BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R14-
COAL COMBUSTION WASTE (CCW)	)	
SURFACE IMPOUNDMENTS AT POWER	)	(Rulemaking- Water)
GENERATING FACILITIES: PROPOSED	)	
NEW 35 ILL. ADM. CODE 841	)	

PREFILED ANSWERS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, (Illinois EPA) by and through its counsel, and hereby submits its PREFILED ANSWERS. In support therefore, the following statements are made:

1. The Illinois EPA prefiled the testimony of Rick Cobb, William Buscher, Lynn Dunaway, and Amy Zimmer on January 15, 2015.

3. On February 5, 2014, the Hearing Officer issued an order containing prefiled questions of the Illinois Pollution Control Board directed to the Illinois EPA.

4. The Illinois EPA's answers to the Illinois Pollution Control Board's questions are found in Attachment 1.

5. On February 5, 2014, Medina Valley Cogen filed questions directed to the Illinois EPA.

6. The Illinois EPA's answers to the Medina Valley Cogen's questions are found in Attachment 2.

7. On February 5, 2014, the Midwest Generation L.L.C. filed questions directed to the Agency Generally, Richard Cobb, William Buscher, Lynn Dunaway, and Amy Zimmer.

8. The Illinois EPA's answers to the Midwest Generation's questions are found in Attachment 3.

9. On February 5, 2014, the Environmental Law and Policy Center filed questions directed to the Richard Cobb, William Buscher, Lynn Dunaway, and Amy Zimmer.

10. The Illinois EPA's answers to the Illinois Agricultural Coalition are found in Attachment 4.

R14-10
EXH 5
TJF
2/26/14

EXHIBIT
5

Illinois Environmental Protection Responses to Board Questions

Statement of Reasons (SR):

1. The Agency noted that it is "aware of 89 CCW surface impoundments at power generating facilities. Some of [the] surface impoundments are lined with impermeable materials, while others are not." SR at 3. The Agency's Technical Support Document (TSD) identified 83 surface impoundments at 24 power generating facilities. TSD at 1

   Attachment C to the Statement of Reasons states that "[t]here 24 power plants in Illinois with a total 83 impoundments. . . . There are also older ash ponds at many of these facilities." SR, Attachment C at 1. Proposed Section 841.105 specifically refers to "surface impoundments".

   a) Please clarify the number of CCW surface impoundments and power generating facilities.

      AGENCY RESPONSE: The Agency has reviewed the best available information, and determined that there are 24 power generating facilities with 91 impoundments.

   b) Does the number of CCW surface impoundments include both primary and polishing ponds?

      AGENCY RESPONSE: Yes.

   c) How many of these impoundments are still receiving CCW wastes?

      AGENCY RESPONSE: Upon reviewing the best available information the Agency believes that 58 of these impoundments can receive CCW. The actual use of each impoundment depends on the daily needs of the facility.

   d) How many of these impoundments would be subject to the proposed regulations?

      AGENCY RESPONSE: Under proposed Section 841.105, all surface impoundments containing CCW or leachate from CCW operated on or after the effective date of the rules would be subject to the proposed rules. In addition, the Agency intends these rules to apply to surface impoundments containing CCW or leachate from CCW that are no longer in operation, if the CCW or leachate from CCW causes or contributes to an exceedence of the groundwater quality standards. Because these factors can change before the rule is finalized, the Agency cannot speculate which impoundments would be subject to these rules on their effective date

   e) Do the proposed rules apply to the other "older ash ponds" mentioned in Attachment C? SR, Attachment C. If not, what rules, if any, would apply

AGENCY RESPONSE: Whether the proposed rules would apply to these "older ash impoundments" depends upon whether the impoundments are causing groundwater contamination. If an impoundment is not causing groundwater contamination the proposed rules would not apply. The groundwater quality regulations found in 35 Ill. Adm. Code Part 620 are applicable throughout the State. This response also assumes that these older ash ponds are not in operation after the effective date of these rules.

f) Please comment on the number of impoundments that are lined with impermeable materials.

AGENCY RESPONSE: Upon reviewing the best available information the Agency believes thirty eight impoundments are lined with impermeable materials.

2. The Agency stated that "CCW can contain antimony, arsenic, barium, boron, beryllium, cadmium, chromium, chloride, iron, lead, mercury, manganese, nickel, selenium, silver, sulfate, and thallium." SR at 3. The TSD notes that nationwide studies indicate the presence of inorganic constituents in CCW. TSD at 2. Please comment on whether any testing has been done by the power generating facilities to show that organic compounds are not a concern with the disposal of CCW.

AGENCY RESPONSE: Joliet 29 has recently tested for benzene and BETX. These tests did not detect any exceedences. Crawford and Southern Illinois Power Corp. – Marion have tested for benzene, toluene, and ethylbenzene, and all results have also been non-detect. CWLP has tested for a longer list of organics, and there have been no detections. Organics were analyzed at Powerton and Waukegan, and no detections were reported.

3. The Agency stated that, "[u]nder the ash impoundment strategy, the Illinois EPA identified facilities with CCW surface impoundments, requested groundwater monitoring well data, requested a potable water system surveys, requested hydrogeologic site assessments, required the installation of groundwater monitoring and conferred with the Department of Natural Resources on dam safety." SR at 5, citing *id.*, Attachment B. "The information gathered as a result of the Illinois EPA's ash impoundment strategy shows that 14 facilities have violations of the numerical groundwater quality standards on-site." SR at 5.

a) Please clarify whether facilities with CCW surface impoundments identified as a part of the ash impoundment strategy included the 83 impoundments mentioned in the TSD. If not, please explain why only a subset of the 83 units was considered for further investigation under the Agency 's strategy.

AGENCY RESPONSE: The Agency did not require the investigation of all impoundments because groundwater contamination had previously been identified and corrective actions were under way for some facilities.

b) How many of the facilities identified under the Agency strategy were already monitoring groundwater and how many facilities installed groundwater monitoring wells to comply with the Agency s strategy?

AGENCY RESPONSE: Seven of the facilities identified under the Agency's strategy were already monitoring groundwater. Seventeen facilities installed groundwater monitoring wells to comply with the Agency's strategy.

c) Please clarify whether all identified facilities provided the Agency with the requested information. If not, comment on the status of the facilities with surface impoundments that have not provided the requested information.

AGENCY RESPONSE: All identified facilities provided the Agency with the requested information.

4. On page 5, the Agency noted that, "[c]orrective actions, including groundwater management zones, compliance commitment agreements, and consent orders, have been initiated at 11 of these facilities."

The TSD stated that "[d]escriptive statistics and box plots have been developed for the IOC contaminants at 13 power generating facilities relative to the applicable Illinois Pollution Control Boards (Board) groundwater quality standards (GWQS) at 35 111. Adm. Code 620." TSD at 9. Further, the TSD stated that, "[c]ompliance commitment agreements are in place for all 5 Midwest Generation facilities and the Prairie Power Facility to address groundwater contamination issues. The 2 Dynegy facilities and the 4 Ameren facilities were issued Notices of Intent to Pursue Legal Action on February 13, 2013."

a) Please comment on whether the compliance commitment agreements for the Dynegy and Ameren facilities have been finalized since filing of this rulemaking proposal. If not, please provide the status of those facilities.

AGENCY RESPONSE: The compliance commitment agreements for the Dynegy and Ameren facilities were not finalized. The two Dynegy facilities and the four Ameren facilities were issued Notices of Intent to Pursue Legal Action on February 13, 2013.

b) Please provide for the record copies the compliance commitment agreements that are currently in place.

AGENCY RESPONSE: Please see Exhibit A.

5. The TSD mentioned the Agency' s Ash Impoundment Strategy web page at http://www.epa.state.ilms/wateriash-impoundment/index.html. TSD at 23. This webpage contains a link to an Agency document entitled "Other Coal Ash Sites — September 2011. (http://www.epa.state.ii.us/watedash-impoundment/documents/other-coal-ash-sites.pdt). That document stated that, [i]n addition to the coal ash impoundments at coal fired electric power plants, the [Agency] also works with a number of other sites with coal combustion residues." Please provide for the record the document entitled "Other Coal Ash Sites — September 2011" to describe the State's other efforts to address coal combustion residuals.

AGENCY RESPONSE: Please see Exhibit B.

6. The Agency's Ash Impoundment Strategy webpage also contains a link to a more recent version of "Illinois EPA's Ash Impoundment Strategy Progress Report" from October 2011 than Attachment D to the Statement of Reasons. Please submit the more recent document into the record.

AGENCY RESPONSE: Please see Exhibit C.

7. The Statement of Reasons, Attachment C, stated that, "[s]ince the early 1990s, new ash ponds (surface impoundments) have been required to be lined. SR, Attachment C at 1. It also stated that "[s]tate construction and operating permits issued in conjunction with [NPDES] permits require surface impoundments to be in compliance with the Illinois groundwater and surface water quality standards including nondegradation requirements. Permit conditions require low permeable liners and groundwater monitoring." Id. at 2.

The TSD stated that "[a] new unit should be properly engineered and designed to prevent contamination. . . ." TSD at 21.

a) For new CCW surface impoundments described above, was a liner required as a condition the NPDES permit?

AGENCY RESPONSE: No. The Agency does not require a liner as a condition of an NPDES permit. Liners have been required by State Construction and Operating permits.

b) Could you please elaborate on what type(s) of liner was required?

AGENCY RESPONSE: Coal combustion waste impoundments since the early 1990's have been required to install a liner composed of a minimum of two feet of earthen material compacted to hydraulic conductivity of 1 x 10-7 centimeters/second or a synthetic liner that affords equivalent protection.

c) How do the liners compare to those in USEPA's proposed rule at 40 CFR 257.72(a) or 264.1306(b)?

AGENCY RESPONSE: The USEPA proposals require CCW surface impoundments to install a double liner system which is more complex than the single liner system that the Agency has been requiring since the early 1990's, which is described in answer 7(a).

d) The proposed rules do not contain a requirement for new units to have a liner. Should this requirement be included in the proposed rule?

AGENCY RESPONSE: The requirement to install a liner is a design requirement. Please see the Agency's response to Board Question 7(g).

e) Have there been any new CCW surface impoundments permitted in the last few years?

AGENCY RESPONSE: Yes.

f) Do the Agency anticipate that there will be new CCW surface impoundments in the future?

AGENCY RESPONSE: Yes. The proposed rules were drafted such that they would be applicable to new CCW impoundments if new CCW impoundments are constructed in the future.

g) Should the proposed rules provide design criteria for new CCW surface impoundments?

AGENCY RESPONSE: The Agency believes including design criteria for new CCW surface impoundments is a good idea. Before making such a proposal, the Agency would like to conduct outreach and gather input from the regulated community and environmental groups to develop design criteria. The Agency would most likely use the design criteria found in 35 Ill. Adm. Code 370 as a starting point.

If the Board is interested in pursuing design criteria for new CCW surface impoundments, the Agency proposes the Board reserve Sections 841.200 through 841.300 for future design criteria.

Technical Support Document:

8. Please provide a clearer, color copy of the following figures from the TSD:

a) Figure 1 Illinois Potential for Aquifer Recharge Map with Power Generating Facilities,

AGENCY RESPONSE: Please see Exhibit D.

b) Figure 3 All CWS Wells and the Probabilistic Network,

AGENCY RESPONSE: Please see Exhibit E.

c) Figure 4 Inorganic water quality data within Illinois Sand and Gravel Aquifers,

AGENCY RESPONSE: Please see Exhibit F.

d) Figure 5 Inorganic water quality data within Illinois Shallow Bedrock Aquifers. TSD at 3, 6-8.

AGENCY RESPONSE: Please see Exhibit G.

USEPA's Proposed 40 C.F.R. Part 257

9. In the Statement of Reasons, the Agency explained that the proposed rule was prompted by the need to have closure requirements for CCW surface impoundments. The Agency stated that "[t]he proposed rule ensures that CCW surface impoundments are closed in a manner that minimizes impacts to the environment including groundwater, surface water and air medias." SR at 22. In addition to unit closures, Section 841.105(a)(1) indicates that the proposed rule also applies to units that are actively in operation on or after the effective date of the rules, which would include new units. Although the Agency characterizes the purpose of the proposed rule is to "prevent waste and degradation of the groundwater" (SR at 7), the proposal does not appear to address other issues for new or active units, such as design criteria, fugitive emissions, and stormwater run-off controls. The Agency stated that "[m]any of these impoundments are permitted through an NPDES permit or state operating permit issued by the Agency pursuant to Subtitle C." SR at 8. Attachment C stated that, "[s]ince the early 1990s, new ash ponds (surface impoundments) have been required to be lined. . . . Permit conditions require low permeable liners. . . ." SR, Attachment C at 1, 2.

Please explain why the Agency 's proposed rule does not appear to include sections similar to the following sections in USEPA's proposed rule for new, active, or expanding surface impoundments or whether the Agency plans to propose requirements in the future.

a) 40 CFR 257.71 (264.1303) Design criteria for existing CCR surface impoundments

AGENCY RESPONSE: Part 841 does not include sections that mirror the USEPA's design criteria for existing CCW surface impoundments. Some of those requirements are covered by the Department of Natural Resources dam safety regulations. Please see Agency's response to Board question 7(g).

b) 40 CFR 257.72 (264.1303) Design criteria for new CCR surface impoundments and lateral expansions,
AGENCY RESPONSE: Part 841 does not include sections that mirror the USEPA's design criteria for new CCW surface impoundments. Some of those requirements are covered by the Department of Natural Resources dam safety regulations. Please see Agency's response to Board question 7(g).

c) 40 CFR 257.80 (264.1308) Air criteria,

AGENCY RESPONSE: The Agency regulates air emission under Subtitle B of Title 35 of the Illinois Administrative Code; in particular, the wind dispersal of fugitive dust regulations are found in accordance with 35 Ill. Adm. Code Part 212.Subpart K.

d) 40 CFR 257.81 (264.1303(g)) Run-on and run-off controls, and

AGENCY RESPONSE: Part 841 does not include a section that mirrors the USEPA's run-on or run-off controls because the Agency believes this would be covered under Subtitle C, and a stormwater pollution prevention plan.

e) 40 CFR 257.82 (264.1307) Surface water requirements. See 75 Fed. Reg. 35230 (June 21, 2010).

AGENCY RESPONSE: Part 841 does not include a section that mirrors the USEPA's surface water requirements. Those sections of the USEPA's proposal state that CCR surface impoundments shall not cause a discharge of pollutants into waters of the United States that violates any requirements of the Clean Water Act and shall not cause the discharge of nonpoint source of pollution that violates any requirements of an area-wide or State-wide water management plan. The Board's surface water regulations are found in Subtitle C of Title 35, which governs discharges to waters of the United States. Thus, the Agency did not include a comparable provision in this Part.

10. Regarding fugitive emissions from CCW surface impoundments or operations, the Agency stated in "Other Coal Ash Sites — September 2011" that, [a]s part of the recent NPDES permit renewal process for this facility, the applicant has been required to develop and implement an updated fugitive dust control plan. Prior to re-issuance of a renewed NPDES permit for this facility, appropriate conditions will be incorporated to address fugitive dust issues based on the good mining practices of 35 Ill. Adm. Code 406.204 [Mine Waste Effluent and Water Quality Standards, Good Mining Practices] and the dust control plan currently being developed.

a) 35 Ill. Adm. Code 406.204 applies to mines. Could you please elaborate on how the good mining practices of 35 IAC 406.204 address fugitive dust?

AGENCY RESPONSE: The good mining practices in Section 406.204 do not directly address fugitive dust control. Because CCW being disposed at coal mines is hauled to the mines in a dry form, the following BMP is included in NPDES permits at mines:

> **Fugitive dust from the coal combustion waste material shall not leave the disposal area. Timely covering, incorporation and/or wetting shall be utilized as necessary to protect exposed surfaces from wind erosion. If during the disposal operations such procedures do not sufficiently control fugitive dust, disposal activities shall cease until such time that more favorable conditions exist or modified operation procedures are proposed and approved by the Agency.**

b) Are conditions for fugitive controls included in the NPDES permits for the CCW surface impoundment units at power generating facilities? If so, would you please describe the controls?

AGENCY RESPONSE: Unlike mine permits, NPDES permits at power generating facilities do not contain a BMP for fugitive dust because CCW at surface impoundments is typically deposited by means of sluicing the CCW or deposition into a water filled surface impoundment. If dust control operations (such as water sprays) result in water runoff from the coal pile, then the runoff is addressed in the NPDES permit.

c) Are NPDES permits currently the only mechanism the State has to require control of fugitive dust from power generating facility units or other non-mine related CCW sites?

AGENCY RESPONSE: No. The air regulations in Subpart K of 35 Ill. Adm. Code 212 require control of fugitive dust.

Dunaway Pre-Filed Testimony

11. On pages 2-3 of your testimony you indicated that the Agency proposed recalculation of background chemical constituent concentrations no less often than every five years, which is less frequent than the recommendation in the Unified Guidance. Would you explain the reason the Agency did not follow the recommendation in the Unified Guidance that you cited in your testimony?

AGENCY RESPONSE: The Unified Guidance recommends updating statistical calculations for background every one to three years as long as there is enough data to make statistically valid comparisons. The Agency selected five years to assure enough additional data is available for statistically valid comparisons.

Section 841.105: Applicability

12. Subsection 841.105(a)(1) states that that Part 841 would apply to all surface impoundments at power generating facilities containing [CCW] or leachate from CCW that are operated on or after the effective date of these rules.

    a) Please clarify whether subsection (a)(1) limits the applicability of Part 841 to new units that have not operated prior to the effective date of Part 841.

    AGENCY RESPONSE: No. Subsection 841.105(a)(1) would include CCW units operated before the effective date of these proposed rules, so long as the owners or operators continue to operate the facility after the effective date of these rules.

    b) If so, please comment on whether the proposed section 841.105(a)(1) should be revised so that Part 841 would apply to all surface impoundments at power generating facilities containing CCW and/or leachate from CCW?

    AGENCY RESPONSE: Part 841 should not apply to CCW units no longer in operation and not causing groundwater contamination after the effective date of the proposed rules.

13. Section 841.105(a)(2) states that Part 841 applies to surface impoundments that are "not operated after the effective date of these rules, but whose coal combustion waste or leachate from coal combustion waste causes or contributes to an exceedence of the groundwater quality standards on or after the effective date of these rules."

    a) Please explain whether "not operated after the effective date of the rules" means that an impoundment has stopped receiving CCW or leachate, or the impoundment has been closed in the context of the rules.

    AGENCY RESPONSE: "[N]ot operated after the effective date of the rules" means that the impoundment is not receiving any kind of waste or stormwater flow after the effective date of these rules. The Agency will consider the unit in operation if it has stopped receiving CCW, but continues to receive stormwater or other waste streams.

    b) Please clarify whether owner or operators of CCW surface impoundments that are not operated after the effective date of the proposed regulations must demonstrate that coal combustion waste or leachate from coal combustion waste contained in the impoundment is not causing or contributing to an exceedence of the groundwater quality standards to be not subject to the proposed regulations.

    AGENCY RESPONSE: Such a demonstration is not required.

14. Section 841.105(b)(1) exempts surface impoundment units operated under a solid waste landfill permit issued by the Agency from the proposed rules.

a) Please provide for the record the number of CCW surface impoundments that are currently operating under the solid waste landfill permits. Also, comment on whether the Agency expects the number of CCW impoundments with landfill permits to change with the adoption of the proposed rules.

AGENCY RESPONSE: The Agency is not aware of any CCW surface impoundments that are currently operating under solid waste landfill permits. The rules governing solid waste landfills specifically exclude surface impoundments from the definition of "landfill." See 35 Ill. Adm. Code 810.103. The Agency does not expect the number of CCW units operating under a landfill permits to change.

b) Please clarify whether CCW surface impoundments subject to solid waste landfill permits are subject to all operating, closure and post closure care requirements under 35 IAC 811 and 814. If not, please identify the specific requirement under those Parts that apply to CCW surface impoundments. Please provide a copy of a recent landfill permit issued to a CCW surface impoundment to illustrate the requirements applicable to such impoundments under the landfill permit.

AGENCY RESPONSE: The Agency is not aware of any CCW surface impoundments subject to these requirements because surface impoundments are not landfills, and therefore not subject to Parts 811 or 814.

15. Section 841.105(b)(2) exempts surface impoundment units operated pursuant to procedural requirements for a landfill exempt from permits under 35 Ill. Adm. Code 815 from the proposed rules.

a) Please provide for the record the number of CCW surface impoundments that are currently operating pursuant to procedural requirements for solid waste landfills under Part 815. Also, comment on whether the Agency expects the number of CCW impoundments operating under Part 815 to change with the adoption of the proposed rules.

AGENCY RESPONSE: Section 815.101 states that Part 815 applies to exempt landfills. Under Section 810.103, surface impoundments are excluded from the definiton of landfills. See 35 Ill. Adm. Code 815.101; 35 Ill. Adm. Code 810.101; 35 Ill. Adm. Code 810.103.

b) Please clarify whether CCW surface impoundments operating under Part 815 are subject to all operating, closure and postclosure care requirements under 35 IAC 811, 813 and 814. If not, please identify the specific requirement under those Parts that apply to the CCW surface impoundments. Also, please comment on whether the CCW surface impoundments operating under Part 815 are subject to all recordkeeping and reporting requirements of that Part.

AGENCY RESPONSE: There are no CCW surface impoundments operating under Part 815. Section 815.101 states that Part 815 applies to exempt landfills. Under Section 810.103, surface impoundments are excluded from the definiton of landfills. See 35 Ill. Adm. Code 815.101; 35 Ill. Adm. Code 810.101; 35 Ill. Adm. Code 810.103.

16. Please comment on whether there would be any benefit to transition facilities operating under the nonhazardous solid waste landfill regulations to operating under with the requirements of the proposed CCW surface impoundment requirements.

AGENCY RESPONSE: There would be no benefit. Landfills are not surface impoundments and surface impoundments are not landfills.

17. Section 841.105(b)(4) exempts small impoundments meeting liner, accumulation period, and volume limitations. Please clarify whether an owner or operator must demonstrate compliance with the three conditions to qualify for this exemption.

AGENCY RESPONSE: Such a demonstration is not required to qualify for the exemption.

18. Section 841.105(b)(5) exempts surface impoundments "used to only collect stormwater runoff, which does not contain leachate." Would it be acceptable to the Agency if the proposed language is clarified to indicate that the surface impoundment must not contain any CCW?

AGENCY RESPONSE: No. A clarification to "not contain any CCW" ignores the possibility that small amounts of ash could be present from air deposition or that may have been used for anti-skid purposes. The Agency suggests the following change to Section 841.105(b)(5).

> **5) that does not contain more than one cubic yard of CCW and is used to only collect stormwater runoff, which does not contain leachate.**

Section 841.110: Definitions

19. "Aquifer" and "off site" are defined in proposed Section 841.110, but are not used in the proposed rule. These appear to be carried over from the Part 840 rules applicable to the closure of Hutsonville ash pond. Should these terms be defined in the proposed Section 841 if they are not used?

AGENCY RESPONSE: Yes. The Agency believes these definitions would be beneficial for the implementation of the proposed rules, and requests they be retained.

20. Although the proposed definition of "Aquifer" in Section 841.110 is the same as that in Section 840.104, it is slightly different than the definition that appears in Section 810.103. Should it be the same as in Section 810.103?

AGENCY RESPONSE: No. The Agency recommends that the Board adopt the definition from Section 3 of the Illinois Groundwater Protection Act (415 ILCS 55/3), as it did in 35 Ill. Adm. Code 620.110.

21. This Section defines "compliance point" in part as "any point in groundwater designated at a lateral distance of 25 feet from the outer edge of the unit, or property boundary, whichever is less, and a depth of 15 feet from the bottom of the unit."

a) Please clarify whether the definition of "groundwater" at Section 3.210 of the Act applies to this Part. If so, would it be acceptable for the Agency to add the statutory definition of groundwater in this Section.

AGENCY RESPONSE: The definition of groundwater in the Act applies to this Part. The Agency has no objection to the addition of this definition to the proposed rule.

b) Please clarify whether the definition is meant to describe a point at the edge of a three-dimensional zone created by a vertical component 25 feet from the ground level edge of the unit straight down to a horizontal plane at a depth 15 feet below the deepest part of the unit similar to the zone of attenuation under 35 Ill. Adm. Code 810.103 and 811.320(c)? Or, is this part of the definition meant to refer to a three-dimensional zone that follows the contours of the unit, 25 feet horizontally from the outer edge of the sides of the unit at and below the ground surface as well as 15 feet vertically below any point along the bottom of the unit? Please revise the proposed language to clarify the proposed intent.

AGENCY RESPONSE: The Agency prefers to be consistent with 35 Ill. Adm. Code 620 and make this proposed Part as clear as possible. With regard to points of compliance this proposed Part applies to groundwater as defined in Part 620. In response to Board Questions 21 (b) and (c), the Agency suggests the following changes to the definition of Compliance Point in Section 841.110:

> **"Compliance point" means any point in groundwater designated at a lateral distance of 25 feet <u>measured parallel to the land surface</u> from the outer edge of the unit <u>and projected vertically downward</u>, or the property boundary, whichever is less, and a depth of 15 feet from the bottom of the unit <u>or 15 feet into the groundwater table, whichever is greater</u>. If the owner or operator has a GMZ, <u>pursuant to 35 Ill. Adm. Code 620.250</u> for the site or unit, compliance point means any point <u>as specified in an approved corrective action process</u> ~~in the groundwater at which a contaminant released from the unit could~~**

~~pass beyond the Agency approved GMZ boundary~~. **There may be more than one compliance point for a particular unit(s)/GMZ.**

c) Also, please comment on whether groundwater as defined in the Act may be located at depths greater than 15 feet from the bottom of surface impoundment units subject to the proposed rules. If so, would the 15 feet limitation still apply?

AGENCY RESPONSE: See Agency response to Board Question 21(b).

22. The proposed definition of "Compliance Point" at Section 841.110 also provides that,"[i]f the owner or operator has a GMZ for the site or unit, compliance point means any point in the groundwater at which a contaminant released from the unit could pass beyond the Agency approved GMZ boundary."

a) Should the reference to the GMZ in the proposed definition include a citation to 35 IAC 620.201(b) and 620.250 for designating and establishing groundwater as a GMZ?

AGENCY RESPONSE: The Agency agrees the reference to GMZ should include a citation to Section 620.250, but not include a reference to Section 620.201(b).

b) Please comment on whether the proposed definition should more closely mirror the language of or refer to 35 Ill. Adm. Code 620.505(a)(4), which states that "[c]ompliance with standards at a site is to be determined as follows: . . . (4) For a groundwater management zone, as specified in a corrective action process." 35 Ill. Adm. Code 620.505(a)(4).

AGENCY RESPONSE: The Agency agrees with the Board's suggestion that the definition should more closely mirror the language in Section 620.505(a)(4). See the Agency's response to Board Question 21.

23. Proposed Sections 841.230(b)(3), 841.230(c), and 841.235(a) are based on the presence of a down-gradient monitoring well. However, the proposed definition of compliance point does not appear to specifically require such a point to be down-gradient of the unit with respect to the direction of groundwater flow. Please clarify whether the definition of compliance point must also indicate that such a point be located down-gradient of the CCW unit with respect to the direction of ground water flow. If not, please explain how comparisons would be made using down-gradient wells in proposed Sections 841.230(b)(3), 841.230(c), and 841.235(a).

AGENCY RESPONSE: The definition of compliance point should not require that such a point be located down-gradient of the CCW surface impoundment with respect to the direction of groundwater flow. The compliance points for a unit are independent of groundwater flow direction, and exist in all directions regardless of the direction of groundwater flow.

Groundwater flow systems are unique to each site. Impoundments sometimes create radial flow conditions, what is referred to as "mounding." Under mounding conditions groundwater can move in the opposite direction of the general groundwater flow direction for the site, or perpendicular to the general groundwater flow direction for the site, or "radially" in all directions from the impoundment. Comparisons would be made using down-gradient wells in proposed Sections 841.230(b)(3), 841.230(c), and 841.235(a) by utilizing site specific groundwater flow information which is dependent on groundwater flow conditions at and unique to each site.

24. The TSD stated that

[t]he leachate definition we are proposing to include under this regulation is generated from the storage of coal combustion waste in a surface impoundment, and is not just stormwater runoff that may have come into contact with fugitive ash. Precipitation moving through a larger quantity of CCW stored in a surface impoundment could produce a larger quantity of leachate and a higher concentration of contaminants that represent a threat to groundwater. TSD at 19-20.

Please clarify whether it is the Agency 's position that stormwater runoff that comes in contact with CCW should not be considered as leachate because of lesser quantity and lower concentration of contaminants. If so, does the Agency have any data on chemical characteristics of stormwater runoff at coal-fired power generating facility to support its position?

AGENCY RESPONSE: The Agency seeks to use the leachate definition to differentiate between stormwater that falls within the foot-print of a surface impoundment or disposal area and percolates through the CCW and stormwater that falls on a surface where CCW may be present from air deposition and be entrained in the storm water run-off.

Yes, the Agency has data from Midwest Generation's Powerton Station, East Yard Run-off Basin. Analytical results indicate the stormwater within the basin, which is run-off from the power plant property that does not contact CCW storage or disposal areas, does not exceed the numerical value of any Class I groundwater standard, with the exception of chloride, during winter months. The chloride is likely from rock salt applied for melting ice and snow. These analytical results are contained in the "Fourth Quarter and Annual Groundwater Monitoring Report, Powerton Generating Station", from KPRG Environmental Consultation & Remediation, dated January 21, 2014. Please see Exhibit H.

25. Please comment on whether it would be acceptable to the Agency if the term "Storm", which is defined at Section 841.110, is revised as "25-year, 24-hour Storm" to be consistent with how that term has been proposed in other Board regulations. See In the Matter of Concentrated Animal Feeding Operations (CAFOs): Proposed Amendments to

35 Ill. Adm. Code 501, 502, and 504, R12-23 (Nov. 7, 2013). Also, would it be acceptable to the Agency if the National Weather Service 's NOAA Atlas 14-Precipitation Frequency Atlas of the United States, Volume 2, Version 3.0 (2004) is incorporated by reference?

AGENCY RESPONSE: Yes, these changes are acceptable to the Agency.

Section 841.115: Abbreviations and Acronyms

26. Proposed Section 841.110 defines "Agency as the Illinois Environmental Protection Agency. Does the Agency object to removing "Agency' from the abbreviations listed in this proposed section?

AGENCY RESPONSE: The Agency has no objection to this change.

Section 841.130: Compliance Period

27. This Section provides that "[t]he compliance period begins when the unit first receives coal combustion waste, or leachate from coal combustion waste, or one year after the effective date of this rule, whichever occurs later, and ends when the post-closure care period ends." Please clarify whether the compliance period applies to all requirements under Part 841 or to specific requirements such as compliance with groundwater standards.

AGENCY RESPONSE: When the Agency drafted this Section, it intended that the groundwater standards of Part 620 would be effective during the one year after the effective date of the proposed regulations. After reviewing and the discussing the Board's question, the Agency proposes this revision to Section 841.130:

a) Except as provided in this Section, the compliance period begins when the unit first receives coal combustion waste, or leachate from coal combustion waste, or on the effective date of this Part, whichever occurs later, and ends when the post-closure care period ends. The post-closure care period for a unit is the time period described in Section 841.440(a) of this Part.

b) If the unit was in operation on or before the effective date of this Part, the owner or operator shall conduct a hydrogeologic site characterization, establish background values, develop a groundwater monitoring system, and submit a groundwater monitoring plan within one year of the effective date of this Part. The owner or operator must have an approved groundwater monitoring plan within two years of the effective date of this Part. If the owner or operator wishes to use previous site investigations or characterizations, plans, or programs to satisfy the requirements of this Part, the owner or operator must submit the previous investigations, characterizations,

plans or programs in accordance with Section 841.140 of this Part to the Agency for approval pursuant to Section 841.145 of this Part within one year of the effective date of this Part.

28. This Section requires an owner or operator to "conduct a hydrogeologic site characterization, establish background values, develop a groundwater monitoring system, and groundwater monitoring plan before the compliance period begins."

a) Please clarify whether an owner or operator must comply with the proposed requirements under Subpart B for hydrogeologic site characterization, groundwater monitoring system and groundwater monitoring plan when preparing plans required under this Section.

AGENCY RESPONSE: No, but any facility with existing groundwater monitoring wells would be required to sample and analyze pursuant to proposed Section 841.230 and 841.215. See Agency's response to Board Question 27 above.

b) Please indicate whether the groundwater monitoring plan, which according to Section 841.210 includes information concerning hydrogeologic characterization, background values and groundwater monitoring system, must be submitted to, and approved by the Agency prior to the beginning of the compliance period. If so, would it be appropriate to include a reasonable deadline in the rules for submission and approval of the groundwater monitoring plan prior to the beginning of the compliance period.

AGENCY RESPONSE: Please see the Agency's response to Board question 27 above. The Agency believes the deadline for the submission of groundwater monitoring plans should be one year from the effective date of this Part, and the deadline for obtaining approval of the groundwater monitoring plan should be two years from the effective date of this Part. The Agency proposes that all groundwater monitoring plans are reviewed by the Agency under proposed Subpart E.

29. This section requires that, "[i]f the owner or operator wishes to use previous site investigations or characterization, plans or programs to satisfy the requirements of this Part pursuant to Section 841.145, the owner or operator must submit the previous investigations, characterizations, plans or programs to the Agency for approval of this Part before the compliance period begins." Please clarify whether the proposed language must read as "submit the previous investigations, characterizations, plans or programs in accordance with Section 841.140 of this Part to the Agency for approval pursuant to Section 841.145 of this Part before the compliance period begins".

AGENCY RESPONSE: In the Agency's response to the Board's Question 27, the Agency proposes modification to the compliance schedule, and therefore, the language the Board proposes is not adequate. The Agency instead proposes:

If the owner or operator wishes to use previous site investigations or characterizations, plans, or programs to satisfy the requirements of this Part, the owner or operator must submit the previous investigations, characterizations, plans or programs in accordance with Section 841.140 of this Part to the Agency for approval pursuant to Section 841.145 of this Part within one year of the effective date of this Part.

Section 841.155: Construction Quality Assurance Program

30. Subsection (b)(1) requires that an operator must designate a CQA officer. Would the Agency comment whether that requirement should apply to an owner or operator of a unit?

AGENCY RESPONSE: The requirement should apply to the owner or operator of a unit.

Section 841.165: Public Notice

31. This Section requires the Agency to post proposed corrective action plans and closure plans on the Agency s website.

a) Would you please explain the reason that the proposal does not include newspaper notice?

AGENCY RESPONSE: The Agency based proposed Section 841.165 on comments provided by the Environmental Groups and the Attorney General's office, both of which did not include newspaper notice. The Agency elected not to include newspaper notice for corrective action or closure plans for several reasons. First, the Agency believes affected parties would be no more likely to see a notice in the newspaper than a notice posted on the Agency's webpage. With the available search engines on the internet, posting the corrective action plan or the closure plan on the Agency's webpage may reach more people then newspaper publication. Second, the notice provided under the proposed rules is already more extensive than notices provided under most other similar Agency programs. In fact, no other Agency program provides newspaper notice for the completion of corrective action plans and only one other Agency program provides newspaper notice for closure plans. Third, the Agency is concerned that the administrative burden of circulating notices for each plan and the costs associated with those notices would outweigh the benefit of such notice. Finally, the Agency has several other programs, such as Right-to-Know and Environmental Justice, that provide notice to individuals that may be threatened by any actual contamination from a unit, should such a threat arise. Depending on the circumstances, this notice could be provided directly to an affected individual or made via newspaper or other publication.

Accordingly, the Agency believes that an additional newspaper notice for corrective action and closure plans at CCW surface impoundments is not necessary.

b) In the absence of some sort of direct notice, would you please describe how an interested person would be notified or prompted to go to the Agency's website for specific details?

AGENCY RESPONSE: The Agency will post the proposed plans in the same place on its webpage. The Agency believes interested parties have an obligation to periodically check its webpage. The Agency does not believe this notification varies from how an interested person would be notified by newspaper publication; and interested person has an obligation to check the legal notices listed in the paper periodically. Unlike newspaper notification, interested parties can perform internet searches to find the posted proposed and final corrective action and closure plans.

c) Would you please describe now a person would navigate the Agency's website to find public notices or posted corrective action or closure plans?

AGENCY RESPONSE: The Agency's webpage (http://www.epa.state.il.us/) includes a link to Public Notices. At this time, the Agency anticipates posting proposed and finalized corrective action or closure plans for CCW surface impoundments in this section or a similar section.

32. Under subsection (d), the Agency would be required to post its final decision on proposed corrective action plans, closure plans, and modifications to them on its Web page for a period not shorter than 30 days. Under proposed Section 841.500, the period for appeal to the Board if the Agency disapproves a plan or modification or approves it with conditions is 35 days. Would the Agency comment on a requirement that the Agency "shall post its final decisions on the proposed corrective action plans and closure plans, or modifications thereto, on the Agency's Web page on the postmarked date that the notice is mailed and maintain it there for a period not shorter than 35 consecutive days"?

AGENCY RESPONSE: The Agency has no objection to the language suggested by the Board.

Section 841.200: Hydrogeologic Site Characterization

33. Please clarify whether an owner or operator is required to prepare a hydrogeologic characterization plan under subsection (a). If so, should that plan be submitted to the Agency for approval in accordance with Section 841.140? If not, please explain the rationale for not requiring the submission of a hydrogeologic investigation plan to the Agency.

AGENCY RESPONSE: Subsection (a) does not require a hydrogeologic site characterization plan. The hydrogeologic site characterization is used to gather information supporting the groundwater monitoring system and groundwater monitoring plan. The results are submitted as part of the groundwater monitoring plan. If review of the groundwater monitoring plan indicates site characterization information may be missing, the groundwater monitoring plan may not be approved until such information is supplied.

34. Please clarify whether an owner or operator will have to submit a hydrogeologic characterization completion report to the Agency under this section. If not, please explain the rationale for not requiring any Agency oversight regarding hydrogeologic characterization.

AGENCY RESPONSE: The results of the hydrogeologic site characterization must be submitted as part of the groundwater monitoring plan, at which time the Agency will conduct its review. The purpose of the characterization is to identify and submit information supporting the groundwater monitoring plan.

Section 841.205: Groundwater Monitoring System

35. Proposed subsection 841.205(c)(2) would require monitoring wells that represent groundwater quality at the compliance point(s). "Compliance Point" is defined in proposed subsection 841.110 with a spatial reference to "a lateral distance of 25 feet from outer edge of unit, or property boundary, whichever is less, and a depth of 15 feet from the bottom of the unit." However, proposed section 841.205(d) requires "Monitoring wells must be located in stratigraphic horizons that are potential contamination migration pathways." What if the compliance point located pursuant to the spatial reference in proposed 841.110 does not fall within a potential migration pathway? Should proposed subsection 841.205(d) be phrased something like this:

d) The groundwater monitoring system must include mointornig~~Monitoring~~ well(s) ~~must be~~ located in stratigraphic horizons that are potential contamination migration pathways.

OR

d) The groundwater monitoring system must include mointornig~~Monitoring~~ well(s) ~~must be~~ located in all stratigraphic horizons that are potential contamination migration pathways as identified by the hydrogeologic site characterization conducted pursuant to Section 841.200

AGENCY RESPONSE: The Agency recommends the second version.

36. Proposed section 841.204(c)(3) states that the groundwater monitoring system must have sufficient wells to "determine compliance" with Part 620. Proposed section 841.210(a)

states the owner or operator must develop a groundwater monitoring plan to "demonstrate compliance" with Part 620. However, none of these sections or any of the others in the proposal appear specifically to refer to provisions setting forth when and how compliance with the applicable groundwater quality standards would be achieved. Should proposed Subpart B contain a distinct section on "Compliance Determination" similar to 35 Ill. Adm. Code 620.505 Compliance Determination or 840.118 Demonstration of Compliance? Or should the proposal specifically reference 35 111. Adm. Code 620.505(a)(5) and (6)?

AGENCY RESPONSE: The relevant portions of Section 620.505 are subsections (a)(2) and (a)(4), both of which are included in the definition of "compliance point" under the proposed rules. See proposed Section 841.110 and the Agency's response to Board Question 21. Compliance with the groundwater quality standards in Part 620 must be achieved at all times, as Part 620 is currently in full force and effect. The Agency believes proposed Part 841 adequately specifies how compliance is demonstrated. Proposed Section 841.125 provides that the groundwater quality standards of Part 620 apply, and proposed Section 841.130 states when compliance with the groundwater quality standards must be achieved. Proposed Section 841.215 states what parameters must be monitored for, and proposed Section 841.230 states how frequently the groundwater must be sampled. Finally, proposed Section 841.125 states where the groundwater quality standards will be evaluated—at the compliance points, which are defined in proposed Section 841.110. The monitoring wells at the compliance points will be set forth in the groundwater monitoring system and groundwater monitoring plan.

For the above stated reasons, the Agency does not believe proposed Subpart B should not contain a distinct section on "Compliance Determination" similar to 35 Ill. Adm. Code 620.505 Compliance Determination or Section 840.118 Demonstration of Compliance.

Section 841.210: Groundwater Monitoring Plan

37. Subsection (e) requires "[a]ll groundwater samples taken pursuant to this Section must be analyzed for the chemical constituents listed in Section 841.215 of this Part by a certified laboratory." Please clarify whether the samples must be analyzed by a laboratory certified by the Agency. Also, comment on whether it would acceptable to the Agency if samples are analyzed by certified laboratories outside of Illinois.

AGENCY RESPONSE: The Agency believes the following definition of certified laboratory be included in the definitions found in Section 841.110.

> **"Certified Laboratory" means any laboratory certified pursuant to Section 4(o) of the Act [415 ILCS 5/4(o)], or certified by USEPA.**

Section 841.220: Determining Background Values

38. The third subsection, which the Board intends to re-designate as subsection (c), refers to up-gradient wells. However, the proposed rules do not clearly specify whether background values must be established for all monitored wells or only up-gradient wells. Please clarify the proposed intent.

AGENCY RESPONSE: Background values must be established for all monitoring wells because compliance applies individually at each monitoring well, at each regulated unit. For example, a well down-gradient of one unit may be up-gradient of another. It is also possible that an owner or operator may use an intra-well statistical method that compares previous results to current results at each well.

Section 841.225: Statistical Methods

39. Subsection (a) provides that, "[w]hen determining background values and when conducting compliance or assessment monitoring," the owner or operator must specify statistical methods. Please explain the difference between compliance and assessment monitoring under the proposed regulations.

AGENCY RESPONSE: Compliance monitoring is the routine monitoring conducted pursuant to the approved groundwater monitoring plan that compares applicable groundwater quality standards of 35 Ill. Adm. Code 620 to the results obtained from each monitoring event. Assessment monitoring is additional monitoring, which may be at a higher frequency than for compliance monitoring and could include monitoring at additional wells to evaluate an apparent exceedence of one or more groundwater quality standards.

40. Subsection (c) requires the sample size to "be as large as necessary to ensure with reasonable confidence that a contaminant release to groundwater from a facility will be detected." Please explain what "reasonable confidence" means statistically in the context of the proposed regulations.

AGENCY RESPONSE: "[R]easonable confidence" is used to explain that different statistical methods require sample sets of different sizes to achieve a given level of certainty that an exceedence of a predicted maximum value is not by random chance. Therefore, sample size must be compatible with the mathematical requirements of the statistical method being used.

Section 841.235: Annual Statistical Analysis

41. Please explain the rationale for requiring statistical analysis of groundwater monitoring data on an annual basis instead of a semi-annual or quarterly basis consistent with the sampling frequency.

AGENCY RESPONSE: The annual statistical analysis is used to evaluate chemical constituent concentrations that do not exceed the numerical groundwater quality standards. The annual analysis will evaluate compliance with the non-degradation

provisions of 35 Ill. Adm. Code 620. Since the constituent concentrations will not necessarily represent a threat of an exceedence of a numerical groundwater quality standard, the urgency for comparison is reduced. Second, data sets extending over a period longer than a single sampling period may be required to recognize the trends at low constituent levels. Finally, preparation and review of annual analysis for the number of wells and constituents required under this proposed Part will require significant resources. The Agency believes an annual statistical analysis is a reasonable requirement when these factors are taken into consideration.

Section 841.240: Inspection

42. This Section sets forth provisions for inspection of surface impoundments, some of which are not directly related to groundwater monitoring. Please comment on whether it would be acceptable to the Agency if the Board moved this Section under Subpart A of the proposed regulations.

AGENCY RESPONSE: This change is acceptable to the Agency.

43. The Statement of Reasons states that CCW surface impoundments constructed as diked enclosures "are considered dams and are required to comply with Illinois dam safety regulations." SR at 2-3. Further, the Agency states that it "conferred with the Department of Natural Resources on dam safety." SR at 5, citing SR, Attachment B (Letters to Power Generating Facilities). The TSD explains that the purpose of the weekly inspections under proposed Section 841.240 is different than the Department of Natural Resources dam safety program. TSD at 36.

a) Please provide a citation to the Illinois dam safety regulations as well as a copy for the record.

AGENCY RESPONSE: The Illinois dam safety regulations can be found at 17 Ill. Adm. Code 3702. Please See Exhibit I.

b) Of the current CCW surface impoundments in Illinois, would the dams be classified as Class I, II, or III under 17 Ill. Adm. Code 3702?

AGENCY RESPONSE: This determination would need to be made by Illinois DNR Office of Water Resources.

c) Please elaborate on the Agency's conference with the Department of Natural Resources on dam safety related to this proposal.

AGENCY RESPONSE: The Agency did not discuss these rules with IDNR while the Agency formulated the ash impoundment strategy because these rules were not contemplated at that time. Subsequently, in 2013, the Agency discussed with IDNR including a reference to the dam safety regulations in

the proposed rule to ensure any work done on the impoundment dams would comply with the dam safety regulations.

d) The proposed federal rule for disposal of coal combustion residuals from electric utilities states,

It should also be recognized that while states currently have considerable expertise in their State dam safety programs, those programs do not tend to be part of State solid waste or clean water act programs, and so, oversight may not be adequately captured in [US]EPA's existing data. This proposal requests states and others to provide further information on state programs. . . . 75 Fed. Reg. 35133 (June 20, 2010).

Please compare inspection requirements under the Department of Natural Resources dam safety program together with the proposed rule at 35 IAC 841.320 against inspection requirements under the proposed federal rule for dam safety at 40 CFR 257.83 (Alternative 1 - Subtitle D) or 264.1304 (Alternative 2 - Subtitle C).

AGENCY RESPONSE: The Agency compared proposed Section 841.240 with the inspection requirements under the proposed change to the federal rule. The Agency found that while the the federal rule requires CCR surface impoundmentsto be examined weekly as does porposed Section 841.240, the federal rule requires a much more extensive annual inspetion as follows: all CCR surface impoundments that meet the requirements of § 264.1303(b) of this subpart shall be inspected annually by an independent registered professional engineer to assure that the design, operation, and maintenance of the surface impoundment is in accordance with recognized and generally accepted good engineering standards. The owner or operator must notify the state and the EPA Regional Administrator that a certification by the registered professional engineer that the design, operation, and maintenance of the surface impoundment is in accordance with recognized and generally accepted good engineering standards has been placed in the operating record.

The Department of Natural Resources is responsible for inspecting the design, operation, and maintenance of dams, including surface impoundments that would be subject to Part 841. The inspection requirements related to surface impoundment design, operation, and maintenance set forth in each proposed federal rule somewhat mirror the Department of Natural Resources' dam safety program rules. Each proposed federal rule requires an annual inspection of the surface impoundment by an independent professional engineer. The Department of Natural Resources' dam safety rules require inspections every one to five years, depending on the probability that a dam failure would cause loss of life or substantial economic loss. Thus, under the Department of Natural

Resources' rules, an annual inspection is only required when the failure of a specific dam has a high probability for causing loss of life or substantial economic loss.

Section 841.300: Confirmation Sampling

44. Subsection (a) requires the submission of confirmation sampling results to the Agency within 30 days after the date on which the original sample analysis was submitted to the Agency pursuant to Section 841.210(d). Counting the 60 days allowed by Section 841.210(d), subsection (a) allows an owner or operator 90 days from the time of initial exceedence to notify the Agency. Please comment on whether the confirmation of an exceedence and the notification of a confirmed exceedence should be done on shorter deadline.

AGENCY RESPONSE: The confirmation of an exceedence and notification of a confirmed exceedence should not be required to be completed in a shorter time than proposed. The Agency will receive notification of the results of the first sample within sixty days of completion of the initial sampling. If this first sample shows an exceedence, the monitoring well will be resampled for each chemical constituent with an exceedence, and the results of the resampling will be submitted to the Agency within thirty days after the date on which the original sample results were submitted. The Agency will have two notifications during this process, one on the initial sampling and a second on the confirmed sampling. Based upon expected timeframes for the results of submitted groundwater samples from laboratories, the Agency considers these timeframes to be reasonable.

Section 841.310: Corrective Action Plans

45. Subsection (d) provides that "[t]he owner or operator shall submit a corrective action plan within 180 days after submission of confirmation sampling results. This requirement is waived if no groundwater quality standard is exceeded in the samples taken pursuant to subsection (a) of this Section for two consecutive quarters." Please clarify whether compliance with the groundwater quality standard over two consecutive quarters is sufficient to demonstrate that a confirmed exceedence is no longer a cause for concern. The Board notes that Section 841.315(c)(1) requires four quarterly samples of groundwater monitoring wells to ensure compliance with the applicable groundwater standards. Also, please comment on whether the owner or operator must report to Agency that a corrective action plan will not be submitted pursuant to subsection 841.310(d).

AGENCY RESPONSE: Compliance with groundwater quality standards for two consecutive quarters is not a sufficient demonstration that a confirmed exceedecne is no longer cause for concern, but it is enough data to delay the submission of a corrective action plan. Under proposed Section 841.230(b)(1), the owner or operator must sample quarterly, and must maintain this monitoring schedule until a change is approved by the Agency. The development of a corrective action plan requires significant resources, and the agency does not want to require submission

of a corrective action plan unnecessarily. Two samples in which the groundwater quality standards are not exceeded may indicate that corrective action is not required. If, however, continued quarterly monitoring show there is an exceedence, and confirmation sampling confirms, and the corrective action process and associated deadlines will again be applicable.

The Agency recommends that a unit's owner or operator notify the Agency if the unit meets the waiver requirement. Since what is being submitted is simply two quarters of data showing compliance, and is not a plan for review, the Agency does not recommend that it be subject to review pursuant to Subpart E. The data speaks for itself.

46. Subsection (e)(9), which the Board intends to re-number as (e)(8), refers to Institutional Controls, but that term is not defined in the proposed regulations. The Board notes that proposed Section 841.410(a)(9) also refers to institutional controls.

Section 840.116(a)(3) refers to institutional controls as being "in accordance with the Uniform Environmental Covenants Act [765 ILCS 122] or an altemative instrument authorized for environmental uses under Illinois law and approved by the Agency." 35 Ill. Adm. Code 840.116(a)(3). Please comment on whether it would be acceptable to the Agency if language based on Part 840 is added Sections 841.310(e)(9) and 841.410(a)(9) to describe institutional controls.

AGENCY RESPONSE: The Agency agrees with this change.

47. Would the Agency clarify whether the annual progress report required by subsection (g) would be reviewed by the Agency according to Subpart E?

AGENCY RESPONSE: Annual progress reports are not subject to Subpart E. This report is not listed in proposed Section 841.505.

Section 841.325: Corrective Action Report and Certification

48. Subsection(c) refers to submission of a corrective action certification on forms prescribed by the Agency. The Board notes that proposed Sections 841.425(c) and 841.440 include similar requirements regarding closure certification and post-closure certification, respectively. Please submit into the record any drafts of the proposed forms for these certifications.

AGENCY RESPONSE: Please see Exhibit J.

Section 841.400: Surface Impoundment Closure

49. Subsection (b) addresses closure by removal and requires that "[a]ll coal combustion waste must be properly disposed unless beneficially reused." Please explain what proper disposal means in the context of the proposed regulations. Would it be acceptable to the

Agency if the last sentence of subsection (b) is revised as "All coal combustion waste and leachate must be disposed in accordance the applicable laws and regulations unless beneficially reused?"

AGENCY RESPONSE: In the context of these regulations "proper disposal" means that CCW and leachate will be transported to and disposed at facilities in compliance with applicable environmental rules and regulations. The Agency does not oppose the Board's suggested changes.

Section 841.405: Closure Prioritization

50. Subsection (a)(1)(C) requires a Category 1 unit to be closed within two years of the Agency's approval of the closure plan.

a) Please comment on whether the two-year time period is based on the duration for closure of a typical CCW surface impoundments.

AGENCY RESPONSE: There is not a typical CCW surface impoundment, and therefore, not a typical duration to close a CCW unit. Factors that effect closure time include size, age, methods of construction, and mode of operation.

Category 1 units directly impact a potable water supply and need to be addressed as soon as possible. It is expected that the closure of a unit would take at least one construction season. In addition, if a new impoundment needs to be constructed to dispose of ash in order not to interrupt the operation of the power plant this time frame would be tight considering the time needed for design and approval of the alternate disposal area.

b) If so, please explain the rationale for allowing 5 years or more for the closure of impoundments under Categories 2, 3 and 4, particularly for closure of inactive units.

AGENCY RESPONSE: The rationale for allowing five years or more for the closure of impoundments under Categories 2, 3 and 4, particularly for closure of inactive units is based in part, on the proposed federal regulation which proposes to close units in five years. In addition, one utility may need to be closing several impoundments under Categories 2, 3 and 4 at once. Sufficient time will be required for them to complete the work.

c) Also, please explain why a distinction between active and inactive units is not proposed for Category 4 units.

AGENCY RESPONSE: Under the proposed rule, sites over Class IV groundwater have a longer time period to close because the groundwater quality beneath the unit has already been significantly impacted. The

distinction between active and inactive is immaterial because the Agency proposes to give these units more time than active units to close.

51. Please comment on whether it would be acceptable to the Agency if subsection (a)(4)(A) is revised to include a citation to Part 620 as follows:

Unless Category 1 applies, Category 4 applies where the unit is located on a site that has been characterized as Class IV groundwater pursuant to 35 Ill. Adm. Code 620.240 beyond a lateral distance of 25 feet from the edge of the unit.

AGENCY RESPONSE: This change is acceptable to the Agency.

52. Subsection (a) sets a closure deadline for each of the four categories of units but includes language allowing the Agency to approve "a longer timeline" for closure. Would the Agency comment on factors or circumstances that may lead it to extend a closure deadline?

AGENCY RESPONSE: Factors that may result in extended closure deadlines include, but are not limited to, the following:

a) **If a unit is active and the impoundment must be closed, it may take longer than 2 years for closure if a new impoundment must be designed, permitted and built if there is no other existing impoundment to take the coal combustion waste**

b) **Unusual weather events such as extremely wet or dry weather that prohibit the completion of work on schedule.**

c) **When an entire facility is closing, building a replacement ash disposal unit which would be used for a very short time may not be the best way to manage CCW. In this case, a longer timeline for closure may be appropriate.**

Section 841.410: Closure Plan

53. Institutional controls addressed in subsection (a)(9) refer only to those prohibiting potable uses. Should there be any requirement in the Closure Plan for institutional controls to address future use and ensure that any final cover, final grading, liner, and/or containment barrier specified in the closure plan remain intact?

AGENCY RESPONSE: Yes. The Agency would not object to adding deed restriction requirements that mirror the regulations governing Standards for New Solid Waste Landfills, at 35 Ill. Admin. Code 811.110(g) and (h).

Section 841.415: Final Slope and Stabilization

54. Subsection (b) requires that "all slopes must be designed to drain runoff away from the cover and to prevent ponding, unless otherwise approved by the Agency." Would the Agency comment on circumstances in which it may approve a final slope that did not drain runoff away from the cover or prevent ponding?

AGENCY RESPONSE: While the Agency expects these circumstances to be relatively rare, the closure of Ash Ponds 1 and 2 at the Ameren U.E., Venice Generating Station provides an example. The ash ponds at Venice were constructed with their western side against the Mississippi River levee. The east side of the ponds was constructed against a railroad levee. The final cover could not extend over either of these bounding levees and, thus, the ash and final cover was shaped into two mounds so that stormwater was routed inward on the west and east slopes and the interior slopes were routed to sumps, for subsequent pumping over the top of the Mississippi River levee under an NPDES permit. The sumps are constructed to prevent leakage, and will only hold water during storm events, but the sumps could be considered ponding. Similar complicating factors could exist at other facilities, and therefore the Agency included some flexibility in the proposed Rule in recognition of these possible circumstances.

Section 841.420: Final Cover System

55. Subsection (b)(1) suggests that, if the unit has a bottom layer with permeability greater than 1 X 10-7 cm/sec, then the low permeability layer could be constructed with equal permeability

However, subsection (b)(1) requires construction of a low permeability layer according to subsections (A) and (B), both of which rely on a standard of 1 X 10-7 cm/sec. Also, subsection (b)(1) allows the Agency to approve alternative techniques or materials equivalent or superior to the requirements of subsection (A) or (B). Does the Agency wish to comment on language regarding units with a bottom layer or propose any clarifying language?

AGENCY RESPONSE: The Agency's intent is that any cover will have a permeability of 1 X 10-7 cm/sec or less. If a bottom liner exists that has a permeability of less than 1X 10-7 cm/sec, then the cover must have a permeability less than or equal to the bottom liner. The Agency proposes the following revision:

b) The final cover system must consist of a low permeability layer and a final protective layer.

1) Standards for the low permeability layer. The low permeability layer must have a permeability less than or equal to 1 x10^{-7} cm/sec. If the CCW unit has a liner system, the low permeability layer must have a permeability less than or equal to the permeability of any bottom liner system. ~~In the event that there is no bottom liner present, the cover shall have a permeability of less than or equal to 1 X 10^{-7} cm/sec.~~ The

low permeability layer must be constructed in accordance with the following standards in either subsections (b)(1)(A) or (b)(2)(B) of this Section, unless the owner or operator demonstrates that another low permeability layer construction technique or material provides equivalent or superior performance to the requirements of either subsections (b)(1)(A) or (b)(2)(B) of this Section and is approved by the Agency.

Section 841.435: Post-Closure Care Plan

56. The Agency's Statement of Reasons addresses the Agency's outreach with stakeholders from industry, environmental groups, and the Attorney General's office regarding the issue of a financial assurance requirement for CCW surface impoundments. SR at 26. Would the Agency estimate the expected cost for a typical surface impoundment to provide financial assurance to cover closure and post-closure care required by proposed regulations?

AGENCY RESPONSE: The impoundments subject to this proposed Part vary greatly in size, age, methods of construction (lined versus unlined), and mode of operation (periodic removal versus constant accumulation). Therefore, the Agency does not believe it can reasonably estimate the cost of financial assurance for CCW impoundments.

57. Please address whether there are other Illinois regulations that require financial assurance for corrective action.

AGENCY RESPONSE: Section 724.201 of Title 35 of the Illinois Administrative Code requires financial assurance for the completion of corrective actions at certain solid waste management facilities. The majority of Illinois regulations relating to financial assurance pertain to closure and post-closure care.

Section 841.440: Post-Closure Report and Certification

58. Please comment on whether it would be acceptable if Section 840.440(a) is revised as follows:

Post-closure care must continue until

(1) compliance with the groundwater quality standards set forth in 35 Ill. Adm. Code, 620 or in a groundwater management zone established pursuant to 35 Ill. Adm. Code 620.250 is achieved; and

(2) a minimum of ten years after from the Agency' s approval of the closure report.

AGENCY RESPONSE: The proposed change is acceptable to the Agency, but the Agency does not believe the phrase "or in a groundwater management zone established pursuant to 35 Ill. Adm. Code 620.250" is necessary because the first reference to 35 Ill. Adm. Code 620 encompasses Section 620.250.

Section 841.450: Resource Conservation and Recovery Act

59. If the Board adopts Part 841 and USEPA then adopts federal rules under RCRA, would the Agency propose amendments to Part 841?

AGENCY RESPONSE: The Agency will comply with any RCRA amendments that the USEPA adopts. However, the Agency is, at this time, unable to commit to proposing amendments to Part 841 or comment on the extent of any proposed amendments to Part 841 because the range of regulatory possibilities included in the two USPEA proposals present too many variables to allow the Agency to respond with any level of certainty.

Section 841.500: Plan Review, Approval, and Modification

60. Subsection (e) provides that appeals are subject to review under Section 40 of the Act and allows filing an appeal "within 35 days after the post-marked date that the notice is mailed." Section 841.505(b) incorporates these rights of appeal with regard to approval of reports and certifications.

Section 40(a) of the Act requires filing a petition with 35 days after the date on which the Agency served its decision on the applicant." Similarity, Section 105.206(a) of the Board's procedural rules requires filing an appeal "within 35 days after the date of service of the Agency's final decision." Does the Agency wish to comment on the appeal deadline or propose any clarifying language?

AGENCY RESPONSE: The Agency's proposed language is intended to ease the administration of the review process. With the large number of appeals provided for within this Part, the Agency chose the post marked date to begin the appeal period because it will be easier for the Agency to track and administer the program.

The Agency, however, does not object to changes that would make this section consistent with Section 105.206.

ATTACHMENT 2: Illinois EPA Response to Medina Valley Cogen's Questions

1. On pages 16-17 of his pre-filed testimony, Rick Cobb discusses the use of GMZs. The pre-filed testimony includes the following statement:

   The intent of the corrective action process under a GMZ is to make every effort to first improve groundwater quality to the applicable numerical standards. However, after every effort has been made to improve groundwater quality, but it has been determined that it is not technically and economically feasible to restore the groundwater quality to the numerical standards where **asymptotic** levels of reduced contaminant concentrations have been reached via corrective actions (see figure 2), Section 620.450 provides for alternative groundwater standards if the conditions in Subsection 620.450(a)(B) can be met. This is the point where the Agency will consider the appropriateness of alternative water supplies and restricted use ordinances, if necessary.

   Proposed Sections 841.310(e)(9) and 841.410(k) (35 Ill. Adm. Code 841.310(e)(9), 410(k)), concerning corrective action plans and closure plans, respectively, allow use of institutional controls without limiting them to restricted use ordinances. By using the term "ordinance" please clarify whether IEPA intends to limit the use of institutional controls to municipally-adopted ordinances or whether the term "ordinance" is meant to be more generic and include institutional controls such as on-site or site-specific environmental land use controls.

   AGENCY RESPONSE: The term "ordinance" is used generically and intended to include institutional controls.

2. On page 4 of her pre-filed testimony, Amy Zimmer states:

   In addition, if a groundwater management zone ("GMZ") is approved as part of a corrective action, additional points of compliance in relation to the GMZ boundary and the modeled or monitored extent of contamination may then be required to be monitored.

   Ms. Zimmer's testimony implies that compliance points could simultaneously include locations very close to the unit and also farther away based on the approved GMZ boundary. Please clarify whether it is IEPA's intention to have compliance points inside the GMZ boundary or whether the GMZ approval would establish the compliance points for as long as the GMZ is in place, which is what the definition of "Compliance point" states.

   AGENCY RESPONSE: A groundwater management zone is contaminant specific. Therefore, compliance point locations close to the unit would still apply for contaminants not part of the groundwater management zone. These locations would be based upon the definition of a compliance point and located at a distance of no more than 25 feet lateral from the edge of the unit and 15 feet vertical from the bottom of the unit or into the groundwater table, whichever is greater. There would be separate compliance points for contaminants that are identified as part of the groundwater management zone due to an exceedence of a groundwater standard, and these compliance points would be specified in the correction action plan as part

of the groundwater management zone and generally based upon the location of boundary of the GMZ.

ATTACHMENT 3: Illinois EPA Response to Midwest Generation's Questions

I. GENERAL QUESTIONS TO THE AGENCY WITNESSES

1. Do the proposed Part 841 rules establish a new "permit program" under the Board's regulations?

AGENCY RESPONSE: No.

2. At p. 15 of Mr. Cobb's pre-filed testimony, he states that: "If a numerical standard set forth in Section 620.410 or 620.430 is exceeded at an existing or new CCW unit, the appropriate remedy is corrective action under 35 Ill. Adm. Code Section 620.250." What is the appropriate remedy if the exceedence is caused by a CCW unit that was closed before the effective date of these rules?

AGENCY RESPONSE: If the exceedence occurred or continued after the effective date of these rules, and the CCW surface impoundment is not otherwise excluded by Section 841.105, either Subpart C for corrective action or Subpart D for closure would apply. If a CCW surface impoundment is not subject to this proposed Part, but is causing an exceedence of a groundwater quality standard, corrective action is still the appropriate remedy, but the corrective action will not be under proposed Part 841.

3. Is it correct that the purpose of the "Alternate Cause Demonstration" is to remove from the scope and applicability of these proposed Part 841 regulations such alternate causes of impacts to groundwater?

AGENCY RESPONSE: No. Showing an alternative cause of impacts to groundwater other than the unit does not remove a facility from the applicability of the rules. It means that the facility would not be required to take corrective action under proposed Part 841 on that particular exceedence.

4. The pre-filed testimony of Mr. Cobb, Mr. Buscher and Mr. Dunaway each discusses the applicable compliance standards when a confirmed exceedence of the Part 620 groundwater standards occurs in a monitoring well for a CCW surface impoundment unit. At page 5 of his pre-filed testimony, Mr. Buscher explains that: "The effects of the corrective action will be assessed by monitoring the groundwater quality at a site to determine when groundwater quality standards are met and the corrective action can be terminated." Is it correct that under the proposed rules, as long as an owner or operator has demonstrated compliance with the Part 620 groundwater standards, the corrective action can be terminated?

AGENCY RESPONSE: No. An owner or operator will generally be expected to complete all of the requirements of an approved corrective action. However, should the numerical groundwater quality standards be achieved prior to completion of all corrective actions, pursuant to proposed Sections 841.310(h) and (j), the owner or operator could modify their corrective action plan with Agency review and

approval. The Agency would still require the submission of a corrective action report and certification pursuant to proposed Section 841.325.

5. Please explain whether under the proposed rules the applicable groundwater compliance standards are the Part 620 groundwater standards, the background concentrations or both?

AGENCY RESPONSE: The Part 620 groundwater quality standards include nondegradation (35 Ill. Adm. Code 620 Subpart C) and numeric limits (35 Ill. Adm. Code 620.Subpart D). When evaluating compliance with the nondegradation groundwater quality standard, the Agency looks at the background concentrations. If the surface impoundment causes a statistically significant increase of the contaminant above background, the preventive response provisions of proposed Section 841.235 must be followed.

When evaluating compliance with the numeric groundwater quality standards, the Agency will look at naturally occurring concentrations to determine if that concentration is above or below the numeric limit. If the naturally occurring concentration is below the numeric limit, any subsequent monitoring results showing an exceedence of the numeric limits listed in Subpart D of Part 620 is out of compliance. If the naturally occurring concentration is above the numeric limits, any subsequent monitoring results showing an exceedence of the naturally occurring concentration values is out of compliance.

When there is an exceedence of the groundwater quality standard, the owner or operator of the unit may show that it was caused by another source.

6. Section 841.150 of the proposed rules provides that "[t]he owner or operator of the unit must submit to the Agency an application to revise any state operating permits or NPDES permits issued by the Agency as necessary as a result of preventive response, corrective action or closure under this Part." Please provide some examples of how the result of preventive response, corrective action or closure under these proposed rules would require the operator to submit an application to revise an NPDES permit.

AGENCY RESPONSE: Examples of when an owner or operator would be required to submit an NPDES permit application or modification include, but are not limited to, the following:

A) The site specific rule proposed by Ameren and adopted by the Board for Ash Pond D at Hutsonville (35 Ill. Adm Code 840) is a good example. In addition to capping Ash Pond D, the rule requires a hydraulic containment system to capture contamination in the upper aquifer groundwater that has gone off-site and exceeds the numerical groundwater standards. Further, the same hydraulic containment system is used to pull back a contaminant plume in the lower aquifer where the plume has moved off-site and exceeds the naturally occurring background, but does not exceed the numerical standards.

Discharge from the hydraulic containment system for both the corrective action in the upper aquifer, and preventive response in the lower aquifer will require an NPDES permit before discharge into the Wabash River.

B) **A corrective action requiring on site grading of the area around a CCW impoundment, rerouting of the discharge stream, and relocating the discharge outfall, would require a modification of the NPDES permit.**

C) **If a corrective action would involve changing or modifying the NPDES to allow stormwater to be directed to another impoundment, for example.**

D) **If groundwater control system requires additional discharges to the current NPDES system.**

E) **If the closure plan or corrective action plan involves construction that disturbs more than one acre, a construction storm water permit may be needed.**

a) Given that the preventive response, corrective action or closure activities are subject to the Agency's review or approval, rather than leave it to the owner or operator to try to determine whether the Agency believes that any part of those approved activities trigger the need to modify an existing NPDES permit, isn't it more appropriate to provide that the Agency may require the owner or operator to apply to revise its permit as necessary as a result of any of these actions?

AGENCY RESPONSE: No. Owners or operators are responsible for having the appropriate NPDES permit.

b) If the owner or operator fails to recognize that something in the preventive response, corrective action or closure under these proposed rules may trigger the need to modify an existing NPDES permit, then is the owner or operator out of compliance with proposed Section 841.150 rule and subject to potential enforcement for that noncompliance?

AGENCY RESPONSE: Yes. The Agency may pursue enforcement under Section 12 of the Act, Subtitle C, or this proposed section.

c) Does section 841.150 potentially and unnecessarily duplicate requirements under existing regulations for state operating permits or NPDES permits and/or the provisions of those permits which specify when an application to revise or modify the permit is required?

AGENCY RESPONSE: Yes. This provision was merely intended to be a check or cross reference with respect to existing NPDES requirements. This was recommended to the Agency during stakeholder outreach. We have no objection to removing this Section, if the Board so chooses.

7. Did the Agency consider reducing the list of chemical constituents that are required to be monitored to match the shorter list of chemical constituents that the proposed federal rules for CCW surface impoundments require and if so, why did the Agency decide not to reduce the list of chemical constituents for which monitoring is required?

AGENCY RESPONSE: Yes, the Agency considered it and rejected it for several reason reasons: 1) Illinois has groundwater quality standards for chemical constituents (35 Ill. Adm. Code 620) that must be met on-site at these facilities that apply now; 2) U.S. EPA's list of constituents do not apply now; 3) the Agency has a significant amount of groundwater quality data for these sites that U.S. EPA may not have; and 4) sampling can be reduced to semi-annual from quarterly if not detected.

a) If leachate from the unit to be monitored is collected and analyzed by the owner or operator, would the Agency be willing to use that analytical data as a basis to shorten the parameters monitoring list to only those parameters which are shown to be detected within the leachate from the Unit?

AGENCY RESPONSE: The Agency believes the full list is needed as future influent and the chemical makeup of the influent may be different than what is currently being sent to the impoundment. In addition, many of the existing impoundments have been in existence for many years. The current influent may not be reflective of the total chemical makeup of what has been placed in the impoundments over the length of their existence.

b) Is the Agency also willing to consider including a provision in the rules that if a specific parameter is not detected in the monitoring results obtained over the course of several consecutive monitoring events, the parameter can be removed from the list?

AGENCY RESPONSE: No. Please see the Agency's response to question 7(a) above.

II. QUESTIONS FOR RICHARD P. COBB

Power Generating Facilities Where GW Standards Exceeded (Prefiled Testimony at pp. 3-4)

1. MWGen Power Stations Impoundments- Periodic Ash Removal. The following questions refer to Attachment I and specifically, unless otherwise stated, to the MWGen Will

County, Waukegan, Powerton, Joliet 29 and Crawford Station portions of Attachment 1 (at p. 21 of Pre-Filed Testimony):

a) Excluding the Crawford Station, because no impoundments are listed for Crawford in Attachment 1, is it correct that none of the impoundments identified on Attachment 1 for the MWGen Stations are used as permanent disposal sites for ash but rather the ash that collects in these impoundments is removed on a periodic basis?

AGENCY RESPONSE: It is the Agency's understanding that ash is removed on a periodic basis from these impoundments.

b) Are there other impoundments owned or operated by the entities listed in Attachment 1 which are not used as permanent disposal sites for ash and from which ash is removed on a periodic basis?

AGENCY RESPONSE: As impoundments that are not closed have the option to remove ash for beneficial use and can close by complete removal of ash, the Agency cannot say whether impoundments that are not closed are permanent disposal sites for ash. Venice and Hutsonville Ash Pond D would be termed permanent disposal sites.

2. Regarding the MWGen Will County Surface Impoundments:

a) Attachment 1 to your pre-filed testimony notes that it has four impoundments, but is it also correct that under the terms of the CCA, two of those impoundments, Ponds 1 North and 1 South, are to be removed from service?

AGENCY RESPONSE: Yes

b) If the two Will County impoundments are removed from service prior to the enactment of these proposed rules, will they be subject to the proposed closure requirements of these proposed rules?

AGENCY RESPONSE: If all CCW or leachate from CCW is removed before the effective date of these rules, this Part would not apply.

3. Regarding the MWGen Will County, Joliet 29 and Powerton Stations:

a) As part of the work that was done by MWGen under the Will County Station CCA, is it correct that one of the two remaining impoundments was to have its liner replaced with a new synthetic liner subject to Agency approval of the proposed liner specifications?

AGENCY RESPONSE: Yes for Will County Power. Pond 3S is lined with an HDPE liner, Pond 2S is to be lined with an HDPE liner, and Ponds 1N and 1S are to be removed from service and a dewatering system installed.

b) Is it also correct that one of the impoundments at the Joliet 29 Station, Pond #3, was to have its liner replaced with a new synthetic liner subject to Agency approval of the proposed liner specifications?

AGENCY RESPONSE: Yes, it is true.

c) For Powerton, two of the impoundments had their liners replaced with new synthetic liners and received Agency approval of the proposed liner specifications, correct?

AGENCY RESPONSE: Two impoundments at Powerton did have new synthetic liners installed.

d) Under the proposed rules, at the time of closure of these re-lined ponds, and if the ash is removed from the ponds prior to closure, is it correct that the liners themselves also will have to be removed to complete closure? If your answer is "yes," please explain why it is the Agency's position that even the liners have to be removed to complete closure?

AGENCY RESPONSE: Under the rules proposed to the Board, the answer is yes. However, the Agency recommends that the Board delete the "removal of containment system components" requirement found in Section841.400(b) from the proposed rule. See the Agency's response to Midwest Generation's Questions to William Buscher, question 6.

4. Regarding the MWGen Will County, Waukegan & Powerton Stations:

a) For the Will County and Powerton Stations, in addition to the establishment of a GMZ, is it also true that the land owned by MWGen within the GMZ is also subject to an Environmental Land Use Agreement (ELUC) which restricts the use of any groundwater within this area?

AGENCY RESPONSE: Yes.

b) For the Waukegan Station, in addition to an existing ELUC that ComnEd has for an adjacent former Tannery Site, is it also true that the land owned by MWGen within the GMZ is also subject to an ELUC which restricts the use of groundwater within this area?

AGENCY RESPONSE: The Agency is not aware of the location or existence of a GMZ at the Waukegan Station. The Agency is aware of two areas, based on data provided by Midwest Generation, which have ELUCs. One is

the former Tannery Site, the other is an area described in a letter and attachments, dated January 18, 2013, which is responsive to the compliance commitment agreement relative to violation notice W-2012-00056. Please see Exhibit K.

c) Under the proposed rules, will ELUCs continue to be available as an institutional control to address groundwater impacts?

AGENCY RESPONSE: ELUCs can be used as authorized under Section 58.17 of the Illinois Environmental Protection Act, 415 ILCS 5/58.17 (2012).

5. Questions regarding the Groundwater Monitoring Results for MWGen Stations (Attachment 1, pp. 23-36).

a) Will County Station Monitoring Results:

(1) Is it correct that for MW-1 and MW-2 on Attachment 1 at p. 23, antimony has been non-detect in the quarterly sampling conducted since these listed sampling events?

AGENCY RESPONSE: Yes, as of October 2013.

(2) Please review the monitoring results for MW-5 and confirm whether the results listed on Attachment 1 at pp. 24-5 for boron, manganese, sulfate and TDS are instead actually the monitoring results for MW -4?

AGENCY RESPONSE: Yes with the exception of pH. The actual monitoring results for MW-5 are listed below.

MW-5

Parameter	Sample Value	GW Standard	Collection Date
pH	9.30 su	6.5-9.0 su	03/16/2012
pH	9.51 su	6.5-9.0 su	03/28/2011
Boron	2.9 mg/l	2.0 mg/l	03/16/2012
Boron	3.2 mg/l	2.0 mg/l	12/08/2011
Boron	4.0 mg/l	2.0 mg/l	09/15/2011
Boron	3.2 mg/l	2.0 mg/l	06/15/2011
Boron	2.7 mg/l	2.0 mg/l	03/29/2011
Boron	2.6 mg/l	2.0 mg/l	12/13/2010
Sulfate	500 mg/l	400 mg/l	12/08/2011
Sulfate	690 mg/l	400 mg/l	09/15/2011
Sulfate	540 mg/l	400 mg/l	06/15/2011
Sulfate	570 mg/l	400 mg/l	03/29/2011
Sulfate	580 mg/l	400 mg/l	12/13/2010
TDS	1,500 mg/l	1,200 mg/l	09/15/2011

TDS	**1,400 mg/l**	**1,200 mg/l**	**06/15/2011**
TDS	**1,300 mg/l**	**1,200 mg/l**	**03/29/2011**

b) Waukegan Station Monitoring Results:

(1) Is it correct that the antimony exceedence shown on page 29 of Attachment 1 for MW-1 was an initially misreported sampling value and that the subsequently corrected value reported by MWGen's contractor did not show any exceedence for antimony?

AGENCY RESPONSE: Laboratory data sheets confirm that Antimony at MW-1 on October 25, 2010 was initially misreported to the Agency.

c) Powerton Station Monitoring Results (pp. 32-36 of Attach. 1):

(1) Is it correct that the following exceedences shown on pages 32-36 of Attachments 1 were incorrectly reported by MWGen's contractor and that the correct sampling values were not exceedences: MW-1 Boron; MW-7, MW-9 and MW -13 Selenium; and MW -12 mercury?

AGENCY RESPONSE: Laboratory data sheets confirm that Boron at MW-1 on March 19, 2012 and Selenium at MW-7 on December 12, 2011, MW-9 on March 25, 2011 and MW-13 on August 9, 2011 were initially misreported to the Agency. The Agency cannot find laboratory data sheets to confirm that Mercury at MW-12 on December 15, 2010 was initially misreported to the Agency.

(2) Is it also correct that for several of the parameters for which an exceedence is shown at a particular monitoring well, it was a one-time exceedence and the subsequent sampling results have all been below the groundwater standard?

AGENCY RESPONSE: Some monitored parameters at some monitoring wells were one time exceedences.

6. On Page 4 of your pre-filed testimony, regarding the assessments of CCW surface impoundments either by the Agency or which the Agency requested be performed by the owner or operator, you state that: "The assessments conducted determined that none of these sites with groundwater contamination threatened off-site potable water supply wells." When you refer to "these sites," that includes the MWGen Stations you have identified in Attachment 1 to your testimony?

AGENCY RESPONSE: Yes

a) If none of these sites threatens off-site potable water supply wells, why does the Illinois EPA believe these regulations must be adopted now, particularly when there are federal regulations addressing CCW impoundments that are in the rulemaking stage as well?

AGENCY RESPONSE: Illinois has groundwater quality standards that apply on-site as well as off-site. In addition, the Agency is proposing these rules in response to the site-specific rulemaking filed by Ameren Energy Resources.

Purpose of the Proposed Rules

7. On page 4 of your testimony, you state that: "As part of the further development of the Agency ash impoundment strategy, we developed these proposed regulations of general applicability specifically to fill a regulatory gap that exists pertaining to CCW surface impoundments at facilities." Please describe what you mean by the regulatory gap that exists pertaining to CCW surface impoundments at facilities?

AGENCY RESPONSE: These surface impoundments are built and operated under Subtitle C regulations. Subtitle C, however, does not contain provisions for closure or corrective action. Therefore, the Agency believes there is a regulatory gap. The Board, in an adjusted standard (AS 09-1), recommended that a site specific regulation be developed under Subtitle G to address CCW surface impoundments. In April 2013, Ameren Energy Resources filed a site specific rulemaking proposal to close multiple sites. In response, the Agency prepared and filed this proposed rule of general applicability to fill the regulatory gap.

8. Is the intended scope of the proposed rules to address threats or impacts to groundwater from CCW surface impoundments?

AGENCY RESPONSE: Yes, as well as threats or impacts to groundwater from leachate from CCW surface impoundments.

9. Is it not the intended scope and purpose of these rules to address threats or impacts to groundwater from sources other than CCW surface impoundments at these facilities? Why did the Agency decide to limit the scope of the rules to impacts from CCW surface impoundments? Is it because this is where the "regulatory gap exists" and there are other existing state programs that can address impacts on groundwater from other sources?

AGENCY RESPONSE: Yes, the Agency does not intend the scope of these rules to cover activities other than surface impoundments containing CCW or leachate from CCW. The Agency limited the scope of these rules because, as stated above, this is where the regulatory gap exists.

Metals

10. On page 7 of your pre-filed testimony, you state that: "Metals in groundwater are most soluble in water with a low pH ... " What pH range are you referring to as "low pH?" Is it the "below 4.5" pH range referenced at p. 9 of your testimony?

AGENCY RESPONSE: The statement was intended to emphasize acidic conditions at 4.5 or less.

TDS

11. On page 9 of your pre-filed testimony, you state that TDS can cause "objectionable taste and odor conditions." At what TDS concentration level do such conditions occur? Is it these types of conditions that the Class I standard of 1,200 mg/l is based on?

AGENCY RESPONSE: TDS can include sulfate, which causes objectionable taste and odor conditions at a concentration of 250 mg/l. See the Agency's response to question 12 below.

Yes, these are the types of conditions that the Class I standard is based on.

Sulfate

12. In the 1999 EPA Study of high levels of sulfate in drinking water referenced on page 9 of your pre-filed testimony, what concentrations of sulfate were reported to cause the bad taste and smell reported by the participants in the study?

AGENCY RESPONSE: 250 mg/l

Boron

13. On page 9 of your pre-filed testimony, you state that: "Boron contamination may prevent watering of sensitive plants." Please explain what this statement means, including explaining what types of plants you are referring to as "sensitive plants."

AGENCY RESPONSE: Boron is phytotoxic. Table V-14 from Water Quality Criteria 1972 describes what plants are sensitive to boron. See Exhibit L.

14. Is the boron GW standard set at a level to protect against such harm to plants?

AGENCY RESPONSE: Yes and other beneficial uses.

Applicability

15. On page 10 of your pre-filed testimony, you state that (p. 1 0) "The proposed rules apply to units: (1) in operation after the effective date of the proposed rules or (2) that have groundwater contamination attributable to the unit prior to the effective date of these rules." Isn't your reference in part (2) of this statement to units that have attributable groundwater contamination "prior to the effective date of these rules" inconsistent with the language of proposed section 841.105 which states that for units that are "not operated after the effective date of these rules", Part 841 applies when CCW or leachate

from CCW "causes or contributes to an exceedence of the groundwater quality standards on or after the effective date of these rules?"(emphasis added).

AGENCY RESPONSE: The Agency agrees. This was accidentally miscopied from page 18 of the Technical Support Document.

16. On pp. 10-11 of your pre-filed testimony, you describe the exemption from these proposed rules set forth in section 841.105(b)(4)(A) through (C), is it correct that all three requirements set forth in subparagraphs (A) through (C) of this subparagraph (i.e., the liner requirement, the removal of the CCW or the CCW leachate from the unit in a one year or less time period and the maximum volume of no more than 25 cubic yards) must be satisfied in order for the surface impoundment unit to be excluded from these proposed rules?

AGENCY RESPONSE: Yes. Unless otherwise exempt under proposed Section 841.105(b), all three are required. The Agency received written and verbal stakeholder input from Midwest Generation, Old Dominion, and Prairie State suggesting that a de-minimus exemption be developed. The Agency developed the de-minimus exemption in subsection (b)(4)(A)-(C).

a) If your answer is "yes," why isn't it sufficient for purposes of minimizing the risk of exposure to seasonal recharge from precipitation, to remove all CCW and any associated leachate on an annual basis, even if the quantity is somewhat more than 25 cu. yds., if the unit has the low permeability liner required by this proposed rule?

AGENCY RESPONSE: All three are required because it provides a multiple barrier approach to protection. For example, if one barrier fails then there are two more to ensure protection.

b) Why is 25 cu.yds. a threshold for additional risk?

AGENCY RESPONSE: See the Agency's response to question 16(a) above.

c) What is the source or basis of the permeability standard of 1×10^{-7} centimeters?

AGENCY RESPONSE: The basis for 1×10^{-7} centimeters per second (cm/s) is from Table 5.5.1 entitled Typical Values of Hydraulic Conductivity and Permeability from Jacob Bear's Dynamics of Fluids in Porous Media. Unweathered impervious clay has a permeability of 1×10^{-7} cm/s. See Exhibit M.

17. On page 11 of your pre-filed testimony, you state: "The Agency also excludes units used to only collect stormwater runoff, which does not contain leachate, because this represents a low potential for groundwater contamination." Given that the definition of "leachate" in the proposed regulations is what is "generated from the storage of CCW in a

surface impoundment", as explained on p. 12 of your testimony, does this exclusion apply provided the stormwater unit does not collect stormwater from a CCW surface impoundment?

AGENCY RESPONSE: Yes, but run-off from a CCW storage pile would also be considered leachate. Therefore, the exclusion applies if it does not collect storm water from a CCW surface impoundment, runoff from a CCW storage pile or other CCW source, or leachate from a CCW landfill or other CCW source.

18. At page 11 of your pre-filed testimony, you state that: "Stormwater is a disperse nonpoint source of pollution that does not have a significant hydraulic head." Please explain how this infom1ation is relevant to the proposed exclusion for stoml water runoff units?

AGENCY RESPONSE: The testimony was referring to stormwater running over the land surface, not stormwater collected in an impoundment which has a hydraulic head.

Definitions

19. Beginning at the bottom of page 11 and continuing to page 12 of your pre-filed testimony, you discuss the "compliance point" definition in Section 841.110 of the proposed rules, which includes language that the compliance point is "a lateral distance of 25 feet from the outer edge of the unit, or property boundary, whichever is less." Please explain the basis for the restriction to a lateral distance of 25 feet even if the location of the facility's property boundary is greater than 25 feet?

AGENCY RESPONSE: The "compliance point" as described is consistent with the point of compliance in Part 620. See 35 Ill. Adm. Code 620.240. Within the 25 foot distance, the groundwater is Class IV. Please also see answers to Board Questions 21 and 22 for clarification and suggested alternate language. Subsection 620.240(e)(1)(A) indicates: A lateral distance of 25 feet from the edge of such potential source or the property boundary, whichever is less.

a) In the solid waste landfill regulations in Part 810, Section 810.103 defines "Zone of attenuation" to mean "the three dimensional region formed by excluding the volume occupied by the waste placement from the smaller of the volumes resulting from vertical planes drawn to the bottom of the uppermost aquifer at the property boundary or 100 feet from the edge of one or more adjacent units." Why is the Agency proposing here the much shorter distance of 25 feet from the edge of the unit?

AGENCY RESPONSE: The Agency relied on Part 620 in determining where the compliance points were located. This smaller distance was adopted by the Board for potential primary and secondary sources (excluding landfills)

in Section 620.240(e) because these units are generally smaller than landfills and do not require a larger area for determining compliance.

b) In the currently proposed federal coal combustion residual (CCR) rules, it is proposed that the compliance boundary be established at 150 meters down gradient of the unit boundary or the facility property line, whichever is closer. Did the Agency consider using the 150 meters distance instead of the lateral distance of 25 feet and if so, why did the Agency reject the use of the 150 meters distance?

AGENCY RESPONSE: The Agency elected to follow the compliance distance already applicable to these units pursuant to Section 620.240(e)(1)(A).

c) In the Part 814 landfill regulations, in section 814.402(b)(3), it is provided that upon a petition by the owner or operator, the Board may provide for a zone of attenuation and adjust the compliance boundary. Is it correct that such a provision for petitioning the Board to provide a zone of attenuation and to adjust the compliance boundary is not included in these proposed rules and, if not, why not?

AGENCY RESPONSE: The proposed rules do not contain this provision because anyone can seek an adjusted standard from the Board's rules of general applicability pursuant to Section 28.1 of the Act.(415 ILCS 5/28.1.)

20. Section 811.317 of the Solid Waste Landfill rules addresses groundwater impact assessments and provides for a systematic assessment of the impacts of the seepage of leachate from a solid waste unit, including the use of a groundwater contaminant transport model. Please explain whether, and if so, how, the Agency considered this approach to assessment of impacts from CCW surface impoundments in these proposed rules?

AGENCY RESPONSE: The Agency did consider this approach to assessment of impacts from CCW surface impoundments in these proposed rules for both a corrective action at a unit and closure of a unit. The proposed rule includes the Corrective Action Sections 310(e) and (f) as well as the Section 410(a) and (b) which address this issue. Specifically, Section 310(e) requires that the corrective action plan include groundwater modeling results and supporting documentation be provided as applicable, to establish a GMZ. Again, the Closure Plan Section 410(a)(7) requires the groundwater modeling results and supporting documentation be provided where appropriate, to establish a GMZ.

21. At page 12 of your pre-filed testimony, you state that: "Moreover, chemical constituent concentrations may exceed the standards in Section 620.410, but must not exceed existing concentrations, within the boundary of an Agency approved GMZ."

a) Please explain how the "existing concentrations" of a chemical constituent are to be determined?

AGENCY RESPONSE: On the effective date of an Agency-approved GMZ pursuant to Section 620.250, existing concentrations are contaminant(s) confirmed by groundwater monitoring sample results exceeding the applicable groundwater standard that either led to a party to seeking a GMZ on a voluntary basis or in response to enforcement. Prior to obtaining a GMZ such a site is subject to daily fines and penalties. There was recognition in the GMZ process that groundwater contamination can take a long time to correct. Therefore, while the corrective action is underway, the otherwise applicable standards are stayed, under the condition that groundwater is being managed to mitigate impairment to groundwater caused by a release of contaminants from a site, and that actions are being implemented to correct this impairment. The existing concentrations of contaminants that apply on day one (time (t1) of GMZ approval are expected to decrease over time. The concentration in mg/L at t2, t3, t4...etc., should continue to decrease over time. Thus, the purpose of staying the otherwise applicable standards is not to condone the release of additional contaminants to the existing contaminant concentrations, but to restore groundwater quality.

b) Is a statistical analysis applied to make this determination?

AGENCY RESPONSE: A statistical method may be used.

c) If a statistical analysis is applied to make this determination, is it an intra well statistical analysis that is required for each of the GMZ wells?

AGENCY RESPONSE: An intra well statistical analysis may be used

d) Will that be considered the compliance point(s)?

AGENCY RESPONSE: Points of compliance for a groundwater management zone would be locations meeting the definition of compliance point in proposed Section 841.110 for a groundwater management zone. These compliance points could be located no farther than the boundary of the approved groundwater management zone. The Agency expects these to be located close to but inside the surficial boundary of the approved GMZ. Generally, a groundwater management zone boundary should outline the region of a worst-case extent of a groundwater contamination plume. There is also a depth component attached to a groundwater management zone based upon vertical extent of impact.

22. On page 12 of your pre-filed testimony, you explain that because it is "the hydraulic head on CCW in a surface impoundment unit that increases the production of leachate migration into the water table", the proposed leachate definition is leachate that "is generated from the storage of CCW in a surface impoundment, and is not just storm water runoff that may have come into contact with fugitive ash." Is it also correct that the proposed leachate definition also excludes, and does not apply to, the ash slurry or

combination of ash and wastewater within the conveyance system used to transport it to the surface impoundment unit?

AGENCY RESPONSE: No.

Previous Investigations, Plans and Programs

23. On page 18 of your pre-filed testimony, you note the significant amount of information already available for many of the CCW surface impoundment sites and state: "Therefore, the Agency proposes that previous investigations, plans or programs already in place may be used to meet the requirements of this section, provided all components required in this section are included." Has the Agency reviewed the previous assessments and the components of the CCAs entered into between it and MWGen for the MWGen stations as shown on Attachment 1 to your testimony and determined that all of the components required in this section are included?

AGENCY RESPONSE: The Agency has not reviewed the previous assessments and components of the CCAs and compared them to the requirements of the proposed rule.

III. QUESTIONS FOR WILLIAM E. BUSCHER

Subpart C - Corrective Action

1. At the bottom of page 3 of your pre-filed testimony, you discuss an owner or operator's option to demonstrate that an exceedence of the groundwater standards "is not a result of the operation of the Unit." Is it correct that under the proposed rules, there is a presumption that any confirmed exceedence of the groundwater standards detected in a monitoring well is a result of the operation of a CCW surface impoundment and the burden of proof to show otherwise is on the owner or operator under proposed Section 841.305 Alternate Cause Demonstration?

AGENCY RESPONSE: Yes.

a) What if any criteria apply to the review process by which the Agency will make a determination whether the exceedence is not the result of the operation of the unit?

AGENCY RESPONSE: The criteria would include reviewing site specific groundwater flow information and site specific spatial distribution of where the exceedence of the groundwater standards occurs.

b) If the groundwater concentrations above the groundwater standards for the particular constituents detected in both upgradient and downgradient monitoring wells for a Unit are substantially the same or if the concentration levels of groundwater exceedences concentrations for the constituents in the downgradient

monitoring well are lower than in the upgradient well, is this sufficient evidence for the Agency to determine that the release is not associated with the Unit? If not, what else is necessary?

AGENCY RESPONSE: No. In this case, the groundwater flow conditions would need to be carefully evaluated. Many of the impoundments are located near rivers or lakes where groundwater flow direction may change on a regular basis due to the change in elevation of the water body.

c) If the Agency concurs with the owner or operator's alternative cause demonstration that the release is not attributable to a unit but is either due to natural causes or another source, does the owner or operator have to continue thereafter to notify the Agency of confirmed detections of concentrations above any groundwater quality standard for these constituents in the subject monitoring wells?

AGENCY RESPONSE: If the concentration of a constituent exceeds the numerical groundwater quality standard and the exceedene is due to natural causes the owner or operator would not have to notify the Agency of confirmed detections of concentrations above any numerical groundwater quality standard because it would appear that there has not been a release from the unit. In this case, the applicable groundwater quality standard would be the naturally occurring concentration. However, the owner or operator would have to notify the Agency of confirmed detections of concentrations above the naturally occurring concentration in groundwater for these constituents in the subject monitoring wells.

If the concentration of a constituent exceeds the numerical groundwater quality and the Agency agrees that the exceedence is not attributable to the unit, the owner or operator would not have to continue thereafter to notify the Agency of confirmed detections of concentrations above any numerical groundwater quality standard for constituents in the subject monitoring wells. However, the owner or operator would have to notify the Agency of confirmed detections of concentrations above the concentration in groundwater which has been determined not to be attributable to the unit. Stated another way the Agency would like to be notified if concentrations on the site exceed up gradient background levels.

d) Can the required monitoring list be shortened by those parameters which are determined to no longer be useful in monitoring if a release from a regulated unit has occurred?

AGENCY RESPONSE: No

2. If the Agency concurs with the owner or operator's alternate cause demonstration that the exceedence is due to a source other than a unit, but that source still exists at the site, such

as a source associated with historical plant operations, is it correct that any corrective action regarding that other source is not governed by these proposed rules but instead could be addressed under existing programs such as the Site Remediation Program under Part 740 of 35 Ill. Adm. Code?

AGENCY RESPONSE: If the Agency concurs with the owner or operator's alternate cause demonstration that the exceedence is due to a source other than a unit, but that source still exists at the site, such as a source associated with historical plant operations, it is correct that any corrective action regarding that other source is not governed by these proposed rules. However, the use of the Site Remediation Program under Part 740 of 35 Ill.Adm.Code will be determined on a site specific basis by the Agency.

3. Do the proposed rules allow for the use of a Tiered Approach to Corrective Action ("TACO") as provided under Part 742 of35 Ill. Adm. Code and if not, why not?

AGENCY RESPONSE: No, the use of a Tiered Approach to Corrective Action ("TACO") as provided under Part 742 of 35 Ill. Adm. Code is not intended for these sites. The impoundments at these sites are operated under permits issued by Agency must be in compliance with permit conditions.

a) If the Part 742 TACO regulations are not applicable, why is it appropriate to apply TACO standards to ash constituents like boron or sulfate that are impacting groundwater from a historical source but not allow those same standards to apply to a release from an existing CCW surface impoundment unit for the same constituents?

AGENCY RESPONSE: The impoundments at these sites are operated under permits issued by Agency must be in compliance with permit conditions.

4. On page 4 of your pre-filed testimony, you reference the use of an institutional control prohibiting potable water use as part of an owner or operator's corrective action plan, whether or not it is the Agency's intention under these proposed rules that corrective action plans may incorporate and rely on the provisions for institutional controls that are provided in Subpart J ofthe Part 742 TACO regulations? And if so, where is that provided in the proposed rules? If not, then how will the Agency make the determination of what is or what is not an acceptable institutional control?

AGENCY RESPONSE: The use of a TACO as provided under Part 742 of 35 Ill. Adm. Code is not intended for these sites. The Agency will make the determination of what is or what is not an acceptable an institutional control prohibiting potable water use at a site on a case by case basis.

Closure

5. On page 6 of your pre-filed testimony, referring to the closure process for CCW surface impoundments, you state: "This process may be completed with ash left in place or after ash has been removed." If ash is left in place, isn't the situation substantially similar to that of a closed solid waste landfill where the waste has been left in place and if so, why are these CCW -specific closure rules necessary instead of simply applying the same closure rules that already exist for solid waste landfills under Parts 811 and 814?

AGENCY RESPONSE: These surface impoundments are not landfills. The Illinois Pollution Control Board has determined that a site specific rulemaking was in order for the Hutsonville ash pond D. Please See 35 Ill. Adm. Code 841; AS 09-01.

6. On page 6 of your pre-filed testimony, you state: "If all ash is removed from the impoundment, a final cover system would not be required but the impounding structure would need to be removed." If all ash is removed, explain what the "impounding structure" consists of and why it also must be removed in order to complete the closure process?

AGENCY RESPONSE: The "impounding structure" refers to containment system components which include the liner and liner subbase. The liner does not include the berm or impounding structure

a) Has the Agency considered that the same level of protection could be achieved by allowing the alternative of cleaning the liner surface of CCW, compromising its integrity to allow precipitation to pass through it and then backfilling with clean fill?

AGENCY RESPONSE: The Agency considered this issue and believes that there will be cases where the liner could be cleaned and this approach has merit as long as the closure plan is protective of groundwater.

b) Has the Agency considered what the potential additional cost is to an owner or operator of have to remove the impounding structure and transport and dispose of it in a landfill?

AGENCY RESPONSE: Yes, the Agency has taken these comments under consideration and recommends the Board delete the "removal of containment system components" requirement found in Section841.400(b) from the proposed rule. The Agency requests the Board consider this proposed change:

Section 841.400 Surface Impoundment Closure

b) If closure is to be by removal of all impounded coal combustion waste, and leachate from coal combustion waste, the owner or operator shall remove all coal combustion waste~~, as well as containment system~~

~~components (liners, etc)~~. **All coal combustion waste must be properly disposed unless beneficially reused.**

Closure Prioritization

7. On page 8 of your pre-filed testimony, you state: "A unit is inactive if it has not received coal combustion waste, or leachate from coal combustion waste, within the most recent period of eighteen months. If an impoundment has not received ash for eighteen months it is expected that the power plant has other impoundments it is utilizing."

   a) If an impoundment is undergoing some type of repair or renovation or ash removal that extends for a period of over 18 months, would it have any means under the proposed rules to request and receive an extension of this eighteen month period so that it was not required to proceed to submit a closure plan given its intent to continue using the Unit?

   AGENCY RESPONSE: No.

   b) If such an extension provision is not in the proposed rules, is the Agency willing to consider including one?

   AGENCY RESPONSE: No. The owner or operator may elect corrective action instead of closure.

8. On page 8 of your pre-filed testimony, regarding closure of an active Category 3 Unit causing an exceedence under Section 841.405(a)(3) of the proposed rules, you state: "If the Unit is active, a closure plan must be submitted to the Agency within two years of confirmation of an exceedence of an applicable groundwater standard attributable to a release from the Unit. The Unit shall be closed within five years of the Agency's approval of the closure plan, unless the Agency approves a longer time period." Your testimony seems to indicate that closure under these conditions is mandatory, whereas the introductory paragraph of Section 841.405 contains the language that in addition to a confirmed exceedence, "the owner or operator elects to close the unit(s)," please explain the intended meaning ofthis provision of Section 841.405(a) and whether and when closure is required under 841.405?

   AGENCY RESPONSE: Closure is not mandatory for a Unit causing an exceedence of the groundwater quality standards. The owner or operator may choose to complete a corrective action.

   a) In Section 841.405(a), where an exceedence has been confirmed, other than referencing an exception for an owner or operator making an alternative cause demonstration, it does not appear to allow the owner or operator the opportunity to address the exceedence at a compliance point through a corrective action plan, is this correct?

AGENCY RESPONSE: No, the owner or operator does have the opportunity to address an exceedence at a compliance point through an approved corrective action plan. See proposed Section 841.300(b) and 841.405.

b) Does the requirement to close the unit apply to a unit for which a GMZ has been approved by the Agency and the exceedence occurs within the boundaries of the GMZ?

AGENCY RESPONSE: There is no requirement to close a unit as the owner or operator may elect to pursue corrective action. When a unit with a GMZ elects to close, these proposed rules would apply.

c) Does the requirement to close the unit apply where the exceedence occurs within the boundaries of an ELUC or other institutional control which contains prohibitions on the use of groundwater?

AGENCY RESPONSE: There is no requirement to close a unit as the owner or operator may elect to pursue corrective action. When a unit with a institutional controls elects to close, these proposed rules would apply.

IV. QUESTIONS FOR LYNN E. DUNAWAY

1. Will you be the primary person at the Agency to review the owner or operator's statistical methods used and analysis of chemical constituent concentrations in groundwater that are required under the proposed rules?

AGENCY RESPONSE: No, I will be one of at least four people reviewing submissions under these proposed rules.

2. Have you encountered situations where CCW surface impoundments have been in operation at facilities for many years and there is one or more historical sources of impacts to groundwater with similar chemical impacts on the groundwater at the facility?

AGENCY RESPONSE: Yes.

a) Can the statistical analysis that is conducted in such situations to try to differentiate between the potential sources of groundwater be relatively complex?

AGENCY RESPONSE: Yes

b) In such circumstances, is there any concern that the Agency may not have the resources to properly evaluate submittals and make determinations regarding whether the appropriate statistical equations are being both properly used and implemented?

AGENCY RESPONSE: The Agency does not have a statistician on staff and some situations involve complex statistics.

c) Has the Agency given any consideration to, and if not would it consider, allowing for the retention of an experienced professional statistician, at the owner or operator's cost, to provide assistance in reviewing and evaluating such submissions similar to the allowed use of a licensed professional engineer, called a RELPE under the Part 740 regulations, specifically along the lines provided for the professional to perform review and evaluation services under the direction of the Agency?

AGENCY RESPONSE: No.

Determining Background Values

3. On page 2 of your pre-filed testimony, you state: "In the proposed Part, the term "background" is applied broadly, because background values must be calculated for all monitoring wells, not just those wells which are up gradient of regulated units." Is the term "background" in the proposed rules interpreted or applied differently here than it is for solid waste landfills under Parts 811 and 814 of the existing Board regulations? If so, please explain what the difference is and why the Agency is proposing to apply the term "background" differently for CCW surface impoundment units versus landfills?

AGENCY RESPONSE: In these proposed rules, background is interpreted as existing concentrations of chemical constituents in groundwater: which may or may not have been impacted by a unit regulated pursuant to this proposed Part; may originate from anthropogenic activities (other than regulated units) that may or may not be owned or controlled by the owner or operator of a regulated unit; or may arise from naturally occurring variability in groundwater quality. CCW surface impoundments are specifically excluded from the definition of landfills.

a) Why isn't the requirement to develop background values for all wells, both upgradient, downgradient and or otherwise, limited to those situations where there is high spatial variability in the overall data set or where a representative upgradient data set cannot be generated?

AGENCY RESPONSE: The variability of conditions at the various facilities throughout the State results in multiple combinations of possible complicating factors. The proposed Part is a rule of general applicability and must be applicable in all situations.

b) If there is a requirement to establish individual background values for each parameter at each individual monitoring well location, why is this necessary other than for those parameters which may be causing an upgradient vs. downgradient statistical issue?

AGENCY RESPONSE: See answer to question 3(a) above.

c) Isn't a requirement to prepare intrawell background calculations for each parameter for all monitoring wells, regardless of whether they are up gradient or downgradient, regardless of whether there is an impact or threat to groundwater detected at that well potentially unnecessary, burdensome and costly?

AGENCY RESPONSE: See answer to question 3(a) above.

4. Is it reasonable to assume that there could be a situation where the background interference from non-CCW Surface Impoundment Unit sources is so similar to that presented by a release from a CCW Surface Impoundment Unit that it would make statistical monitoring of chemical constituents ineffective for determining whether there may have been a release from the regulated Unit and one would instead have to rely on other physical monitoring such as water levels? If yes, do the proposed rules allow for such reliance on information or data other than statistical methods of evaluation?

AGENCY RESPONSE: The hypothetical situation you describe could exist. Groundwater levels must always be taken into consideration, otherwise there would be no way to tell if the hypothetical unit being described is up gradient or down gradient of the regulated unit. These proposed rules do allow the use of information other than statistical analysis, for example the alternative cause demonstration in Section 841.305.

5. In the Part 811 regulations for landfills, Section 811.320(d)(l) provides that the initial monitoring to determine background concentrations commences during the hydrogeological assessment required under those rules and is established based on consecutive quarterly sampling of wells for a minimum of one year. Where in these proposed rules is it specified when and on what amount of sampling data the background concentrations are to be determined?

AGENCY RESPONSE: Section 841.220 requires that the number and type of sampling must be adequate to be matched with a statistical method. In response to the Board's questions, the Agency now proposes additional changes to Section 841.130 such that that background must be established within one year of the effective date of these proposed rules.

6. How does one calculate a "background" value for a monitoring well immediately down gradient of a regulated unit?

AGENCY RESPONSE: Background for a monitoring well immediately down gradient of a regulated unit would be calculated by collecting the appropriate number and type of samples to meet the requirements of a selected statistical method. The resulting "background" values represent current groundwater quality at that location.

Statistical Methods

7. On page 3 of your pre-filed testimony, you state: "Any statistical method that is selected must meet the performance criteria of proposed Section 841.225(b)." How will IEPA approach determining whether the performance criteria have been met and what will be the basis of that determination?

   AGENCY RESPONSE: The Agency will research the proposed method to the best of its ability, ask questions of the owner or operator and their consultants, and make an informed decision.

8. On page 4 of your pre-filed testimony, you state: "If the chemical constituents' concentrations are nonparametric, then the data must either be transformed (e.g., using the log of the chemical constituent concentration) or a nonparametric statistical method must be used." Is it correct that there are different types of nonparametric statistical analyses, some less complex and some more complex, but the proposed rules allow the owner or operator to choose among those analyses provided that the one selected is appropriate to use based on the data set?

   AGENCY RESPONSE: Yes.

9. On page 5 of your pre-filed testimony, you state: "Proposed Section 841.225 allows the use of control charts if approved by the Agency. The Agency must find that a control chart will monitor chemical constituent concentrations in a manner that will protect human health and the environment." Please explain in more detail what control charts are and how they are to be used under the proposed rules, including what their purpose is, how they are constructed and how they are interpreted?

   AGENCY RESPONSE: Control charts, as discussed in the Unified Guidance, combine a prediction limit with a cumulative sum, which essentially graphs the data on an on-going basis. Both of these measures are used to compare recent monitoring data to assess compliance relative to a background (baseline) value.

   a) What criteria will the Agency use to determine whether a control chart will monitor chemical constituent concentrations in a manner that will protect human health and the environment?

      AGENCY RESPONSE: Most importantly, the Agency will have to be satisfied that the groundwater data used to establish the background (baseline) value is not already contaminated. Further, the Agency would need to evaluate if the prediction limit in the control chart would be accurate enough to demonstrate increasing trends or prevent exceedences of numerical groundwater standards that are not random events.

10. On page 6 of your pre-filed testimony, you state: "If the number of non-detects is large enough they may cause chemical constituent concentrations to be nonparametric. In such an instance, a different statistical method may be required to analyze the particular chemical constituent(s) that are nonparametric."

    a) Do you agree that the list of chemical constituents in Section 620.410(a) and (e) that an owner or operator is required under proposed Section 841.215 to monitor for includes certain constituents which are not typically associated with coal ash, such as perchlorate and cadmium?

    AGENCY RESPONSE: The Agency agrees that perchlorate is not typically associated with CCW. The Agency would recommend that the Board exclude perchlorate from the list of required constituents. However, CCW is known to contain small amounts of Cadmium and various other metals.

    b) Is there any provision in the proposed rules that allow an owner or operator to stop monitoring for a particular chemical constituent when after a period of time that chemical constituent is not detected, as is allowed after two consecutive quarters of no detections under the assessment monitoring provisions of Part 811 landfill regulations in Section 811.319(b)(5)(G)? If so, please identify where such a provision exists in the proposed rules? If no such provision exists, is the Agency willing to include one that is similar to Section 811.319(b)(5)(G)?

    AGENCY RESPONSE: No. Given the changing technologies that are being applied to meet more stringent air quality regulations, the Agency believed it premature to include such a provision in the proposed rule.

    c) What if any benefit is there for the stated purpose of these rules to performing continued detailed nonparametric analyses of constituents which are repeatedly reported to be at non-detect levels in monitoring wells?

    AGENCY RESPONSE: Given the changing technologies that are being applied to meet more stringent air quality regulations, the possibility exists that chemical constituents not previously detected in groundwater monitoring wells may become more abundant.

Sampling Frequency

11. On page 6 of your pre-filed testimony, you state: "Detections of chemical constituent concentrations that exceed standards of 35 Ill. Adm. Code 620 Subpart D, will require quarterly monitoring for those chemical constituents that exceed those standards, unless a more frequent schedule is already in place." Where the owner or operator has made the alternative cause demonstration pursuant to proposed Section 841.305 for the chemical constituent concentrations exceeding the Part 620 standards, is any monitoring still required or does monitoring cease for those constituents for which the alternative source demonstration has been made showing that the release is not from the Unit?

AGENCY RESPONSE: Monitoring does not cease. Just because an alternative cause has been identified and corrective action is not required of the owner or operator at that time, it does not necessarily follow that a regulated unit will not in the future be responsible for a release of an additional amount of the subject contaminant, necessitating corrective action.

Annual Statistical Analysis

12. On page 8 of your pre-filed testimony, you state: "If a chemical constituent concentration does not exceed a numerical groundwater standard, the annual statistical analysis must determine if a statistically significant increase, below the numerical groundwater standard, has occurred in any chemical constituent." Does the annual statistical analysis have to include those chemical constituents which have been demonstrated to be from an alternate source pursuant to Section 841.305? Is there any provision in the proposed rules that provides for the removal of such chemical constituents from the required annual statistical analysis?

AGENCY RESPONSE: Yes, the annual statistical analysis must include constituents identified as having a source identified in an alternative cause demonstration. Just because a constituent has been identified as having an alternative cause and preventive response is not required of the owner or operator at that time, it does not necessarily follow that a regulated unit will not in the future be responsible for an additional amount of the subject contaminant, necessitating preventive response.

13. On page 8 of your pre-filed testimony, you state that sampling frequency must be increased from semiannual to quarterly: "If an increase in chemical constituent concentrations is found to be statistically significant and does not exceed a numerical standard, the owner or operator has 60 days after the submission of the annual report to investigate the cause of the statistically significant increase and notify the Agency in writing stating the cause of the increase, and the means by which the alternative cause was determined."

a) Do you agree that in certain instances it may be necessary to collect additional information and to perform modeling work in order to show that the increase is due to an alternative cause and that this work may not reasonably be able to be completed within the 60 day period proposed in the rule?

AGENCY RESPONSE: There may be instances when more than 60 days are required to identify an alternative cause. However, there will also be instances when it will not take that long. Further, the 60 day deadline for a determination initiates the additional monitoring, investigation and modeling that this question suggests is necessary.

b) Would the Agency be willing to consider including in this section of the rule, which is at Section 841.235(c)(2), a provision which allows the owner or operator to obtain additional time to conduct the alternative cause review where the relevant circumstances reasonably require it before it has to increase the sampling frequency from semi-annual to quarterly and do the additional investigation and other steps required by this proposed section?

AGENCY RESPONSE: No, the Agency does not support such a change because Section 841.325(c)(2) only requires that the owner or operator determine if high priority resource groundwater exists down gradient of the regulated unit and if the chemical constituent concentrations identified represent a threat to the continued or potential use of the groundwater without treatment or additional treatment.

14. With regard to proposed Section 841.235(c)(3)(C) and the required contents of a preventive response plan, on page 9 of your pre-filed testimony, you state: "If the statistically significant increasing chemical constituent concentrations persist for more than two years, additional investigation is required since the investigation and resulting actions to date have not resolved the problem." What was the rationale for selecting the 2 year time period?

AGENCY RESPONSE: Two years was selected because the Agency believes it is a long enough time period to expect some change in water quality from actions that are being evaluated at the point of compliance, which is only 25 feet laterally from the edge of the CCW impoundment, yet a short enough time period that an increasing trend will not be allowed to reach a numerical standard.

a) In the situation where the owner or operator has as part of its corrective action already installed a groundwater control system that is containing the groundwater, such as groundwater extraction wells, or has installed another type of groundwater control or treatment system, isn't it reasonable to assume that this corrective action, particularly in a silty clay or clay unit, will need more than a two-year period to be effective in addressing the statistically significant increasing concentration?

AGENCY RESPONSE: It appears that the Agency should clarify that Section 841.235 is addressing statistically significant increasing contaminant concentrations that do not exceed numerical standards. Therefore, the actions taken are called preventive response. A corrective action is taken when a chemical constituent concentration exceeds a numerical groundwater standard caused by a regulated unit. The Agency anticipates that an owner or operator who has installed a groundwater control system as part of a corrective action for one or more chemical constituents would likely provide the Agency with an evaluation of that control systems efficacy in controlling the newly increasing constituent. If the existing corrective action will also

control the newly increasing constituent it's quite possible no further actions would be required at that time.

b) Would the Agency consider revising this proposed rule to allow for a period of longer than two-years in such circumstances before the owner or operator is required to conduct a hydrogeologic investigation or additional site investigation?

AGENCY RESPONSE: No. As explained in the Agency's response to question 14(a)above, no further action may be required. Further, Section 841.235(c)(3)(C) states that "the statistically significant increasing concentration continues over a period of two or more consecutive years." This language already allows that an increasing trend could continue past two years. The Agency anticipates that site specific data supporting a time longer than two years would be provided by the owner or operator.

Confirmation Sampling

15. On page 9 of your pre-filed testimony, you state: "Proposed Section 841.300 does not require confirmation sampling be conducted by the owner or operator when groundwater monitoring detects statistically significant increasing chemical constituent concentrations that are below a numerical standard. However, resampling a monitoring well may be necessary to meet the requirements for preventive response pursuant to proposed Section 841.235 and 35 Ill.Adm.Code 620."

a) Please explain further when resampling a monitoring well may be necessary to meet the requirements for preventive response in proposed Section 841.235.

AGENCY RESPONSE: 35 Ill. Adm. Code 620.305(b) requires that a regulated entity resample a well for the subject contaminant to confirm the detection if preventive notice is given. The Agency's position is that Section 841.235 represents preventive notice. However, Section 841.235 would allow an owner or operator to skip the resampling step.

b) Please identify with more specificity what requirements in Part 620 you are referring to.

AGENCY RESPONSE: See the explanation in the Agency's response to question 15(a).

V. QUESTIONS FOR AMYL. ZIMMER

Hydrogeologic Site Characterization

1. At the bottom of page 2 of your pre-filed testimony, you note that the Agency "will evaluate the site characterization data for existing sites in relation to monitoring plan and monitoring system design" and that "[a]ny discrepancies noted between the site

characterization data and proper designs of the monitoring systems and monitoring plans will be noted and addressed on a site-by-site basis."

a) Please provide examples of what would constitute the type of discrepancies you are referring to in your testimony, particularly in terms of what will constitute a discrepancy?

AGENCY RESPONSE: An example of the type of discrepancy to which I am referring would be if review of the hydrogeologic site characterization and associated data indicated an identified contaminant migration pathway but there is no planned monitoring of the identified pathway. In that case, the Agency may request that a monitoring well be installed at the proper location and depth. The Agency expects these discrepancies to be minimal.

b) Section 841.200(b)(3) of the proposed rule provides a general statement that hydrogeologic characterizations need to provide the data necessary to " ... develop and perform modeling to assess possible changes and benefits of potential groundwater impact mitigation alternatives." When do the proposed rules contemplate this hydrogeologic characterization is to be performed - before or after a release from a Unit has been identified?

AGENCY RESPONSE: The Agency expects much of the hydrogeologic site characterization to take place before a release from a unit has occurred as much of the data required for characterization is not release dependent. The Agency acknowledges that if a release were to occur, further investigation and characterization of the site may be needed to fill data gaps in order to effectively model potential impacts and mitigation efforts.

c) If the hydrogeologic characterization is performed before a release from a Unit has been identified, how does one know in advance what information is going to be needed to evaluate or model potential contaminant transport scenarios and/or to assist in proper development of remedial alternatives?

AGENCY RESPONSE: Please see answer to question 1(b) above.

d) In your experience, do most initial site hydrogeologic characterizations provide all the information required to develop a three-dimensional ("3-D") numerical groundwater model? Isn't it more typical to gather additional data once it is determined that a 3-D numerical model is necessary, the model is constructed and any data gaps are identified?

AGENCY RESPONSE: No, most initial site hydrogeologic site characterizations to do not provide all the information necessary. Please see answer to question 1(b) above.

e) Please explain whether this the iterative model development process envisioned by the Agency under the proposed rules, because it is not clear under proposed Section 841.200 if this approach is acceptable or if a large, complex and potentially unnecessary hydrogeologic characterization is needed to be completed before any release attributable to a Unit is identified.

AGENCY RESPONSE: As stated in the answer to question1.b) above, the Agency expects the hydrogeologic site characterization to provide much of the geologic and hydrogeologic site information that is not related to specifics of a potential future release. If a release were to occur and corrective action or closure is needed, the Agency expects that further site characterization would be needed to fill data gaps and provide release specific information for modeling of groundwater impacts and evaluating mitigation or closure activities.

Groundwater Monitoring System

2. On page 4 of your pre-filed testimony, in a situation where a GMZ has been approved as part of a corrective action, you state that "additional points of compliance in relation to the GMZ boundary and the modeled or monitored extent of contamination may then be required to be monitored."

a) If a GMZ is approved, is the compliance point or points located at the boundary of the GMZ pursuant to the definition of "compliance point" in Section 841.110 of the proposed rules which provides in relevant part that "compliance point means any point in the groundwater at which a contaminant released from the unit could pass beyond the Agency approved GMZ boundary"?

AGENCY RESPONSE: A groundwater management zone is contaminant specific. Therefore, compliance locations close to the unit would still apply for contaminants not part of the groundwater management zone. There would be separate compliance points for contaminants that are identified as part of the groundwater management zone and these would be at locations as defined in proposed Section 841.110 and based upon the extent of the groundwater management zone.

b) Please explain what you mean by these "additional points of compliance" - including whether these points could be inside, along and/or outside of the boundary of the GMZ?

AGENCY RESPONSE: Additional points of compliance for a groundwater management zone would be locations meeting the definition of compliance point in proposed Section 841.110 for a groundwater management zone. These compliance points could be located up to the extent of the boundary of the approved groundwater management zone. The Agency expects these to be located close to but inside the surficial boundary of the approved GMZ.

c) The definition of "compliance point" in proposed Section 841.110 states that "[t]here may be more than one compliance point for a particular unit(s)/GMZ." Are these the "additional points of compliance to which you are referring in your testimony?

AGENCY RESPONSE: Yes. Please see answer to question 2(a) above.

d) What criteria will be used to determine whether these additional points of compliance are necessary and if so where they will be located?

AGENCY RESPONSE: Additional points may be necessary if a groundwater management zone is approved by the Agency. Locations will be site-specific and based upon the approved boundary of the GMZ.

e) Can risk-based evaluations be used to establish that the compliance point is appropriately established at a property boundary for the facility such as where there is no downgradient receptor?

AGENCY RESPONSE: No, the compliance point definition is based upon Ill. Adm. Code Part 620.240 and 620.250.

Groundwater Monitoring Plan

3. Is it correct that proposed Section 841.210 provides for the development of a groundwater monitoring plan that is to accomplish the following two things: (1) monitor and evaluate groundwater quality to demonstrate compliance with the Part 620 groundwater standards; and (2) determine the presence of any monitored contaminant that is above background concentrations?

AGENCY RESPONSE: Yes.

4. Please identify where in Section 841.210 or anywhere else in the proposed rules it addresses the question of when the groundwater monitoring plan must be submitted to the Agency by the owner or operator?

AGENCY RESPONSE: The proposed rule does not specify when the groundwater monitoring plan must be submitted to the Agency. However, the compliance period for a new unit begins when the unit first receives waste or leachate. Therefore, a monitoring plan must be in place at that point to show compliance. For existing units, the groundwater monitoring plan must be submitted within one year of the effective date of these proposed rules.

5. In the last paragraph on page 5 of your pre-filed testimony, in reference to the required contents of a groundwater monitoring plan, you state: "An explanation of the statistical method for background, assessment, and compliance monitoring must also be included."

a) Do you agree with the contents of the Unified Guidance that the Agency proposes to incorporate into the proposed rules that provide that the amount of data needed for background depends on the method chosen and sample variability?

AGENCY RESPONSE: The amount of data needed to calculate background does depend on the method chosen, but the method chosen may also depend on sample variability.

b) If the groundwater monitoring plan is required to be submitted before there is an adequate data set to make this determination of what statistical method to use to establish background for each of the chemical constituents to be monitored, how can the owner or operator comply with this requirement?

AGENCY RESPONSE: The owner or operator will have to begin monitoring early enough to be in compliance.

c) Do you agree that under the Unified Guidance, the minimum data requirements are generally 8 rounds of data, and sometimes more, before an evaluation can be made as to what is the most appropriate statistical method to be applied? If quarterly sampling is being conducted on the monitoring wells, would this indicate that at least two years of monitoring data should be collected before this explanation regarding the statistical method for background should be required to be submitted to the Agency?

AGENCY RESPONSE: Under the assumption that eight rounds of sampling are required to establish background, and the sampling frequency is quarterly, two years of sampling data would be required. However, if eight rounds of sampling are required and the sampling frequency was monthly, one year would provide an adequate data set.

d) After a groundwater monitoring plan is submitted and new data generated for a unit suggests that an alternate statistical method might need to be employed than that originally proposed in the plan, do the proposed rules address the procedure or requirements to follow to modify the plan in such circumstances?

AGENCY RESPONSE: Yes. Proposed Section 841.210(f) states "[t]he groundwater monitoring plan and any modifications to the groundwater monitoring plan must be approved by the Agency pursuant to Subpart E of this Part." Section 841.500(b) then outlines the required contents of a proposed modification to any plan.

6. In proposed Section 841.210(d) of the proposed rules, it requires that the "[s]ampling and analysis data from groundwater monitoring must be reported to the Agency within 60 days after completion of sampling." Does this mean that the 60-day deadline begins once the sampling is completed for all of the wells which require quarterly sampling and then

there is a separate 60-day deadline for reporting to the Agency after the completion of any sampling at wells for which there is a semi-annual requirement? How does confirmation sampling fit into this timeline? Did the Agency consider alternatively providing that the sampling and analysis data is due within 30 or 60 days of the end of the required sampling frequency period?

AGENCY RESPONSE: The sampling deadline is set on a well-by-well basis. If a well is sampled, there are 60 days from that date to report the analysis of that well sample. There is a separate deadline for each well sample because, as you state, different wells can have different sampling schedules. Confirmation sampling results must then be submitted to the Agency within 30 days after the date on which the original sample analysis was submitted. This allows 90 days total for the Agency to be notified of a confirmed exceedence after the initial sample was taken. The Agency considered other options but chose this option as it allows a reasonable timeframe for confirmation and notification but also prompt notification to the Agency of a potential groundwater problem. A 30 or 60 day deadline at the end of the required sampling period could give a facility up to six additional months, depending on their sampling frequency, just to report an initial exceedence to the Agency.

Chemical Constituents and Other Data to be Monitored

7. There does not appear to be any provision in the proposed rules for eliminating the monitoring requirement for a chemical constituent which has repeatedly been undetected in the sampling of monitoring wells, is this correct? If it is correct, what is the Agency's rationale for requiring continued monitoring of a chemical constituent that is undetected over the many years that a Unit may operate?

AGENCY RESPONSE: Yes, that is correct. The rationale is based upon the fact that of the sites and units we have evaluated, many have had various sources and types of CCW material deposited in these units over time. In addition, future sources and types of CCW may also change. Therefore, in order to detect any potential problems that may be related to the various types of current and possible future sources, data needs to continue to be gathered. The Agency needs to have a history of parameter concentrations at the site on an on-going basis in order to evaluate any changes that may be related to current and new sources.

Alternative Cause Demonstration

8. If the Agency concurs with the alternative source demonstration by the owner or operator, will either the monitoring wells or the chemical constituents for those monitoring wells associated with the alternate source impacts be removed from the proposed Part 841 groundwater monitoring program because those wells or parameters cannot be used to demonstrate if there is a release from a Unit?

AGENCY RESPONSE: No, those parameters will not be removed from the program but will continue to be monitored. As stated in the answer to question 7, current and future sources may impact groundwater and the Agency needs to be able to evaluate all parameters to ensure the unit is not impacting groundwater above naturally occurring or anthropogenic background values. The facility may choose to modify their groundwater monitoring plan based upon the alternative source demonstration results if they believe an alternate monitoring system will more appropriately reflect any impacts from the unit(s). However, the Agency will not automatically approve removal of monitoring wells from the groundwater monitoring system based upon results of an alternate cause demonstration. An appropriate system must still be proposed and approved.

9. On page 8 of your testimony, you state that a 180-day timeframe for development and submittal of an alternate source demonstration is a reasonable timeframe because of the amount of information that may need to be gathered and included in that demonstration. If it is determined that a 3-D numerical modeling is needed to developing the alternate source demonstration, between the potential additional support characterization work, the modeling, interpretation and reporting, do you agree that the 180-day timeframe may not be sufficient time to complete the demonstration?

AGENCY RESPONSE: This type of situation emphasizes the need to include as much information and data as possible in the hydrogeologic site characterization that is not release dependent. If a potential impact from the unit is identified and confirmed from groundwater sampling, under the alternative cause demonstration, the facility has as much as 1 year to submit a corrective action plan in the event of Agency non-concurrence with the alternative cause demonstration. The alternative would be to appeal the Agency's decision to the Board. The Agency believes this to be a fair timetable considering the need to take prompt action if there is indeed an identified impact from a unit.

a) Is the Agency willing to consider revising the proposed rules to allow for additional time to complete the demonstration when the nature and extent of the information to be submitted warrants it?

AGENCY RESPONSE: The Agency defers to the Board.

I. QUESTIONS TO RICHARD P. COBB

1. On page 2 of the Statement of Reasons, the Agency states that dry coal combustion waste ("CCW") can be disposed of in a landfill. Could you please identify the power generating facilities in Illinois that utilize a dry ash handling system?

AGENCY RESPONSE: Fly ash is the most common CCW material which is handled dry. In most cases bottom ash is handled wet and may be dewatered and placed in a land fill. The following power generating facilites have the ability to handle ash dry:

Electircal Energy
Newton Station
Hennepen Station
Duck Creek Station
Coffeen Station
Southern Illinois Power Co-op
Wood River Station

2. On page 2 of the Statement of Reasons, the Agency states that some power generating facilities remove ash from surface impoundments and dispose it off-site. Could you please identify the power generating facilities in Illinois that remove CCW from impoundments for disposal elsewhere?

AGENCY RESPONSE: The following power generating facilites remove ash from surface impoundments and dispose it off site:

Will County Station
Joliet 29
Powerton
Waukegan Station

3. On page 3 of the Statement of Reasons, the Agency states that is aware of 89 CCW impoundments at power generating facilities in Illinois. However, on page 1 of the Technical Support Document, the Agency states that there are "approximately" 83 CCW impoundments in Illinois. Could you please provide a list of all of the CCW impoundments of which the Agency is aware, and the year in which they commenced operation?

AGENCY RESPONSE: Exhibit N contains the number of impoundments the Agency is aware of at each power generating facility. The year which each impoundment commenced operation was not available for all impoundments. The available information on the year the impoundments commenced operation can be found in Exhibit O.

4. On pages 2 and 3 of the Statement of Reasons, the Agency states that some CCW impoundments are dammed. Could you please provide a list of all such CCW impoundments, along with the acreage of the enclosure and the height of the dike for each impoundment?

   AGENCY RESPONSE: Almost all of the impoundments listed in the answer to question number three above are expected to have been constructed with some type of dike. The acreage of the enclosure and the height of each dike was not available for all of these impoundments. The available information on the acreage of the enclosures and the height of each dike can be found in Exhibit O.

5. On page 3 of the Statement of Reasons, the Agency states that "Some of the surface impoundments are lined with impermeable materials, while others are not." Could you please identify which CCW impoundments are lined, and with what type of lining?

   AGENCY RESPONSE: See Exhibit N.

6. On page 3 of the Statement of Reasons, the Agency states that "When the CCW surface impoundments are not lined with impermeable material, these contaminants may leach into the groundwater, affecting the potential use of the groundwater."

   a) Could you please identify all CCW impoundments from which contaminants currently are, or are suspected by the Agency to be, leaching into groundwater?

      AGENCY RESPONSE: The Agency cannot in all instances identify specific impoundments that are suspected of causing groundwater standards exceedences; however the Agency believes one or more impoundments at the following generating stations are causing exceedences of groundwater standards: Vermillion Station, Newton Station, Duck Creek Station, Coffeen Station, Meredosia Station, Grand Tower Station, City Water Light and Power, Hutsonville Station not included in 35 Ill. Adm. Code 840.

   b) Is the Agency aware of any lined CCW impoundments from which contaminants are, or are suspected by the Agency to be, leaching into groundwater?

      AGENCY RESPONSE: No.

   c) Is the Agency aware of any CCW impoundments at which a liner was installed after the impoundment had commenced operation? If so, what was done with the coal ash already in the impoundment prior to the installation of the liner? Did the Agency require operators to evaluate the potential for contamination from those impoundments prior to lining them?

      AGENCY RESPONSE: Yes. Except for the CCW units at the Hutsonville site, the impoundments in which appropriate liners have been installed after the impoundment began operation are all subject to periodic cleaning for off-

site disposal or beneficial reuse of coal ash. Therefore, plant operations accommodated these ponds being temporarily out of service. Groundwater monitoring at these facilities indicated exceedences of numerical groundwater quality standards; the liner installation was part of an approved compliance commitment agreement or consent order

d) Is the Agency aware of any CCW impoundments that have caused contamination of groundwater that is connected hydrologically to surface waters?

AGENCY RESPONSE: Any groundwater that has been contaminated by a CCW impoundment is fairly near the land's surface. Therefore, it can be assumed that a diffuse flow of groundwater has crossed the interface from groundwater to surface water.

e) Is the Agency aware of any CCW impoundments that are at times directly connected to surface waters, such as during flood events?

AGENCY RESPONSE: There are some CCW impoundments that have emergency outfalls permitted under the NPDES program. These impoundments could discharge directly to surface water during storm events.

7. Could you please identify all CCW impoundments that are operated under a solid waste landfill permit issued by the Agency?

AGENCY RESPONSE: There are no such impoundments.

8. Could you please identify all CCW impoundments that are operated pursuant to procedural requirements for a landfill exempt from permits under 35 Ill. Adm. Code 815?

AGENCY RESPONSE: There are no such impoundments.

9. Could you please identify all CCW impoundments known by the Agency to have been constructed:

a) Over a mine void?

AGENCY RESPONSE: The Agency does not currently track this information relative to CCW surface impoundments and cannot generate a complete list before the first hearing in the rulemaking.

b) Over a groundwater recharge area?

AGENCY RESPONSE: The Agency does not currently track this information relative to CCW surface impoundments and cannot generate a complete list before the first hearing in the rulemaking.

c) Over a wetland?

AGENCY RESPONSE: The Agency does not currently track this information relative to CCW surface impoundments and cannot generate a complete list before the first hearing in the rulemaking.

d) Over a shallow aquifer?

AGENCY RESPONSE: The Agency does not currently track this information relative to CCW surface impoundments and cannot generate a complete list before the first hearing in the rulemaking.

e) Over a site with manmade aquifer-like conditions?

AGENCY RESPONSE: The Agency does not currently track this information relative to CCW surface impoundments and cannot generate a complete list before the first hearing in the rulemaking.

10. What is the basis for the following statement on page 10 of the Technical Support Document?: "The two facilities that have the potential to impact off-site drinking water are Havana East Pond, which is lined, and currently in compliance, and Edwards, which is unlined, but currently in compliance."

AGENCY RESPONSE: This statement means that the groundwater flow direction is from under these units to off-site, and off-site groundwater is Class I: Potable Resource Groundwater (i.e. existing or future use of drinking water). However, there are no contaminants from these units that threaten to exceed naturally occurring background values off-site.

11. In assessing whether any CCW impoundments threaten off-site potable water supplies, has the Agency considered water supplies that may be needed in the future, due to the construction of new wells to meet demand from existing or expanded populations?

AGENCY RESPONSE: Yes. Class I groundwater includes existing and future uses of potable resource groundwater. Further, Richard Cobb's pre-filed testimony (pages 4-6) describes the principles of hydrodynamic dispersion that have resulted in not causing, threatening, or allowing current or future violations of the groundwater standards (i.e. includes naturally occurring background) in down-gradient off-site groundwater.

12. On pages 2 to 3 of your pre-filed testimony, you state: "Corrective actions were implemented at surface impoundments where groundwater contamination resulted from CCW prior to the TVA event under consent orders that included approved groundwater management zones . . . at Havana, Wood River, and Hennepin. The corrective action conducted under the consent order GMZ at Dynegy's Havana Station has restored

contaminated groundwater to meet the numerical groundwater standards." Have numerical groundwater standards been met at Wood River and Hennepin?

AGENCY RESPONSE: The numerical standards have not yet been achieved at all wells at either Wood River or Hennepin. However, both sites are in compliance with the requirements of their GMZs.

13. On page 3 of your pre-filed testimony, you state that "since the early 1990s, new surface impoundments have been required to be lined and groundwater monitoring wells have been installed to monitor the effectiveness of the technology controls used to prevent groundwater contamination."

    a) Are these two requirements—1) lining for new impoundments and 2) groundwater monitoring—set out in any Illinois law?

    AGENCY RESPONSE: The Agency uses its Standards of Issuance authority under Section 309.241 (35 Ill. Adm. Code 309 – SUBPART B: Other Permits) to require liners and groundwater monitoring for new impoundments.

    b) Is there any requirement, either in existing law or in the proposed rule, that a hydrogeological site characterization be completed prior to building a new CCW impoundment?

    AGENCY RESPONSE: No.

14. Under the "ash impoundment strategy" referenced on page 3 of your pre-filed testimony, has the Agency assessed the potential for groundwater flow from impoundments to surface waters?

AGENCY RESPONSE: Yes.

15. Under the "ash impoundment strategy" referenced on page 3 of your pre-filed testimony, has the Agency assessed the potential for unpermitted surface water contamination due to direct connections of impoundments to surface waters under flood conditions?

AGENCY RESPONSE: As a part of the ash impoundment strategy, the Agency has not assessed the potential for contamination from a direct connection to surface water. The Agency may have evaluated impacts to surface water under a permit issued under Subtitle C.

16. Under what legal authority did the Agency adopt its "ash impoundment strategy"?

AGENCY RESPONSE: The Agency developed and implemented a strategy under Sections 4(b) of the Act [415 ILCS 5/4(b)] as detailed in the letters requesting information from the Power Generating Facilities included in Attachment B of our

proposal. Further, the Agency implemented this strategy using its authority under Section 4(c) of the Act [415 ILCS 5/4(c)].

17. Is the Agency aware of any studies that have found that what you refer to in your prefiled testimony as "acid groundwater" (pH < 4.5) is a precondition for the groundwater transport of heavy metals like mercury? When metals are found in non-"acid groundwater" (pH > 4.5), what is the Agency's understanding of the fate of those metals in the groundwater?

AGENCY RESPONSE: No. However, the Agency would expect mercury to behave in a manner similar to other metals, but it may be more attenuated due to its physical properties.

The results of the monitoring data speak for themselves. Mercury has not been detected. Our understanding is detailed in pages 4-9 of Richard Cobb's pre-filed testimony.

18. On page 9 of your prefiled testimony, you discuss several impacts of contamination of groundwater by total dissolved solids ("TDS"), boron, and sulfate.

a) Did you review the evidence of human health risks from TDS, boron, sulfate, or manganese? If so, please describe those impacts.

AGENCY RESPONSE: Yes. Those factors were considered in the Class I: Potable Resource Groundwater standards adopted by the Board for these constituents pursuant to Section 8 of the Illinois Groundwater Protection Act (415 ILCS 55/8) and Section 27 of the Act (415 ILCS 5/27). The records in R89-14 and R89-14(B) include this information.

b) Did you review the evidence of the risks to aquatic wildlife from TDS, boron, sulfate, or mangnese?

AGENCY RESPONSE: Yes. Prior to the adoption of 35 Ill. Adm. Code 620, the General Use in combination with the Public and Food Processing Public Water Supply standards of 35 Ill. Adm. Code 303 also applied to underground water. Those factors have already been considered in the Class I: Potable Resource Groundwater standards adopted by the Board for these constituents pursuant to Section 8 of the Illinois Groundwater Protection Act (415 ILCS 55/8) and Section 27 of the Act (415 ILCS 5/27). The record in R89-14, R89-14(B), and R89-14(C) is replete with this information.

19. On pages 11 and 12 of your prefiled testimony, you state that the hydraulic head on surface impoundments is what drives contaminants into the water table. Will the Agency require the hydraulic head on the impoundment to be factored into any characterization of wells as "upgradient"?

AGENCY RESPONSE: Yes. See proposed Section 841.200. Head elevation is what is contoured in potentiometric surface maps. These maps show what areas are up-gradient or down-gradient and illustrate the direction of groundwater flow relative to CCW surface impoundment units.

20. With respect to groundwater management zones, does the Agency typically require source removal actions?

AGENCY RESPONSE: There is no typical GMZ because each GMZ depends on site specific factors, including source, soil, and hydrogeology. The Agency does not always require source removal actions for CCW surface impoundments.

21. Attached to your testimony is groundwater monitoring data for fourteen power generating facilities.

a) Is this monitoring data the most recent that the Agency has for each of the fourteen facilities? If not, could you please provide all groundwater monitoring data that has been collected from the beginning of the Agency's "ash impoundment strategy" to the present, for each of the fourteen facilities?

AGENCY RESPONSE: The Agency has provided the Board with all the information necessary to support its proposal. To the extent the Environmental Groups would like to present additional information to the Board, the Environmental Groups can submit this information into the record.

b) Could you please provide all groundwater monitoring data that has been collected from the beginning of the Agency's "ash impoundment strategy" to the present, for each of the facilities in Illinois not included with your testimony?

AGENCY RESPONSE: The Agency has provided the Board with all the information necessary to support its proposal. To the extent the Environmental Groups would like to present additional information to the Board, the Environmental Groups can submit this information into the record.

c) On page 63, Attachment XIII, CWLP Map of CCW Surface Water Impoundments, the map is missing. Could you please provide the map?

AGENCY RESPONSE: Please see Exhibit P.

22. With respect to proposed Section 841.105(b)(4), are each of the subsections (A), (B), and (C) necessary preconditions to the exemption of a surface impoundment from the rule? Could you please identify all CCW impoundments this exemption would apply to?

AGENCY RESPONSE: Yes. The Agency is unable to identify all CCW impoundments that this exemption may apply to because some units were constructed prior to the establishment of the Agency, and the Agency cannot predict how many of these units will be in operation on the effective date of the proposed rule.

23. With respect to proposed Section 841.105(b)(5), does this exemption apply to impoundments that store coal combustion waste (other than stormwater runoff)? Could you please identify all CCW impoundments this exemption would apply to?

AGENCY RESPONSE: Please see the Agency answer to Board Question 18. The Agency is unable to identify all CCW impoundments that this exemption may apply to because some units were constructed prior to the establishment of the Agency, and the Agency cannot predict how many of these units will be in operation on the effective date of the proposed rule.

24. With respect to the definition of "compliance point" in proposed Section 841.110, is the following rephrased definition equivalent to the Agency's intended meaning?: "any point in groundwater designated at a lateral distance of no greater than 25 feet from the outer edge of the unit, or at the property line, whichever is closest to the outer edge of the unit."

AGENCY RESPONSE: Please see the answers to Board questions 21 and 22 for clarification and suggested alternate language.

25. Proposed Section 841.155, pertaining to the Construction Quality Assurance Program, establishes criteria for specific closure options such as placing a final cover or installation of a groundwater collection and discharge system. Did the Agency consider including criteria that would need to be met for closure by removal of CCW?

AGENCY RESPONSE: The Agency did consider requiring a Construction Quality Assurance Program for closure by removal of CCW, and included the components of construction that may arise in any removal projects. These components include construction of dewatering equipment, ponds, ditches, lagoons and berms. The Agency, however, would not object to adding a new subsection (a)(5) that specifically lists removal, but leaves this to the discretion of the Board.

26. With respect to proposed Section 841.200, what information would the Agency view as necessary for inclusion within the required hydrogeologic site characterization?

AGENCY RESPONSE: The information necessary for inclusion would be site-specific as each site is hydrogeologically unique. Proposed Section 841.200(b) states that uses of the hydrogeologic site characterization shall include providing information to define hydrogeology, including a map of the potentiometric surface and background groundwater quality concentrations, and to assess any impacts to groundwater attributable to the unit, provide information to establish a groundwater monitoring system, and provide information to develop and perform

modeling to assess changes and benefits of potential groundwater impact mitigation alternatives. As stated, the uses of the hydrogeologic site characterization are broad. Examples of the types of information needed would include: identification of geologic and hydrogeologic materials present at the site (i.e. geologic well logs, geologic cross-sections), static water elevation levels from any preliminary monitoring conducted, any background groundwater quality data available, hydrogeologic parameter measurements for aquifers/aquitards at the site (porosity, hydraulic conductivity, etc.), identification of pumping wells in the area (potable and non-potable), identification of surface water bodies near the site, and identification of potential migration pathways. This list is not all inclusive.

27. What is the definition of a "resource groundwater," as that term is used in the proposed rules, e.g. proposed Section 841.235(c)(2)(C)?

AGENCY RESPONSE: Resource groundwater is defined in the Act as "groundwater that is presently being or in the future capable of being put to beneficial use by reason of being of suitable quality." The Agency, however, intended the reference to resource groundwater in Section 841.235(c)(2)(C) to be limited to resource groundwater specified in 35 Ill. Adm. Code 620.210(a)(1), (a)(2), or (a)(3), and 35 Ill. Adm. Code 620.230.

To correct this, the Agency proposes changing "resource groundwater" in Section 841.235 to "high priority resource groundwater," and adding a definition of "high priority resource groundwater" as follows: "'high priority resource groundwater' means Class I groundwater under Section 35 Ill. Adm. Code 620.210(a)(1), (a)(2), or (a)(3) or Class III groundwater."

These groundwater resources would have hydraulic conductivities of 1×10^{-4} centimeters per second (cm/sec) or more. A hydraulic conductivity of 1×10^{-4} is the low end of what is considered to be an aquifer. Saturated geologic materials with lower hydraulic conductivity values are not capable of producing high yielding groundwater sources for wells or ecosystems.

28. Under proposed Section 841.240(a), who is to conduct the unit inspections once every seven days, and after each storm?

AGENCY RESPONSE: The owner, operator or their designee will conduct the inspections once every seven days and after each storm.

29. Proposed Section 841.240(c) requires the owner or operator of a CCW impoundment to notify the Agency when a visual inspection shows that the level of liquids in the unit has suddenly and unexpectedly dropped and the drop is not caused by changes in influent or effluent flow. What does the Agency intend to do in response to receiving such a notification?

AGENCY RESPONSE: The Agency will review the information and take appropriate action, which may include notifying other State agencies, including Illinois Emergency Management Agency and Illinois Department of Natural Resources. See Technical Support Document at 36-37.

30. Proposed Section 841.400(c)(1) would require the owner or operator to "[e]liminate free liquids by removing liquid waste or solidifying the remaining waste and waste residues." What methods does the Agency expect to be used to remove and dispose of free liquids? Would the Agency propose to require any tracking and accountability measures for disposal of liquid waste?

AGENCY RESPONSE: Methods to remove and dispose of liquid waste would be considered during Agency review of the closure plan proposal. This may include natural draining or a pumping system to drain the liquids. While a tracking system for the liquid waste would not be implemented by the Agency, the closure plan would need to specify how any collected liquids would be disposed, and these methods would be required to meet all rules and regulations governing disposal and any permits obtained as necessary. The Agency does not anticipate requiring any tracking or accountability measures for the disposal of liquid waste beyond those that already exist.

31. Do the proposed rules allow for the further use of CCW impoundments that are causing violations of groundwater and/or surface water standards?

AGENCY RESPONSE: In regard to groundwater, the proposed rules require, depending on the contaminant concentration, either a preventive response or an Agency approved corrective action plan. If an owner or operator is implementing a preventive response or is implementing an Agency-approved corrective action plan to mitigate impairment to groundwater then there is no violation of the groundwater standard.

The CCW unit with a point source discharge to waters of the United States may operate the unit in accordance with its NPDES permit.

32. In Ameren's proposed site-specific rulemaking (PCB R13-19), Ameren attached site characterizations for five of its facilities. Has the Agency received similar site characterizations for any other Illinois power generating facilities? If so, could you please provide them?

AGENCY RESPONSE The Agency has provided the Board with all the information necessary to support its proposal. To the extent the Environmental Groups would like to present additional information to the Board, the Environmental Groups can submit this information into the record.

33. Has the composition of coal ash deposited in Illinois CCW impoundments changed in any way over the past five decades? If so, in what manner?

AGENCY RESPONSE: The Agency cannot say whether the coal ash deposited in CCW surface impoundments has changed in anyway over the past five decades because the Agency does not have this history.

The groundwater monitoring data statistically summarized in the Technical Support Documents (pages 2 – 18), and described in detail in Richard Cobb's pre-filed testimony (Attachments II – XIV) represent the relevant cumulative long-term results of the of the CCW contaminants of concern that are mobile and have been transported to down gradient monitoring points.

34. What requirements in the proposed rules would assure that owners and operators of CCW impoundments will have the resources needed to responsibly close impoundments and address groundwater contamination?

AGENCY RESPONSE: These rules do not propose financial assurance requirements.

35. While developing these proposed rules, did the Agency consult with any other state or federal regulatory agencies? If so, please identify those state or federal regulatory agencies.

AGENCY RESPONSE: Yes. The Agency coordinated with U.S. EPA Region V to obtain input from the other Region V states on how those states regulate CCW surface impoundments. The Agency also coordinated with the Ground Water Protection Council (i.e. national level organization representing State groundwater programs) to obtain input from other States across the country on how they were regulating CCW surface impoundments. The Agency also consulted with the headquarter offices of USEPA to discuss the proposed rule.

36. Does the Agency intend that groundwater quality standards will remain enforceable for the entire life of the unit, through the post-closure period? Does the Agency also intend that groundwater quality standards will remain enforceable after the end of the post-closure period?

AGENCY RESPONSE: The Agency intends that the groundwater quality standards will remain enforceable for the entire life of the unit and after the end of the post-closure period.

II. QUESTIONS TO WILLIAM E. BUSCHER

1. On page 5 of your pre-filed testimony, you state that "The discharge of waste water from groundwater collection systems must be handled properly. In some instances, the owner or operator may have a permit to discharge treated waste water to waters of the United States. This permit would need to be modified in order to receive the waste water from a

groundwater collection system." At what point relative to the corrective action process must a NPDES permit be modified or obtained?

AGENCY RESPONSE: An NPDES permit would need to be modified or obtained prior to the discharge of the wastewater from the groundwater collection system to waters of the United States.

2. How does the risk of future groundwater contamination associated with impoundment closure with CCW left "in place" compare to the risk of contamination associated with closure by complete removal of CCW?

AGENCY RESPONSE: In order to compare the risk of future groundwater contamination associated with closure by complete removal of CCW with the risk of future groundwater contamination associated with an impoundment closure with CCW left "in place" one would need to know if the ash left in place was causing an exceedence of groundwater quality standards, the areal extent of the impacted groundwater and how the impoundment is proposed to be closed. On a site specific basis this information would need to be compared to how the CCW which is to be removed is going to be disposed in order to make a meaningful comparison.

3. On page 7 of your pre-filed testimony, you state that the State's 24 facilities with ash impoundments have "conducted hydrogeologic investigations . . . and assessed groundwater quality." Could you please provide the results of these investigations?

AGENCY RESPONSE: The Agency has provided the Board with all the information necessary to support its proposal. To the extent the Environmental Groups would like to present additional information to the Board, the Environmental Groups can submit this information into the record.

4. On page 7 of your pre-filed testimony, you state that "Prioritization of the work to be completed at these Units is necessary due to the large number of existing impoundments. The Agency anticipates that significant capital resources will be required to address issues at these Units." How did the Agency calculate the amount of capital resources necessary to address CCW issues?

AGENCY RESPONSE: The amount of capital resources necessary to address CCW issues was not calculated. This statement is based on the cost of the significant amount of earth materials which need to be moved in order to close an impoundment and build an alternative disposal structure, the potential cost of replacing a water supply, the cost of evaluating designing and implementing a corrective action, and completing post closure requirements.

5. Has the Agency considered requiring every owner or operator of a CCW impoundment to submit a closure plan at the inception of the rules, to provide information regarding the costs of closure and post-closure activities?

AGENCY RESPONSE: Yes, but the Agency decided not to require a closure plan at inception of the proposed rules because there are too many uncertainties at that time to properly develop a closure plan. Specifically, the volume of ash and, therefore, the final size of the impoundment may not be known at that time. Some facilities periodically remove ash for beneficial reuse that is market dependent. Therefore, some facilities may decide to close by removal as opposed to in-place closure, but due to the market fluctuations, this may not be known until close to closure.

6. On page 9 of your prefiled testimony, you discuss several impacts of contamination of groundwater by total dissolved solids ("TDS"), boron, and sulfate.

   a) Did you review the evidence of human health risks from TDS, boron, sulfate, or manganese? If so, please describe those impacts.

      AGENCY RESPONSE: Yes. The information provided in my testimony describes some of the impacts total dissolved solids ("TDS"), boron, and sulfate have on water systems and human health. The 35 Ill. Adm. Code 620 Class 1 Groundwater quality standards for from TDS, boron, sulfate, or manganese are 1,200 mg/L, 2.0 mg/L, 400.0 mg/L and 0.15 mg/L respectively.

   b) Did you review the evidence of the risks to aquatic wildlife from TDS, boron, sulfate, or manganese?

      AGENCY RESPONSE: Only to the extent that I am aware that boron is toxic to plant life

7. Which CCW impoundments would be placed in each of the categories (I, II, III, and IV) for closure prioritization outlined in proposed Section 841.405?

AGENCY RESPONSE: The immediate initiation of closure is not required by the proposed regulations. Category 1 would directly address future situations where an existing potable water supply well is potentially impacted or threatened by a release attributable to an ash impoundment and the owner operator elects to close the impoundment. While the Agency cannot predict how many units will be in this category when they close, there are no impoundments in Category 1 at this time. Category 2 applies to impoundments which are inactive and have an exceedence of an applicable groundwater quality standard which is a attributable to the impoundment. Category 3 applies to Units which are active and have exceeded an applicable groundwater quality standard which is a attributable to the impoundment. Further site specific information will be required to categorize all active and inactive units. Category 4 applies to units located in Class IV groundwater which have an exceedence of an applicable groundwater quality standard which is attributable to the impoundment. Presently the Duck Creek power plant is the only facility with units which could be inluded Category 4 .

8. On page 9 of your pre-filed testimony, you discuss the steps in a closure plan in which the CCW remains in place. Under what conditions does the Agency envision that a closure plan would need to include removal of the CCW from the impoundment?

AGENCY RESPONSE: The proposed closure regulations do not require the removal of the CCW from an impoundment. The decision to require ash to be removed would be based upon site specific conditions and would need to be technically feasible and economically reasonable. The Agency cannot speculate when removal would be required. A closure plan could include removal of the CCW from an impoundment would be where the material can be marketed for beneficial use. In addition it is expected that the facilities which currently remove ash from their impoundments on a regular basis to complete closure by removal. Another instance would be where the volume of ash in the impoundment is small.

9. How did the Agency arrive at the proposed post-closure care period of 10 years?

AGENCY RESPONSE: The Agency notes that 10 years is the minimum post closure care period. A closed unit will first have to meet groundwater standards before the post closure care period ends. It has been the Agency's experience that once a unit stops receiving CCW and dewaters, chemical constituent concentrations begin to reduce.

III. QUESTIONS TO LYNN E. DUNAWAY

1. On page 3 of your pre-filed testimony, you cite U.S. EPA's 2009 Unified Guidance as having been incorporated by reference into the proposed rules. However, the Unified Guidance is an interpretation of U.S. EPA's RCRA regulations. Is it the Agency's intention that U.S. EPA's RCRA regulations also are incorporated by reference into the proposed rules?

AGENCY RESPONSE: No, it is not the Agency's intent to incorporate USEPA's RCRA regulations into proposed Part 841.

2. Why has the Agency proposed to require owner or operators to recalculate background chemical concentrations in groundwater no less every five years, instead of every one to three years, as recommended by the Unified Guidance?

AGENCY RESPONSE: The Unified Guidance recommends updating statistical calculations for background every one to three years as long as there is enough data to make statistically valid comparisons. Since the proposed rule will require updating statistical calculations for background five years was selected to assure enough additional data is available for statistically valid comparisons

3. How will the Agency ensure that wells affected by groundwater mounding, or radial flow away from an impoundment, are not mischaracterized as "upgradient"?

AGENCY RESPONSE: There is no way to guarantee such circumstances will never occur. However, these circumstances should be limited by selecting up gradient monitoring well locations that are not too close to regulated units and evaluation of monitoring data. The Agency can require the installation of additional monitoring wells should it believe an up gradient monitoring well is being impacted by mounding or radial flow.

IV. QUESTIONS OF TO AMY L. ZIMMER

1. On page 5 of your pre-filed testimony, you describe computer modeling of groundwater. The U.S. EPA has modeled groundwater contamination from coal ash disposal sites and found that peak groundwater contamination levels may sometimes occur several decades after a site begins operation. What would the Agency do if your modeling showed a peak in offsite groundwater contamination 30-40 years after closure, and therefore beyond the proposed 10-year post-closure period?

AGENCY RESPONSE: The Agency would not approve a closure plan that indicated contamination would not peak until 30-40 years after closure. Many of the existing facilities with coal combustion waste surface impoundments have been in existence for decades. Due to this fact, the Agency believes any peaks in contamination have already occurred. See testimony of Richard P. Cobb, pages 4-7.

2. How are nearby surface water features to be evaluated in the hydrogeologic site characterization?

AGENCY RESPONSE: Potentiometric head elevation maps are a component of the hydrogeologic site characterization. These maps show what areas are up gradient versus down gradient and illustrate the direction of groundwater flow relative to CCW surface impoundment units. Groundwater flow from and/or to surface water features would also be indicated on these maps. The effect of surface water features on groundwater flow would then be taken into account as part of the groundwater monitoring system and groundwater monitoring plan and in any proposed corrective action plan or closure plan under the rule..

Exhibit List:

Exhibit A:	Copies the compliance commitment agreements
Exhibit B	Other Coal Ash Sites — September 2011
Exhibit C	Illinois EPA's Ash Impoundment Strategy Progress Report
Exhibit D	Illinois Potential for Aquifer Recharge Map with Power Generating Facilities
Exhibit E	All CWS Wells and the Probabilistic Network
Exhibit F	Inorganic Water Quality Data within Illinois Sand and Gravel Aquifers
Exhibit G	Inorganic Water Quality Data within Illinois Shallow Bedrock Aquifers
Exhibit H	Fourth Quarter and Annual Groundwater Monitoring Report, Powerton Generating Station
Exhibit I	Illinois Dam Safety Regulations
Exhibit J	Drafts of Proposed Forms: corrective action certification, closure certification and post-closure certification
Exhibit K	Midwest Generation letter and attachments, dated January 18, 2013
Exhibit L	Table V-14 from Water Quality Criteria 1972
Exhibit M	Table 5.5.1 entitled Typical Values of Hydraulic Conductivity and Permeability from Jacob Bear's Dynamics of Fluids in Porous Media
Exhibit N	Illinois EPA Chart of CCW impoundments
Exhibit O	Illinois EPA Chart of CCW impoundments
Exhibit P	CWLP Map of CCW Surface Water Impoundments

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217)782-2829
PAT QUINN, GOVERNOR LISA BONNETT, DIRECTOR

217-785-0561

May 20, 2013

CERTIFIED MAIL # 7011 1150 0001 0859 6067
RETURN RECEIPT REQUESTED

Randy Fisher
Supervisor of Generation
P.O. Box 10
13476 Rte 100
Pearl, IL 62361

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00074
PRAIRIE POWER INC., PEARL STATION; ID. NO.: 6296

Dear Mr. Fisher:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Prairie Power Inc., Pearl Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00074.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

EXHIBIT
tabbies
A

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
2125 S. First St., Champaign, IL 61820 (217)278-5800
2009 Mall St., Collinsville, IL 62234 (618)346-5120

9511 Harrison St., Des Plaines, IL 60016 (847)294-4000
5407 N. University St., Arbor 113, Peoria, IL 61614 (309)693-5462
2309 W. Main St., Suite 116, Marion, IL 62959 (618)993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601 (312)814-6026

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

PRAIRIE POWER INC.,
PEARL STATION
PEARL, PIKE COUNTY, IL
ID NUMBER: 6296

RECEIVED
MAY 15 2013
IEPA/CAS

ILLINOIS EPA VN W-2012-00074
BUREAU OF WATER

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Prairie Power Inc., Pearl Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operates Pearl Generating Station in Pearl, Pike County, Illinois ("Pearl Station").

3. Pursuant to Violation Notice ("VN") W-2012-00074 issued on December 6, 2013, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations [and Permit, if applicable]:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells B-1-10, B-2-10, B-3-10, B-4-10, B-5-10, B-6-10, B-7-10, B-8-10, B-9-10, B-10-10, B-11-10, B-12-10 and the Commercial Well.
   Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On March 1, 2013, the Illinois EPA received Respondent's response to VN W-2012-00074, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00074:

   a) The Illinois EPA acknowledges that the coal burning steam unit at Pearl Station was decommissioned on May 1, 2012. As a result of the decommissioning Pearl Station shall not produce ash nor will ash be sent to the ash pond ever again.

   b) Within 60 days of the effective date of the CCA, Pearl Station shall submit an application to the Illinois EPA to establish a groundwater management zone (GMZ) pursuant to 35 Ill. Adm. Code Part 620.250.

   c) Within 120 days of the effective date of the CCA Prairie Power shall establish a GMZ at Pearl Station pursuant to 35 Ill. Adm. Code Part 620.250.

   d) At least 30 days prior to commencement of construction of the cover system, Prairie Power shall submit a Notice of Intent pursuant to the Illinois General Permit for Storm Water Discharges from Construction Site Activities for the construction of a cover system for the existing ash pond.

   e) Within 180 days of the effective date of the CCA, Prairie Power shall commence construction of the cover system, which will utilize a 40 mil thickness high density polyethylene (HDPE) liner and three feet of soil cover material, or an Illinois EPA approved equivalent cover system.

   f) Prairie Power shall complete construction of the cover system at Pearl Station within 300 days of the effective date of the CCA.

   g) Within 200 days of the effective date of the CCA, Prairie Power shall submit an application to modify the existing National Pollutant Discharge Elimination System (NPDES) Permit No. IL 0036765.

   h) Within one year of the effective date of the CCA Prairie Power shall establish a GMZ at Pearl Station pursuant to 35 Ill. Adm. Code Part 620.250.

   i) Within one calendar year of the effective date of the CCA, once the construction of the cover system has been completed and a GMZ has been established at Pearl Station, Prairie Power shall submit a certification (or statement) of compliance. Prairie Power may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00074.

7. This CCA is solely intended to address the violations alleged in Illinois EPAVN W-2012-00074. The Illinois EPA reserves, and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Pearl Station in Pearl, Pike County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

b) Upon execution by all Parties.

12. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 5/20/13
Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: 5/13/2013
Randy Fisher
Supervisor of Generation
Prairie Power, Inc

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-785-0561

October 24, 2012

CERTIFIED MAIL # 7011 1150 0001 0859 0096
RETURN RECEIPT REQUESTED

John Kennedy
Senior Vice President, Generation
235 Remington, Suite A
Bolingbrook, IL 60440

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00058
Midwest Generation, LLC, Will County Generating Station; ID Number: 6283

Dear Mr. Kennedy:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Midwest Generation, LLC, Will County Generating Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00058.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

cc: Basil G. Constantelos
Maria Race
Susan M. Franzetti

BOW ID: W1978100011 CASE ID: 2012-006

cc: Basil G. Constantelos
Midwest Generation EME, LLC
235 Remington Blvd, Suite A
Bolingbrook, IL 60440

Maria Race
Midwest Generation EME, LLC
2535 Remington Blvd, Suite A
Bolingbrook, IL 60440

Susan M. Franzetti
10 South LaSalle St.
Suite 3600
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:)
)
MIDWEST GENERATION, LLC,)
WILL COUNTY GENERATING STATION)
ROMEOVILLE, WILL COUNTY, IL)
ID NUMBER: 6283)
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)
)

RECEIVED
OCT 17 2012
IEPA/CAS

ILLINOIS EPA VN W-2012-00058
BUREAU OF WATER

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Midwest Generation, LLC, Will County Generating Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operates Will County Generating Station in Romeoville, Will County, Illinois ("Will County Station").

3. Pursuant to Violation Notice ("VN") W-2012-00058 issued on June 11, 2012, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10.
   Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On September 4, 2012, and September 27, 2012, the Illinois EPA received Respondent's response and supplemental e-mail response to VN W-2012-00058, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00058:

   a) The ash ponds at Will County Station shall not be used as permanent disposal sites and shall continue to function as treatment ponds to precipitate ash. Ash shall continue to be removed from the ponds on a periodic basis.

   b) The ash treatment ponds shall be maintained and operated in a manner which protects the integrity of the existing liners. During the removal of ash from the ponds, appropriate procedures shall be followed to protect the integrity of the existing liners, including operating the ash removal equipment in a manner which minimizes the risk of any damage to the liner.

   c) During the ash removal process, visual inspections of the ponds shall be conducted to identify any signs of a breach in the integrity of the pond liners. In the event that a breach of the pond liners is detected, Midwest Generation shall promptly notify the Illinois EPA and shall implement a corrective action plan for repair or replacement as necessary, of the liner. Upon the Illinois EPA's approval, and the issuance of any necessary construction permit, Midwest Generation will implement the corrective action plan.

   d) Midwest Generation shall continue quarterly monitoring of the existing ten groundwater monitoring wells for constituents in 35 Ill. Adm. Code 620.410(a) and (d), with the exception of radium 226 and 228, and report its findings to the Illinois EPA within 30 days of the end of each quarter. In addition, Midwest Generation shall record and report groundwater elevation and submit a potentiometric surface map with the above quarterly groundwater monitoring report.

   e) Ponds 1 North (1N) and 1 South (1S) shall be removed from service at Will County Station. All process water shall be diverted from ponds 1N and 1S to existing ponds 2 South (2S) and 3 South (3S). A dewatering system shall be developed and implemented which will not allow water to exceed a depth of one foot above the bottom of Ponds 1N and 1S.

   f) Within 90 days of the effective date of the CCA, Midwest Generation shall submit an application for a construction permit to re-line pond 2S at Will County Station with a 60 mil thickness high density polyethylene ("HDPE") liner or an Illinois EPA approved equivalent material.

g) Midwest Generation shall submit an application to establish a Groundwater Management Zone (GMZ) pursuant to 35 Ill. Adm. Code Part 620.250 within 90 days of the effective date of the CCA.

h) Midwest Generation shall enter into an Environmental Land Use Control (ELUC) to cover the area of the Will County Station property which is contained within the GMZ, except for that portion of the GMZ area which is owned by ComEd. Midwest Generation shall submit a proposed draft ELUC to the Illinois EPA for review and comment within 90 days of the effective date of the CCA.

i) Midwest Generation shall establish a GMZ pursuant to 35 Ill. Adm. Code Part 620.250 and submit a final proposed ELUC, incorporating the completed delineation of the GMZ boundaries, within one year of the effective date of the CCA.

j) Once ponds 1N and 1S have been taken out of service, a dewatering system has been implemented, pond 2S has been relined with a HDPE liner, and a GMZ and ELUC have been established, Midwest Generation shall submit a certification (or a statement) of compliance. Midwest Generation may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance within one year of the effective date of the CCA.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00058.

7. This CCA is solely intended to address the violations alleged in Illinois EPA VN W-2012-00058. The Illinois EPA reserves and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Will County Station in Romeoville, Will County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

    a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

    b) Upon execution by all Parties.

12. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 12/24/12
Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: Oct 15, 2012
John Kennedy
Senior Vice President, Generation
Midwest Generation, ~~LLC~~

Illinois EPA Compliance Statement

The owner of the facility must acknowledge that all compliance commitment agreement (CCA) measures have been successfully completed.

Please complete, sign, and return.

I _____ *(print name)*, hereby certify that all violations addressed in Violation Notice (VN) number _____ have been addressed and that all CCA measures were completed on _____ *(date)*.

_____
Signature

_____
Title

_____
Telephone Number

_____
Date

Be sure to retain copies of this document for your files. Should you need additional notification forms, please contact this office at (217)785-0561. Return this completed form to:

Illinois Environmental Protection Agency
Compliance Assurance Section #19
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

"Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Agency,.....related to or required by this Act, a regulation adopted under this Act, any federal law or regulation for which the Agency has responsibility, or any permit, term, or condition thereof, commits a Class 4 felony..." (415 ILCS 5/44(h) (8))

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-785-0561

October 24, 2012

CERTIFIED MAIL # 7011 1150 0001 0859 0102
RETURN RECEIPT REQUESTED

John Kennedy
Senior Vice President, Generation
235 Remington, Suite A
Bolingbrook, IL 60440

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00056
Midwest Generation, LLC, Waukegan Generating Station; ID Number: 6281

Dear Mr. Kennedy:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Midwest Generation, LLC, Waukegan Generating Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00056.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

cc: Basil G. Constantelos
Maria Race
Susan M. Franzetti

cc: Basil G. Constantelos
Midwest Generation EME, LLC
235 Remington Blvd, Suite A
Bolingbrook, IL 60440

Maria Race
Midwest Generation EME, LLC
2535 Remington Blvd, Suite A
Bolingbrook, IL 60440

Susan M. Franzetti
10 South LaSalle St.
Suite 3600
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

RECEIVED
OCT 17 2012
IEPA/CAS

IN THE MATTER OF:

MIDWEST GENERATION, LLC,
WAUKEGAN GENERATING STATION
WAUKEGAN, LAKE COUNTY, IL
ID NUMBER: 6281

ILLINOIS EPA VN W-2012-00056
BUREAU OF WATER

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Midwest Generation, LLC, Waukegan Generating Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operates Waukegan Generating Station in Waukegan, Lake County, Illinois ("Waukegan Station").

3. Pursuant to Violation Notice ("VN") W-2012-00056 issued on June 11, 2012, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5. Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On September 4, 2012, the Illinois EPA received Respondent's response to VN W-2012-00056, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00056:

   a) The ash ponds at Waukegan Station shall not be used as permanent disposal sites and shall continue to function as treatment ponds to precipitate ash. Ash shall continue to be removed from the ponds on a periodic basis.

   b) The ash treatment ponds shall be maintained and operated in a manner which protects the integrity of the existing liners. During the removal of ash from the ponds, appropriate procedures shall be followed to protect the integrity of the existing liners, including operating the ash removal equipment in a manner which minimizes the risk of any damage to the liner.

   c) During the ash removal process, visual inspections of the ponds shall be conducted to identify any signs of a breach in the integrity of the pond liners. In the event that a breach of the pond liners is detected, Midwest Generation shall promptly notify the Illinois EPA and shall implement a corrective action plan for repair or replacement as necessary, of the liner. Upon the Illinois EPA's approval, and the issuance of any necessary construction permit, Midwest Generation will implement the corrective action plan.

   d) Midwest Generation shall install two additional groundwater monitoring wells on the Waukegan Station property, at locations approved by the Illinois EPA, within 90 days of the effective date of the CCA.

   e) Midwest Generation shall monitor the two new wells and the existing five groundwater monitoring wells quarterly for constituents in 35 Ill. Adm. Code 620.410(a) and (d), with the exception of radium 226 and 228, and report its findings to the Illinois EPA within 30 days of the end of each quarter. In addition, Midwest Generation shall record and report groundwater elevation and submit a potentiometric surface map with the above quarterly groundwater monitoring report.

   f) Midwest Generation shall enter into an Environmental Land Use Control (ELUC) to cover the remaining Waukegan Station property to the east that is not already included in the existing ComEd Former Tannery Site ELUC. Midwest Generation shall submit a proposed ELUC to the Illinois EPA for review and approval within 90 days of the effective date of the CCA.

g) Midwest Generation shall record the ELUC within 30 days of approval of the ELUC by the Illinois EPA.

i) Once the new monitoring wells have been installed and the ELUC has been approved Midwest Generation may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance within one year of the effective date of the CCA.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00056.

7. This CCA is solely intended to address the violations alleged in Illinois EPA VN W-2012-00056. The Illinois EPA reserves and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Waukegan Station in Waukegan, Lake County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

    a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

    b) Upon execution by all Parties.

12. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 10/24/12
Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: Oct 15, 2012
John Kennedy
Senior Vice President, Generation
Midwest Generation, LLC

Illinois EPA Compliance Statement

The owner of the facility must acknowledge that all compliance commitment agreement (CCA) measures have been successfully completed.

Please complete, sign, and return.

I _____ *(print name)*, hereby certify that all violations addressed in Violation Notice (VN) number _____ have been addressed and that all CCA measures were completed on _____ *(date)*.

_____
Signature

_____
Title

_____
Telephone Number

_____
Date

Be sure to retain copies of this document for your files. Should you need additional notification forms, please contact this office at (217)785-0561. Return this completed form to:

Illinois Environmental Protection Agency
Compliance Assurance Section #19
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-785-0561

October 24, 2012

CERTIFIED MAIL # 7011 1150 0001 0859 0119
RETURN RECEIPT REQUESTED

John Kennedy
Senior Vice President, Generation
235 Remington, Suite A
Bolingbrook, IL 60440

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00057
Midwest Generation, LLC, Powerton Generating Station; ID Number: 6282

Dear Mr. Kennedy:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Midwest Generation, LLC, Powerton Generating Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00057.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

cc: Basil G. Constantelos
Maria Race
Susan M. Franzetti

cc: Basil G. Constantelos
Midwest Generation EME, LLC
235 Remington Blvd, Suite A
Bolingbrook, IL 60440

Maria Race
Midwest Generation EME, LLC
2535 Remington Blvd, Suite A
Bolingbrook, IL 60440

Susan M. Franzetti
10 South LaSalle St.
Suite 3600
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

MIDWEST GENERATION, LLC,
POWERTON GENERATING STATION
PEKIN, TAZEWELL COUNTY, IL
ID NUMBER: 6282

RECEIVED
OCT 17 2012
IEPA/CAS

ILLINOIS EPA VN W-2012-00057
BUREAU OF WATER

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Midwest Generation, LLC, Powerton Generating Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operates Powerton Generating Station in Pekin, Tazewell County, Illinois ("Powerton").

3. Pursuant to Violation Notice ("VN") W-2012-00057 issued on June 11, 2012, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, and MW-15. Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On September 4, 2012, the Illinois EPA received Respondent's response to VN W-2012-00057, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00057:

   a) The ash ponds at Powerton shall not be used as permanent disposal sites and shall continue to function as treatment ponds to precipitate ash. Ash shall continue to be removed from the ponds on a periodic basis.

   b) The ash treatment ponds shall be maintained and operated in a manner which protects the integrity of the existing liners. During the removal of ash from the ponds, appropriate procedures shall be followed to protect the integrity of the existing liners, including operating the ash removal equipment in a manner which minimizes the risk of any damage to the liner.

   c) During the ash removal process, visual inspections of the ponds shall be conducted to identify any signs of a breach in the integrity of the pond liners. In the event that a breach of the pond liners is detected, Midwest Generation shall promptly notify the Illinois EPA and shall implement a corrective action plan for repair or replacement as necessary, of the liner. Upon the Illinois EPA's approval, and the issuance of any necessary construction permit, Midwest Generation will implement the corrective action plan.

   d) Midwest Generation shall monitor the new well as described in 5(f) below and the existing fifteen groundwater monitoring wells quarterly for constituents in 35 Ill. Adm. Code 620.410(a) and (d), with the exception of radium 226 and 228, and report its findings to the Illinois EPA within 30 days of the end of each quarter. In addition, Midwest Generation shall record and report groundwater elevation and submit a potentiometric surface map with the above quarterly groundwater monitoring report.

   e) Within 90 days of the effective date of the CCA, Midwest Generation shall submit an application for a construction permit to re-line the Ash Surge Basin and the Secondary Ash Settling Basin at Powerton with a 60 mil thickness high density polyethylene ("HDPE") liner or an Illinois EPA approved equivalent material.

   f) Midwest Generation shall install an additional groundwater monitoring well south of monitor well 9, in a location approved by the Illinois EPA, to better define up gradient groundwater quality, within 60 days of the effective date of the CCA.

g) Midwest Generation shall submit an application to establish a GMZ pursuant to 35 Ill. Adm. Code Part 620.250 within 90 days of the effective date of the CCA.

h) Midwest Generation shall enter into an Environmental Land Use Control (ELUC) to cover the area of the Powerton Station property which is contained within the GMZ. Midwest Generation shall submit a proposed draft ELUC to the Illinois EPA for review and comment within 90 days of the effective date of the CCA.

i) Midwest Generation shall record the ELUC within 30 days of approval of the ELUC by the Illinois EPA.

j) Midwest Generation shall establish a GMZ pursuant to 35 Ill. Adm. Code Part 620.250 within one year of the effective date of the CCA.

k) Once the Ash Surge Basin and the Secondary Ash Settling Basin have been lined and a GMZ and ELUC have been established at Powerton, Midwest Generation shall submit a certification (or a statement) of compliance. Midwest Generation may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance within one year of the effective date of the CCA.

l) Midwest Generation shall not allow the East Yard Run-off Basin to be part of the ash sluicing flow system. Further, Midwest Generation shall submit monitoring results from water contained in the East Yard Run-off Basin proximate to outfall monitoring point 003 within 60 days of the effective date of the CCA. Quarterly monitoring of the East Yard Run-off Basin shall be for the constituents listed in 35 Ill. Adm. Code 620.410(a) and (d) with the exception of radium 226 and radium 228. At the end of four (4) quarters of monitoring, Midwest Generation may request cessation of water monitoring from the East Yard Run-off Basin.

m) Midwest Generation shall not use any unlined areas for permanent or temporary ash storage or ash handling.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00057.

7. This CCA is solely intended to address the violations alleged in Illinois EPA VN W-2012-00057. The Illinois EPA reserves and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Powerton in Pekin, Tazewell County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

    a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

    b) Upon execution by all Parties.

12. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 10/24/12

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: Oct 15, 2012

John Kennedy
Senior Vice President, Generation
Midwest Generation, LLC

Illinois EPA Compliance Statement

The owner of the facility must acknowledge that all compliance commitment agreement (CCA) measures have been successfully completed.

Please complete, sign, and return.

I _____ *(print name)*, hereby certify that all violations addressed in Violation Notice (VN) number _____ have been addressed and that all CCA measures were completed on _____ *(date)*.

_____
Signature

_____
Title

_____
Telephone Number

_____
Date

Be sure to retain copies of this document for your files. Should you need additional notification forms, please contact this office at (217)785-0561. Return this completed form to:

Illinois Environmental Protection Agency
Compliance Assurance Section #19
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

"Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Agency,.....related to or required by this Act, a regulation adopted under this Act, any federal law or regulation for which the Agency has responsibility, or any permit, term, or condition thereof, commits a Class 4 felony..." (415 ILCS 5/44(h) (8))

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-785-0561

October 24, 2012

CERTIFIED MAIL # 7011 1150 0001 0859 0072
RETURN RECEIPT REQUESTED

John Kennedy
Senior Vice President, Generation
235 Remington, Suite A
Bolingbrook, IL 60440

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00059
Midwest Generation, LLC, Joliet #29 Generating Station; ID Number: 6284

Dear Mr. Kennedy:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Midwest Generation, LLC, Joliet #29 Generating Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00059.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

cc: Basil G. Constantelos
Maria Race
Susan M. Franzetti

cc: Basil G. Constantelos
Midwest Generation EME, LLC
235 Remington Blvd, Suite A
Bolingbrook, IL 60440

Maria Race
Midwest Generation EME, LLC
2535 Remington Blvd, Suite A
Bolingbrook, IL 60440

Susan M. Franzetti
10 South LaSalle St.
Suite 3600
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

MIDWEST GENERATION, LLC,
JOLIET #29 GENERATING STATION
JOLIET, WILL COUNTY, IL
ID NUMBER: 6284

RECEIVED
OCT 17 2012
IEPA/CAS

ILLINOIS EPA VN W-2012-00059
BUREAU OF WATER

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Midwest Generation, LLC, Joliet Generating Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operates Joliet #29 a power generating station in Joliet, Will County, Illinois ("Joliet #29").

3. Pursuant to Violation Notice ("VN") W-2012-00059 issued on June 11, 2012, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11.
   Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On August 31, 2012, the Illinois EPA received Respondent's response to VN W-2012-00059, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00059:

   a) The ash ponds at Joliet #29 shall not be used as permanent disposal sites and shall continue to function as treatment ponds to precipitate ash. Ash shall continue to be removed from the ponds on a periodic basis.

   b) The ash treatment ponds shall be maintained and operated in a manner which protects the integrity of the existing liners. During the removal of ash from the ponds, appropriate procedures shall be followed to protect the integrity of the existing liners, including operating the ash removal equipment in a manner which minimizes the risk of any damage to the liner.

   c) During the ash removal process, visual inspections of the ponds shall be conducted to identify any signs of a breach in the integrity of the pond liners. In the event that a breach of the pond liners is detected, Midwest Generation shall promptly notify the Illinois EPA and shall implement a corrective action plan for repair or replacement as necessary, of the liner. Upon the Illinois EPA's approval, and the issuance of any necessary construction permit, Midwest Generation will implement the corrective action plan.

   d) Midwest Generation shall continue quarterly monitoring of the existing eleven groundwater monitoring wells for constituents in 35 Ill. Adm. Code 620.410(a), with the exception of radium 226 and 228, and report its findings to the Illinois EPA within 30 days of the end of each quarter. In addition, Midwest Generation shall record and report groundwater elevation and submit a potentiometric surface map with the above quarterly groundwater monitoring report.

   e) Midwest Generation shall submit an application for a construction permit to re-line Pond #3 with a high density polyethylene ("HDPE") liner within 90 days of the effective date of the CCA. A groundwater monitoring schedule shall be included in the construction permit.

   f) Midwest Generation shall submit an application to establish a Groundwater Management Zone ("GMZ") pursuant to 35 Ill. Adm. Code Part 620.250 within 90 days of the effective date of the CCA.

g) Midwest Generation shall establish a GMZ pursuant to 35 Ill. Adm. Code Part 620.250 within one year of the effective date of the CCA.

h) Once Pond #3 has been re-lined with a HDPE liner and a GMZ has been established, Midwest Generation, shall submit a certification (or a statement) of compliance. Midwest Generation may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance within one year of the effective date of the CCA.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00059.

7. This CCA is solely intended to address the violations alleged in Illinois EPA VN W-2012-00059. The Illinois EPA reserves and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Joliet #29 in Joliet, Will County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

    a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

    b) Upon execution by all Parties.

12. Pursuant to Section 31(a)(7.5) of the Act, 415 ILCS 5/31(a)(7.5), this CCA shall not be amended or modified prior to execution by the Parties. Any amendment or modification to this CCA by Respondent prior to execution by all Parties shall be considered a rejection of the CCA by operation of law. This CCA may only be amended subsequent to its effective date, in writing, and by mutual agreement between the Illinois EPA and Respondent's signatory to this CCA, Respondent's legal representative, or Respondent's agent.

AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 10/24/12
Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: Oct 15, 2012
John Kennedy
Senior Vice President, Generation
Midwest Generation, LLC

Illinois EPA Compliance Statement

The owner of the facility must acknowledge that all compliance commitment agreement (CCA) measures have been successfully completed.

Please complete, sign, and return.

I _____ *(print name)*, hereby certify that all violations addressed in Violation Notice (VN) number _____ have been addressed and that all CCA measures were completed on _____ *(date)*.

_____
Signature

_____
Title

_____
Telephone Number

_____
Date

Be sure to retain copies of this document for your files. Should you need additional notification forms, please contact this office at (217)785-0561. Return this completed form to:

Illinois Environmental Protection Agency
Compliance Assurance Section #19
Bureau of Water
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

"Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Agency,.....related to or required by this Act, a regulation adopted under this Act, any federal law or regulation for which the Agency has responsibility, or any permit, term, or condition thereof, commits a Class 4 felony..." (415 ILCS 5/44(h) (8))

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397
PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-785-0561

October 24, 2012

CERTIFIED MAIL # 7011 1150 0001 0859 0089
RETURN RECEIPT REQUESTED

John Kennedy
Senior Vice President, Generation
235 Remington, Suite A
Bolingbrook, IL 60440

Re: Compliance Commitment Acceptance
Violation Notice: W-2012-00055
Midwest Generation, LLC, Crawford Generating Station; ID Number: 6280

Dear Mr. Kennedy:

The Illinois Environmental Protection Agency ("Illinois EPA") has approved the Compliance Commitment Agreement ("CCA") for Midwest Generation, LLC, Crawford Generating Station. Please find enclosed an executed copy of the CCA for your records.

Failure to fully comply with the CCA may, at the sole discretion of the Illinois EPA, result in referral of this matter to the Office of the Attorney General, the State's Attorney or the United States Environmental Protection Agency.

The CCA does not constitute a waiver or modification of the terms and conditions of any license or permit issued by the Illinois EPA or any other unit or department of local, state or federal government or of any local, state or federal statute or regulatory requirement.

Questions regarding this matter should be directed to Andrea Rhodes at 217/785-0561. Written communications should be directed to the Illinois Environmental Protection Agency, Bureau of Water, CAS #19, P.O. Box 19276, Springfield, IL 62794-9276, and all communications shall include reference to your Violation Notice Number W-2012-00055.

Sincerely,

Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

Attachments

cc: Basil G. Constantelos
Maria Race
Susan M. Franzetti

BOW ID: W0316000340 CASE ID: 2012-006

cc: Basil G. Constantelos
Midwest Generation EME, LLC
235 Remington Blvd, Suite A
Bolingbrook, IL 60440

Maria Race
Midwest Generation EME, LLC
2535 Remington Blvd, Suite A
Bolingbrook, IL 60440

Susan M. Franzetti
10 South LaSalle St.
Suite 3600
Chicago, IL 60603

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:	)	RECEIVED
	)	OCT 17 2012
MIDWEST GENERATION, LLC,	)	IEPA/CAS
CRAWFORD GENERATING STATION	)	
CHICAGO, COOK COUNTY, IL	)	
ID NUMBER: 6280	)	
	)	
	)	ILLINOIS EPA VN W-2012-00055
	)	BUREAU OF WATER
	)	

COMPLIANCE COMMITMENT AGREEMENT

I. Jurisdiction

1. This Compliance Commitment Agreement ("CCA") is entered into voluntarily by the Illinois Environmental Protection Agency ("Illinois EPA") and Midwest Generation, LLC, Crawford Generating Station ("Respondent") (collectively, the "Parties") under the authority vested in the Illinois EPA pursuant to Section 31(a)(7)(i) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/31(a)(7)(i).

II. Allegation of Violations

2. Respondent owns and operated Crawford Generating Station in Chicago, Cook County, Illinois ("Crawford Station").

3. Pursuant to Violation Notice ("VN") W-2012-00055 issued on June 11, 2012, the Illinois EPA contends that Respondent has violated the following provisions of the Act and Illinois Pollution Control Board ("Board") Regulations:

   a) Operations at ash impoundments have resulted in violations of the Groundwater Quality Standards at monitoring wells MW-1 and MW-2.
   Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410.

III. Compliance Activities

4. On August 29, 2012, the Illinois EPA received Respondent's response to VN W-2012-00055, which included proposed terms for a CCA. The Illinois EPA has reviewed Respondent's proposed CCA terms, as well as considered whether any additional terms and conditions are necessary to attain compliance with the alleged violations cited in the VN.

5. Respondent agrees to undertake and complete the following actions, which the Illinois EPA has determined are necessary to attain compliance with the allegations contained in VN W-2012-00055:

   a) Crawford Station shall shut down no later than September 30, 2012. Midwest Generation shall submit confirmation of this shut down to the Illinois EPA by November 15, 2012.

   b) Midwest Generation shall cease operation of the hydro-bins.

   c) Basin 16 shall be rinsed and the rinse water shall be directed to the Basin 16 sump for discharge to the equalization basins. Basin 16 may continue to be used for storm water management purposes.

   d) Ash shall be removed from the Crawford Station fly ash silos, hydro-bins, and precipitators.

   e) In the confirmation submitted pursuant to item 5(a), Midwest Generation must confirm that the coal pile has been removed and the coal fines scraped from the area. Midwest Generation shall cover the coal pile area with topsoil and seed it.

   f) The coal pile run-off pond shall be dredged.

   g) The wastewater treatment system equalization basins shall be drained and sediment removed with a front end loader.

   h) Pending modification of the existing NPDES permit, or until a new NPDES storm water permit is issued to reflect the changed conditions at the Crawford Station, the wastewater treatment system will continue to operate, either in its existing condition or as modified, to address the lack of process wastewater discharges and the on-going discharge of storm water from the Crawford Station.

   i) Once all of the decommissioning activities, items (b) through (g) above, have been completed, Midwest Generation shall submit a certification (or a statement) of compliance. Midwest Generation may submit either the attached "Illinois EPA Compliance Statement" or another similar writing to satisfy the statement of compliance within one year of the effective date of this CCA.

IV. Terms and Conditions

6. Respondent shall comply with all provisions of this CCA, including, but not limited to, any appendices to this CCA and all documents incorporated by reference into this CCA. Pursuant to Section 31(a)(10) of the Act, 415 ILCS 5/31(a)(10), if Respondent complies with the terms of this CCA, the Illinois EPA shall not refer the alleged violations that are the subject of this CCA, as described in Section II above, to the Office of the Illinois Attorney General or the State's Attorney of the county in which the alleged violations occurred. Successful completion of this CCA or an amended CCA shall be a factor to be weighed, in favor of the Respondent, by the Office of the Illinois Attorney General in determining whether to file a complaint on its own motion for the violations cited in VN W-2012-00055.

7. This CCA is solely intended to address the violations alleged in Illinois EPA VN W-2012-00055. The Illinois EPA reserves and this CCA is without prejudice to, all rights of the Illinois EPA against Respondent with respect to noncompliance with any term of this CCA, as well as to all other matters. Nothing in this CCA is intended as a waiver, discharge, release, or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the Illinois EPA may have against Respondent, or any other person as defined by Section 3.315 of the Act, 415 ILCS 5/3.315. This CCA in no way affects the responsibilities of Respondent to comply with any other federal, state or local laws or regulations, including but not limited to the Act, and the Board Regulations [and Permit, if applicable].

8. Pursuant to Section 42(k) of the Act, 415 ILCS 5/42(k), in addition to any other remedy or penalty that may apply, whether civil or criminal, Respondent shall be liable for an additional civil penalty of $2,000 for violation of any of the terms or conditions of this CCA.

9. This CCA shall apply to and be binding upon the Illinois EPA, and on Respondent and Respondent's officers, directors, employees, agents, successors, assigns, heirs, trustees, receivers, and upon all persons, including but not limited to contractors and consultants, acting on behalf of Respondent, as well as upon subsequent purchasers of Respondent's Crawford Station in Chicago, Cook County, Illinois.

10. In any action by the Illinois EPA to enforce the terms of this CCA, Respondent consents to and agrees not to contest the authority or jurisdiction of the Illinois EPA to enter into or enforce this CCA, and agrees not to contest the validity of this CCA or its terms and conditions.

11. This CCA shall only become effective:

a) If, within 30 days of receipt, Respondent executes this CCA and submits it, via certified mail, to Illinois EPA, Bureau of Water, Andrea Rhodes, MC #19, 1021 North Grand Ave East, Springfield, IL 62702. If Respondent fails to execute and submit this CCA within 30 days of receipt, via certified mail, this CCA shall be deemed rejected by operation of law; and

b) Upon execution by all Parties.

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AGREED:
FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

BY: _____ DATE: 10/24/12
Michael Crumly
Manager, Compliance Assurance Section
Division of Public Water Supplies
Bureau of Water

FOR RESPONDENT:

BY: _____ DATE: Oct 15, 2012
John Kennedy
Senior Vice President, Generation
Midwest Generation, LLC

Illinois EPA Compliance Statement

The owner of the facility must acknowledge that all compliance commitment agreement (CCA) measures have been successfully completed.

Please complete, sign, and return.

I _____ *(print name)*, hereby certify that all violations addressed in Violation Notice (VN) number _____ have been addressed and that all CCA measures were completed on _____ *(date)*.

_____
Signature

_____
Title

_____
Telephone Number

_____
Date

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Other Coal Ash Sites
September 2011

In addition to the coal ash impoundments at coal fired electric power plants, the Illinois Environmental Protection Agency (Illinois EPA) also works with a number of other sites with coal combustion residues. Illinois EPA also coordinates with the Department of Natural Resources (DNR) Office of Mines and Minerals (OMM) on the coal mine related sites. The following provides a synopsis of and status of Illinois EPA activities at some of these other sites:

U.S. Minerals, Montgomery County - U.S. Minerals is located on the south side of Coffeen and receives boiler slag from the Coffeen Power Plant, grinds and sizes the granules and ships them to facilities that make asphalt roofing shingles and blasting media. We received dust complaints from Coffeen citizens in 2004, 2005, 2006 and a violation notification letter (VNL) was sent in 2006. The company installed bag houses on the process and the facility currently has a Bureau of Air (BOA) state operating permit. We have not recently received any complaints about operations at this location. Storm water discharges from the site are covered by the general National Pollution Discharge Elimination System (NPDES) Permit for storm water associated with industrial activity (ILR005838)

Springfield Coal Company's Crown III Mine Site, Macoupin County - This mine is located west of Farmersville and coal trucks backhaul fly ash and coal ash to the mine. Trucks dump the ash into an enclosed shed equipped with multiple water sprays to capture dust. The ash is sluiced out to a pond. A truck driver complained about blowing dust in 2004 and an Illinois EPA Bureau of Land – Bureau of Air (BOL-BOA) multimedia inspection was performed. BOL sent a VNL 9/28/04 for BOL violations. No other complaints have been received by BOA Field Operations Section (FOS). The mine currently has a BOA State operating permit.

The Crown III Mine is also inspected by OMM a minimum of once a month. Per OMM, dust is not normally observed blowing from the permit area, but when it is, the operator is required to water down the disposal areas using water trucks. Runoff from the disposal areas is directed to the sediment ponds found on the mine site. DNR has not received any complaints concerning dust for the Crown III Mine.

Certain contaminant concentrations in the Toxicity Characteristics Leaching Potential (TCLP) leachate analysis may exceed the Class II groundwater standards. However, it is noted that in general, the TCLP analysis is an acid leachate test the results from which are considered to be a "worse-case" scenario since the coal combustion waste (CCW) material will be maintained in an alkaline environment. Therefore, for most constituents the TCLP analysis results will provide an overstatement of actual

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concentrations expected to be experienced under field conditions. As these analyses overstate anticipated actual leachate concentrations, these materials are anticipated to pose no threat to the nearby water resources.

As part of the recent NPDES permit renewal process for this facility, the applicant has been required to develop and implement an updated fugitive dust control plan. Prior to re-issuance of a renewed NPDES permit for this facility, appropriate conditions will be incorporated to address fugitive dust issues based on the good mining practices of 35 Ill. Adm. Code 406.204 and the dust control plan currently being developed.

An inspection of this facility was conducted on July 12, 2011. Discharge Monitoring Reports (DMR's) showed compliance with NPDES Permit No. IL0059471 limits. No significant issues with regulated outfalls or runoff were noted during the inspection. No evidence was observed of "coal ash being distributed onto the land, eventually draining into streams." Runoff from the ash disposal area and the coal mine waste areas appeared to be tributary to sedimentation ponds and the permitted outfalls. It was reported that there were 23 groundwater monitoring wells onsite per a Subtitle D permit; however, monitoring well data was not reviewed as part of this inspection. No water related complaints regarding this facility have been received by Springfield Regional Office in the past 20 years. No problems with dust were noted on July 12, 2011 BOW FOS inspection, but the wind was less than 5 mph and dust was not an issue being specifically evaluated during the inspection. The closest residences to the mine and the ash and coal waste piles/impoundments are located to the north and southwest. The closest residence is approximately 900 feet northwest of the ash pile/impoundment and about 1100 feet from the "dry ash." Runoff water impoundments are located on the part of the pile nearest that residence. A topsoil stockpile and offsite runoff diversion channel is located between the residence and ash pile.

A request for a hydrogeologic assessment schedule and well survey within 2,500 feet of the permit boundary was submitted to the Crown III Mine on November 24, 2010. The goals of the assessment are to identify any impacts to groundwater quality at the site, determine the nature and extent of any groundwater impacts identified and identification of potential remedial alternatives for any impacts identified. Crown III committed to a well survey by February 28, 2011, and a hydrogeologic assessment schedule by April 1, 2011. The well survey was submitted March 8, 2011. The schedule for a hydrogeologic assessment was not submitted. Springfield Coal Company's has not responded to a July 15, 2011 letter from Illinois EPA requesting the submission of a completed hydrogeologic assessment by September 14, 2011. Illinois EPA is considering issuing a Violation Notice for the Springfield Coal Company's Crown III Mine Site

Springfield Coal Company's Industry Mine, McDonough & Schuyler Counties - OMM/DNR - OMM has approved Coal Combustion By-product (CCBP) utilization at the

mine site. The CCBP meets the requirements for beneficial use during reclamation to help achieve the permitted post-mining land use. The Industry Mine is inspected by OMM a minimum of once a month. Because of the large area under permit, dust has not been noted blowing from the permit area. The nearest resident lives more than one mile away from the area of coal combustion material placement. Runoff from the disposal areas is directed to the numerous sediment ponds found on the mine site. OMM has not received any complaints concerning dust for the Industry Mine.

Certain contaminant concentrations reported in the TCLP leachate analysis of the CCW may exceed the Class II groundwater standards. However, it is noted that in general, the TCLP analysis is an acid leachate test the results from which are considered to be a "worse-case" scenario since the CCW material will be maintained in an alkaline environment. Therefore, for most constituents the TCLP analysis results will provide an overstatement of actual concentrations expected to be experienced under field conditions. As these analyses overstate anticipated actual leachate concentrations, these materials are anticipated to pose no threat to the nearby water resources.

There is ~8 acre beneficial use coal CCW disposal area at this site. The exposed rock faces are reportedly sealed with compacted clay. Runoff from this area is diverted to a reclamation pond. Dust control in the areas appeared marginal during this inspection.

A ~10.4 acre OMM Permit 16 coal combustion waste CCW disposal area is also located at this located at this site. An earthen containment berm was placed around this area. Runoff from the site needs to be contained; however, it appeared that some runoff would drain off site south of the stockpiles and along the access road. Springfield Coal Company indicated that they would provide containment for the entire disposal site.

Based on comments received during the recent public hearing held on the draft renewed NPDES permit for this facility, the applicant will be required to develop and implement an updated fugitive dust control plan. Prior to re-issuance of a renewed NPDES permit for this facility, appropriate conditions will be incorporated to address fugitive dust issues based on the good mining practices of 35 Ill. Adm. Code 406.204 and the dust control plan to be required.

A VNL was issued on 10/8/09 for an effluent violation and the case was subsequently referred to the Illinois Attorney General' Office (AGO) on 1/20/10.

BOW FOS staff conducted an inspection on 9/27/10: CCW is stockpiled on the ground in the beneficial use CCW disposal area. Local municipalities, townships, etc. typically use this material for road maintenance. The mine had a water truck for dust control (which reportedly worked well when used). This truck was not being operated during inspection.

No complaints have been received by the Peoria BOA/ FOS. This mine has a State operating permit.
A request for a hydrogeologic assessment to identify any impacts to groundwater quality at the site, a determination of the nature and extent of any groundwater impacts identified, and identification of potential remedial alternatives for any impacts identified has been requested as of July 27, 2011. In addition, the facility was asked to conduct a private well survey within 2,500 feet of the permit boundary of the mine. The Springfield Coal Company Industry Mine has committed to submit the well survey and a schedule for completing the assessment to Illinois EPA by October 3, 2011.

Peabody's Gateway Mine, Randolph County - OMM/DNR - OMM inspects the Gateway Mine at a minimum of once a month. OMM has not witnessed any problems with dust blowing off of the mine site during the inspections. Also per OMM, there have not been any citizen complaints of blowing dust from the mine.

Groundwater monitoring at the mine does not indicate that there is material damage to the hydrologic balance outside the mine permit area. A request for a hydrogeologic assessment schedule and well survey within 2,500 feet of the mine permit boundary were requested on September 28, 2011.

Based on comments received during the recent public hearing held on the draft renewed NPDES permit for this facility, the applicant will be required to develop and implement an updated fugitive dust control plan. Prior to re-issuance of a renewed NPDES permit for this facility, appropriate conditions will be incorporated to address fugitive dust issues based on the good mining practices of 35 Ill. Adm. Code 406.204 and the dust control plan to be required.

BOW FOS staff performed an inspection of this facility on April 2, 2010, and May 26, 2011. No fugitive dust was observed during the April 2, 2010, inspection. In addition, no discoloration or turbidity was noted at any permitted outfall. The final report for the May 26th inspection is pending completion.

Collinsville BOA FOS received a complaint from a resident in Coulterville in March, 2011 about odors from spontaneous fires in raw coal storage piles. FOS investigated and a NCA was sent in April, 2011. No complaints about blowing dust have been received in recent years. No VNLs have been sent in the last 5 years. The mine has a BOA State operating permit.

Alpena Vision Resources' Murdock Site, Douglas County - OMM/DNR -The Murdock mine is inspected on a monthly basis by the OMM's Land Reclamation Division. It has received a few dust complaints but onsite follow up inspections have found the site to be maintained properly.

Portions of the mine predate the current regulatory program. Topsoil was not required to be salvaged for that portion of the mine operation. The use of biosolids has been approved as an organic supplement to topsoil under the current regulations.

No mussel kill has been reported to the DNR. Groundwater monitoring has not revealed any groundwater issues at the site.

BOW staff conducted an inspection of the Murdock Mine on October 20, 2010, in response to a complaint of contaminated water around the perimeter of the permitted area. The inspection revealed no discharge or sedimentation in the receiving water from the permitted outfall. No other discharges were noted from the permitted area. Alleged water contamination was the result of independent water sampling from the facility's untreated water collection system. Reclamation of the site is ongoing with the permitted filling of Pond 5 using coal combustion by product, gypsum, and bio-solids. Intermittent carbon recovery occurs in Slurry Pond 1 with no recent activity noted. All mine drainage appeared to report to the treatment system and no fugitive dust was observed at the time of inspection.

A complaint was submitted to United States Environmental Protection Agency (U.S. EPA) about excessive dumping at the Murdock Mine and whether active permits were in place for this activity. The complaint was referred to the BOA-Champaign. BOA FOS investigated the site and spoke with Larry Harp of Old Ben Coal Company. He observed significant emissions of fugitive dust from the site and recommended Illinois EPA issue a VNL. On August 2, 2004 a VNL (A-2004-00276) was issued for violating Section 9(a) of the Illinois Environmental Protection Act (Act) for fugitive dust emissions.

On August 19, 2004 the Old Ben Coal Company provided a compliance commitment agreement (CCA) proposal to the Illinois EPA, which included the following:

1. No activities will be conducted during periods of high winds.
2. Old Ben will contact ADM to discuss possibility of mixing fly ash and bottom ash offsite before transporting to the mine.
3. Ash piles will be pushed as soon as possible or wetted with water to stabilize them against wind erosion.
4. Old Ben will have the trucks dump the loads as close to the fill area as possible to reduce fugitive dust emissions.
5. Water will continue to be applied as necessary to stabilize the ash material to prevent fugitive dust emissions.

On September 22, 2004 Illinois EPA issued an Acceptance of CCA for VN A-2004-00276.

On March 28, 2007 a complaint was received regarding uncontrolled dust emissions and odor from the Mine. BOA-Champaign, investigated the site and observed the dumping of coal ash at the site. The dust generated from the activity went well beyond the property boundary toward the town of Murdock to the northwest. In a file review, permits issued by Illinois EPA BOW for biosolids utilization, dated December 21, 2005 and February 7, 2007. A non-compliance advisory (NCA) for fugitive dust emissions was recommended. On April 10, 2007 an NCA letter was sent to Alpena Vision Resources for violating Section 9(a) of the Act for fugitive dust emissions.

On March 23-24, 2009 two related complaints about fly ash and odor were investigated by BOA-Champaign. The inspector observed several piles of biosolids, gypsum, and fly ash with no apparent dust control measures in place. BOA coordinated with DNR and DNR indicated that the odor problems were likely from humin that had recently been permitted and that they likely would not permit it in the future.

Then on March 1, 2010 a complaint was forwarded to BOA-Champaign from BOL-Champaign. The complaint was from the, Douglas County State's Attomey, who was calling to report a change in odor at the Murdock Mine and to verify that they are permitted for the activity. BOA spoke with OMM, who described the mine reclamation project and provided the contact information of the OMM inspector assigned to the Murdock Mine. In a conversation with the OMM inspector, he indicated that the project had a permit to receive and use biosolids from the Urbana-Champaign Sanitary District. He also provided contact information for, the project manager, who provided some more details of the scope and timeframe of the project. The BOA inspector called states Attorney and reported that the Murdock Mine was permitted to receive biosolids, which has been ongoing for about a year. The States Attorney had no specific contact of direct complainants for additional follow-up.

On April 19, 2010, BOL-Champaign, received another complaint and forwarded it to BOA-Champaign, however there was no contact information provided for follow-up.

More recently on August 5, 2011 Illinois EPA received a complaint about the odor from the mine, BOA-Champaign, responded to the complaint and discussed the issues with the complainant. The primary concerns are the odor and making sure that what is being dumped at the mine is not hazardous to the air and groundwater. The BOA consulted, BOL-Champaign, and, BOW-Champaign, who had both been working on a complaint about the mine. They went and discussed with the manager of the mine potential ways to limit odor emissions, specifically regarding the area to keep storm water from draining

to the stored biosolids. The moisture plus the high heat was likely causing the increase in odor. According to BOW, Alpena completed this recommended grading work. However, the complainant still smells the foul odor. BOA is currently in the process of working with the complainant, OMM, BOW, BOL, and Alpena to resolve the current complaint.

Illinois EPA's Ash Impoundment Strategy Progress Report
October 2011

Introduction

In regard to coal combustion residues (CCR) at surface impoundments and coal fired electric generating plants; the Illinois Environmental Protection Agency (Illinois EPA or IEPA) Bureau of Water (BOW) has been implementing a program **very similar to the proposed "D prime" option** proposed by U.S. EPA. The corrective actions under the Illinois Pollution Control Board's (Board) groundwater management zone (GMZ) provisions are consistent with the existing closure requirements for solid waste landfills (40 CFR 258). U.S. EPA's proposals for closure of surface impoundments containing coal combustion residuals (CCR) are based on these existing models used for landfills.

Illinois EPA's Strategy

Although Illinois was one of the first states in the country to have and apply groundwater standards (i.e. 1971), groundwater monitoring requirements, and corrective actions to ash impoundments (e.g., *Central Illinois Public Service Company v. Pollution Control Board*, 116 Ill.2d 397, approved GMZs at Havana[1], Wood River and Hennepin, etc.) we chose to make further improvements in response to the massive coal ash spill at a Tennessee Valley Authority facility in Kingston, Tennessee. Illinois EPA developed an aggressive strategy to assess ash impoundments at coal fired power plants. Since the early 1990s, new ash ponds (surface impoundments) have been required to be lined and groundwater monitoring wells have been installed at many of these new ash impoundments. There are also older ash ponds at many of these facilities.

An inventory of power plants with surface impoundments permitted by the Illinois EPA under the National Pollutant Discharge Elimination System (NPDES) permit program has been created. There are 24 power plants in Illinois with a total of 83 ash impoundments. Table 1 below indicates the number of impoundments that were active, those that had low permeability liners, and those that had groundwater monitoring as of February 1st, 2009.

Total Impoundments	Active Impoundments	Inactive Impoundments	Lined Impoundments	Impoundments with Groundwater Monitoring
83	68	15	31	28

Table 1. Number of Impoundments that are Active, have Low Permeability Liners, and Groundwater Monitoring Systems

The geologic vulnerability of groundwater at the 24 power plants was assessed using the Illinois' "Potential for Aquifer Recharge" map which classifies the potential for precipitation to infiltrate the surface and reach the water table. This map can also be

[1] The GMZ implemented at Havana has resulted in restoring groundwater quality to meet the Board standards.

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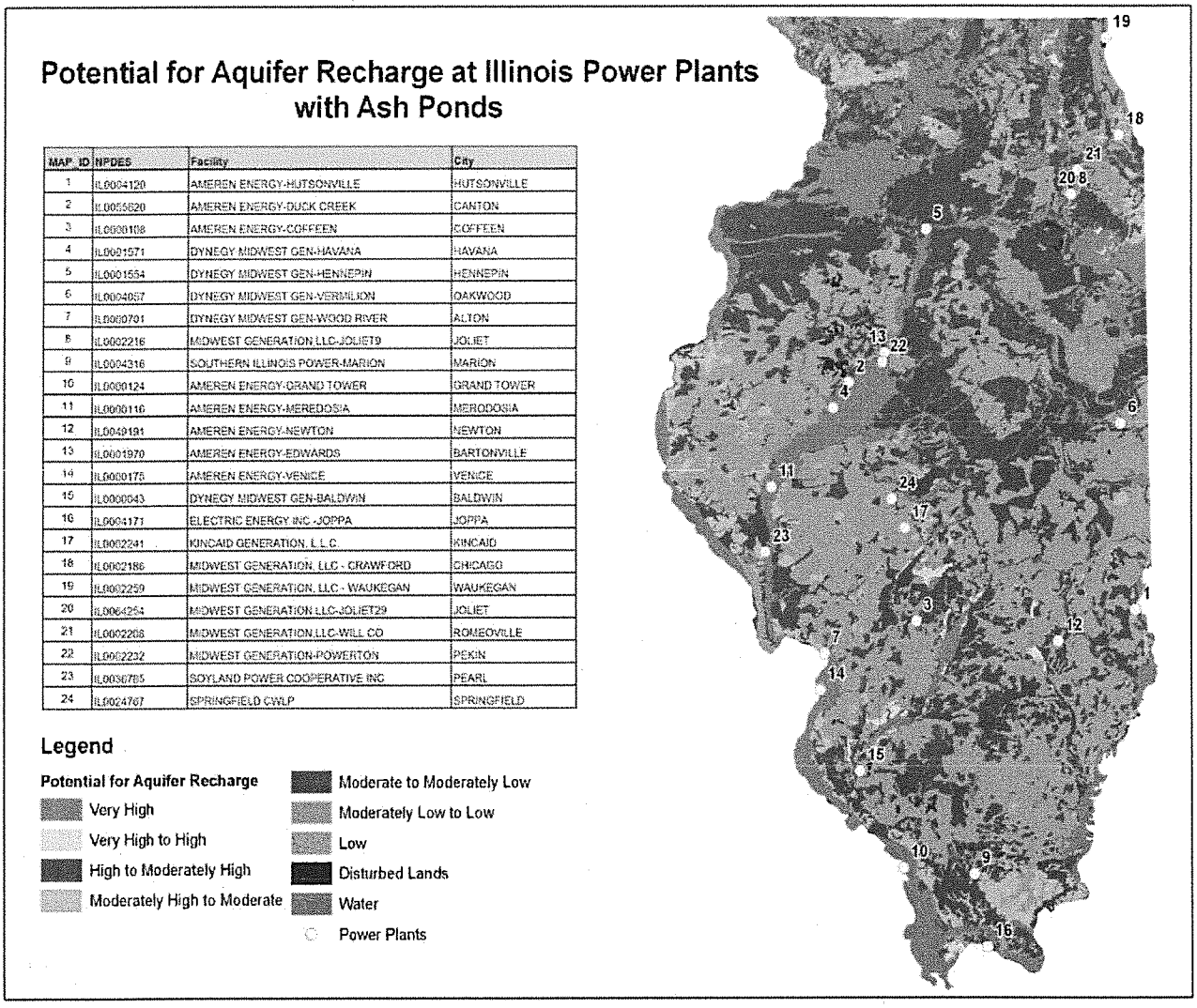
used to determine the potential for groundwater contamination on a regional scale. Figure 1 shows the location of each power plant and the potential for aquifer recharge at each plant. This information, along with the presence of potable wells identified near the plants, was used to determine the potential contamination threat to those wells. The contamination potential ranges from "very high" to "low."

The aforementioned criteria were used to develop assessment priorities for these facilities under an action-oriented strategic plan. The plan was finalized and implementation began on February 26, 2009.



MAP_ID	NPDES	Facility	City
1	IL0004120	AMEREN ENERGY-HUTSONVILLE	HUTSONVILLE
2	IL0055620	AMEREN ENERGY-DUCK CREEK	CANTON
3	IL0000108	AMEREN ENERGY-COFFEEN	COFFEEN
4	IL0001571	DYNEGY MIDWEST GEN-HAVANA	HAVANA
5	IL0001554	DYNEGY MIDWEST GEN-HENNEPIN	HENNEPIN
6	IL0004057	DYNEGY MIDWEST GEN-VERMILION	OAKWOOD
7	IL0000701	DYNEGY MIDWEST GEN-WOOD RIVER	ALTON
8	IL0002216	MIDWEST GENERATION LLC-JOLIET9	JOLIET
9	IL0004316	SOUTHERN ILLINOIS POWER-MARION	MARION
10	IL0000124	AMEREN ENERGY-GRAND TOWER	GRAND TOWER
11	IL0000116	AMEREN ENERGY-MEREDOSIA	MERODOSIA
12	IL0049191	AMEREN ENERGY-NEWTON	NEWTON
13	IL0001970	AMEREN ENERGY-EDWARDS	BARTONVILLE
14	IL0000175	AMEREN ENERGY-VENICE	VENICE
15	IL0000043	DYNEGY MIDWEST GEN-BALDWIN	BALDWIN
16	IL0004171	ELECTRIC ENERGY INC -JOPPA	JOPPA
17	IL0002241	KINCAID GENERATION, L.L.C.	KINCAID
18	IL0002186	MIDWEST GENERATION, LLC - CRAWFORD	CHICAGO
19	IL0002259	MIDWEST GENERATION, LLC - WAUKEGAN	WAUKEGAN
20	IL0064254	MIDWEST GENERATION LLC-JOLIET29	JOLIET
21	IL0002208	MIDWEST GENERATION LLC-WILL CO	ROMEOVILLE
22	IL0002232	MIDWEST GENERATION-POWERTON	PEKIN
23	IL0030765	SOYLAND POWER COOPERATIVE INC	PEARL
24	IL0024767	SPRINGFIELD CWLP	SPRINGFIELD

Figure 1. Illinois Power Plants with CCR Surface Impoundments

Priority 1 facilities (i.e., high potential for aquifer recharge, and existing or future potable uses) were requested, under a modified BOW permit to conduct a potable well survey to

field verify the presence/absence of off-site drinking water supply wells, install a groundwater monitoring well system, implement a monitoring program[2], and submit electronic compliance reports to the Illinois EPA. This information was requested at these 10 facilities, identified in Table 2, because they did not have groundwater monitoring systems. Additionally, the five facilities classified as Priority 2 because of the low potential for aquifer recharge and existing or future potable uses in the area, were requested to assess the potential for contaminant migration at their respective sites.

Priority 1	Priority 2
Ameren - Edwards Station, IL0001970	City Water Light and Power, IL0024767
Ameren - Grand Tower Station, IL0000124	Kincaid Generation, IL0002241
Ameren - Meredosia Station, IL0000116	Ameren - Newton Station, IL0049191
Ameren - Venice Station, IL0000175	Midwest Generation EME - Crawford Station, IL0002186
Dynegy Midwest - Baldwin Energy Center, IL0000043	Midwest Generation EME - Waukegan Station, IL0002259
Electric Energy Inc., IL0004171	
Midwest Generation EME - Powerton, IL0002232	
Midwest Generation EME - Joliet 29, IL0064254	
Midwest Generation EME - Will County Station, IL0002208	
Prairie Power Inc., IL0036765	

Table 2. Priority 1 and 2 under Illinois EPA's CCR Impoundment Strategy

Potable well surveys have been conducted at all facilities to field verify the proximity of drinking water supply wells off-site. These surveys have shown that currently there appear to be no drinking water supply wells that are being threatened down gradient of these sites. In general, Illinois EPA would request a Section 43 referral to the Illinois Attorney General's Office if there was an imminent threat to public health or the environment.

Illinois EPA has also coordinated with the Department of Natural Resources (DNR) Office of Dam Safety. All structures that meet the definition of a dam, as defined in the

[2] Statistically based monitoring programs are required by Illinois EPA to determine naturally occurring compounds (inorganic compound numerical standards apply except due to natural causes) and background concentrations. To take into account spatial and temporal variations a years worth of data is generally required.

Illinois Administrative Code, are regulated by the DNR. If a dam is unpermitted, it is because the regulation that applies to the dam does not require a permit. Of the 1600+ dams in the state that clearly fall under the regulations, only about 650 have an active permit. The rest are low hazard dams that do not require active permits, but are still regulated.

The GMZ provisions of the Board Groundwater Standards (35 Ill. Adm. Code 620) are modeled after the National Contingency Plan.

Progress

The following provides a summary of the progress for each of the Priority 1 and 2 facilities:

Priority 1

- **Ameren Facilities** - Hydrogeologic assessment plans for Edwards Station, Meredosia Station, and Grand Tower have been approved and are being implemented. Initial groundwater monitoring results have been reviewed, and Illinois EPA is waiting on the next round of quarterly samples to further assess conditions at the site.

  Grand Tower - Groundwater flows towards the river, and will therefore not impact any of the potable water supply wells identified proximate to the ash ponds. A letter has been sent to Ameren stating that if elevated levels of contaminants are confirmed, Illinois EPA will require further investigation and appropriate remedial activities where necessary.

  Meredosia - IEPA analyzed groundwater flow direction based on the initial sampling event at the on-site monitoring wells at Meredosia. Groundwater flows towards the river, and will therefore not impact any of the potable water supply wells identified proximate to the ash ponds. A letter has been sent to Ameren stating that if elevated levels of contaminants are confirmed, Illinois EPA will require further investigation and appropriate remedial activities where necessary.

  Venice - The groundwater GMZ was approved for this site to limit recharge through the contaminants leaching to groundwater by covering the ash ponds with a low permeability synthetic membrane (cover). The well inventory required by IEPA and completed by Ameren confirms that there is no use of groundwater for potable or industrial uses down gradient of the ash ponds. The area just south of the plume will be beneath the proposed I-70 bridge, virtually eliminating any potential use of the groundwater. Therefore, contaminated groundwater will not be pumped to control migration. The contaminated groundwater will slowly discharge into the river by subsurface seepage. Ameren analyzed the concentration

of boron that would enter the river through seepage. The result was a concentration of 0.0019 milligrams per liter in the river. This concentration is protective of human health and aquatic life. After the synthetic cover is in place, storm water that runs off the cover and not been in contact with ash will be pumped into the river. The ash ponds do not appear to be the source of the arsenic found east of the ponds. Leachate samples from the ponds have concentrations of arsenic lower than detected east of the ponds. Since groundwater flow is predominantly to the west another source of the arsenic is likely. The area around the ponds has been heavily industrialized for many years, including wood treatment, which utilizes arsenic.

- **Dynegy Midwest, Baldwin Energy Center** - A hydrogeologic assessment plan has been submitted and approved. Initial groundwater monitoring results have been reviewed. Illinois EPA met with Dynegy Midwest to discuss elevated levels of contaminants at the site. Dynegy Midwest will be doing further investigation to better define groundwater impacts at the site.
- **Electric Energy, Joppa Station -** A hydrogeologic assessment plan for this facility has been submitted and approved. EPA met with Electric Energy to discuss elevated levels of contaminants at the site and appropriate remedial alternatives. No private wells appear to have the potential for impact.
- **Prarie Power, Pearl Station** - A hydrogeologic assessment plan has been submitted and approved. Preliminary groundwater sampling results have been received indicating potential groundwater impacts. Additional sampling data is being collected to establish background water quality at the site. The initial monitoring indicates that groundwater flow is primarily towards the river. Potential to impact potable wells is minimal. Confirmation of elevated levels of contaminants will require further investigation and appropriate remedial activities where necessary.
- **Midwest Generation Facilities** - Hydrogeologic assessments plans which include groundwater monitoring for Will County Station, Powerton Station and Joliet 29 Station have been approved. Groundwater monitoring results have been received and are under review.

  Powerton - Due to the presence of artificial lakes, the ash ponds and the river, groundwater flow is variable. Due to the potential for off-site movement Midwest Generation has been instructed that if elevated levels of contaminants are confirmed Illinois EPA will require further investigation and appropriate remedial activities where necessary.

  Joliet 29 - A hydrogeologic assessment plan has been submitted and approved. Groundwater sampling results have been received indicating potential groundwater impacts. Additional sampling data is being

collected to establish background water quality at the site. The initial monitoring indicates that groundwater flow is primarily towards the river. No private wells appear to have the potential for impact. Confirmation of elevated levels of contaminants will require will require further investigation and appropriate remedial activities where necessary.

Will County Station- A hydrogeologic assessment plan has been submitted and approved. Groundwater sampling results have been received indicating potential groundwater impacts. Additional sampling data is being collected to establish background water quality at the site. The initial monitoring indicates that groundwater flow is primarily towards the river. No private wells appear to have the potential for impact. Confirmation of elevated levels of contaminants will require will require further investigation and appropriate remedial activities where necessary.

Priority 2

- **Ameren Facility** - Hydrogeologic assessments plans for Newton Station have been submitted and approved. Preliminary groundwater sampling results have been received indicating potential groundwater impacts. Additional sampling data is being collected to establish background water quality at the site.

- **City Water Light and Power (CWLP) – Dallman Station** A hydrogeologic assessment for Dallman has been received and is currently under review. CWLP met with the IEPA to discuss potential impact to the adjacent stream and the potential for off-site movement of contaminants. CWLP will be doing further investigation to better define groundwater impacts at the site. No private wells appear to have the potential for impact.

- **Kincaid Generation** – An assessment plan which includes the construction of monitor wells has been received and has been approved. Initial monitoring results have been submitted and are under review. There appears to be minimal potential for impact to potable wells.

- **Midwest Generation Facilities** - Hydrogeologic assessments plans which include groundwater monitoring for Waukegan Station and Crawford Station have been approved. Groundwater monitoring results have been received and are under review.

  Waukegan - Groundwater flow at Waukegan appears to be highly dependant on the water level in the ash ponds. Due to the potential for

off-site movement, Midwest Generation has been instructed to complete some additional investigations to more fully evaluate contaminant movement. Confirmation of elevated levels of contaminants will require further investigation and appropriate remedial activities where necessary. No potable wells appear to have the potential for impact.

Crawford - A hydrogeologic assessment plan has been submitted and approved. Groundwater sampling results have been received indicating potential groundwater impacts. Additional sampling data is being collected to establish background water quality at the site. No private wells appear to have the potential for impact. Confirmation of elevated levels of contaminants will require will require further investigation and appropriate remedial activities where necessary.

In addition to the priorities described above, Illinois EPA concurrently continues to work with the eight facilities listed in Table 3 below to assess and remediate groundwater impacts (corrective action). A site specific rule has been adopted by the Illinois Pollution Control Board for the Ameren-Hutsonville site. This rule specifies the steps which are required to be taken to close out the inactive ash impoundment. Ameren is in the process of fulfilling its obligations required under the site specific rule. The closure requirements are consistent with if not more stringent than U.S. EPA's proposed CCR requirements for CCR under either option.

Dynegy Midwest - Havana Station had an approved GMZ, however groundwater at this site has returned to compliance with the numerical groundwater standards.

Midwest Generation - Joliet 9 (Lincoln Stone Quarry)- Lincoln Stone Quarry is a permitted Subpart C facility subject to the regulations of 35 Ill. Adm. Code 814 Subpart C and referenced portions of the 35 Ill. Adm. Code regulations. Because Lincoln Stone Quarry was a pre-existing facility with unique characteristics, the facility did not meet the design requirements intended for a 35 Ill. Adm. Code 811 landfill. In order to be permitted under the solid waste program, the facility had to receive an adjusted standard from the Board for relief from specific regulations, specifically design requirements including the applicable groundwater quality standards (AGQS). The AGQS is a statistically derived value based on data sets that are unaffected by the facility. The site specific data set represents ambient background, which often does not reflect any 620 Class standards. (e.g., ambient background may be naturally above or below the numbers listed under 35 Ill. Adm. Code 620.)

The Board granted an adjusted standard that included 35 IAC 620 Class II groundwater standards for several parameters north of the facility, between the disposal area and the river. The AGQS is applicable to the remaining wells at the facility. Subsequent to receiving the adjusted standard, the IEPA permitted the facility in 1999.

Pumping in the area of the facility subsequently changed groundwater flow direction in the shallow zone such that impacts have been seen in a limited area in the southeast corner of the facility. The Illinois EPA approved a corrective action for that area in 2009 along with additional groundwater assessment. In 2011, the IEPA approved the assessment reports and continues to work with the facility to establish an interim GMZ for the southeast area of the facility, along with a proposal for additional, preventative, corrective action along the south side of the landfill. Groundwater assessment and evaluation continues at the site.

Illinois EPA staff, in cooperation with Will County Department, sampled private wells east of this facility and all inorganic compounds were consistent with ambient background concentrations. The private wells were not impacted by this facility.

Facility	Status
Ameren -Coffeen Station, IL0000108	Further Assessment Underway
Ameren -Duck Creek Station, IL0055620	Remedial Action Under Development
Ameren -Hutsonville Station, IL0004120	Work is proceeding on the Site Specific Rule Adopted by the Board The requirements in this site specific regulation are consistent with if not more stringent than what U.S. EPA is currently proposing for CCR in surface impoundments modeled after 40 CFR 258.
Dynegy Midwest - Hennepin Station, IL0001554	Approved GMZ
Dynegy Midwest - Vermillion Station, IL0004057	Remedial Action Plan Under Development - There are three impoundments at this site. One is currently in use and lined. One unlined impoundment is in use as part of the waste stream under their NPDES permit,

	although it rarely discharges. The third impoundment is unlined and no longer in use. There is currently no indication of contamination from the lined impoundment in use. Surface water monitoring of the Middle Fork of the Vermilion River does not currently indicate impairment for any potential contaminant. Groundwater monitoring results indicate there are potential contamination issues related to the two older unlined impoundments. Contaminants of concern include boron, sulfate, manganese, iron, total dissolved solids, and pH. An initial assessment conducted by the IEPA in early 2009, using internal databases, identified 20 potential private wells within 1 mile of the site. The IEPA then requested a survey of private wells within 2,500 feet of the site be conducted by Dynegy. This survey was completed June 15, 2009. The results of this survey verified one potable well up-gradient of the ash impoundments, the well used by the facility itself, and no private wells located down-gradient of the impoundments. A groundwater monitoring plan has been approved for the site, and the results of the initial one year of monitoring, a GMZ application, and a Corrective Action Plan (including a Closure Work Plan) to deal with contamination issues at the site is due April 1, 2012. The closed pond referenced at the the site is not permitted by DNR. DNR is only aware of 1 active CCW storage pond, which is directly East of the power plant and is permitted. There is a pond on the North side of the property which receives runoff from the capped area of the old pond(s). The large lake on the site is used for cooling water, not CCW storage. All the structures on the site are in compliance ieth DNR regulations.

Dynegy Midwest - Wood River Station, IL0000701	Approved GMZ
Midwest Generation EME - Joliet 9, Landfill IL0002216 Lincoln Stone Quarry	In 2011, the IEPA approved the assessment reports and continues to work with the facility to establish an interim GMZ for the southeast area of the facility.
Southern Illinois Power (SIP), IL0004316	Further assessment is underway, and a meeting with a meeting has been requested to discuss results.

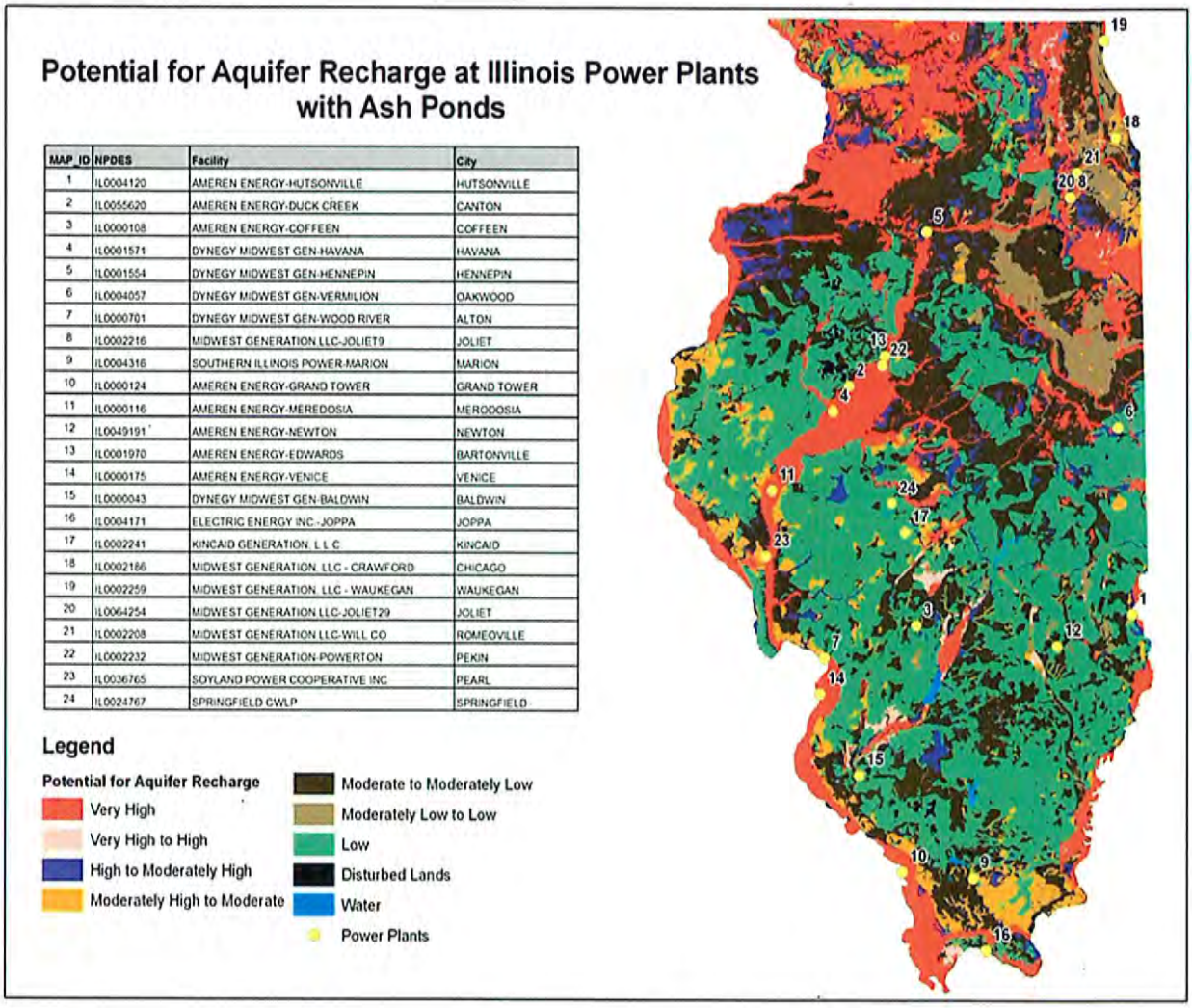
Table 3. Facilities with On-going Groundwater Assessment and Remediation Activities

Groundwater samples were analyzed for the full spectrum of inorganic parameters at these sites. The constituents listed in Table 4 were identified as contaminants of concern at one or more these facilities.

Boron
Sulfate
Chloride
Iron
Manganese
Total Dissolved Solids (TDS)

Table 4. Contaminants of Concern

Many of these power generating facilities are located adjacent to Illinois' major river systems. These modern day river systems overlay Illinois' principle aquifer systems[1] in many parts of the State. In addition, many of these aquifers are in areas that have been mapped as having a high to very high potential for aquifer recharge, as shown on Figure 1.



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22	IL0002232	MIDWEST GENERATION-POWERTON	PEKIN
23	IL0036765	SOYLAND POWER COOPERATIVE INC	PEARL
24	IL0024767	SPRINGFIELD CWLP	SPRINGFIELD

Figure 1. Illinois Potential for Aquifer Recharge Map with Power Generating Facilities

[1] "Principle aquifer" means an aquifer that has been mapped by the Illinois State Geological Survey, and Illinois State Water Survey has been determined to yield 100,000 gallons per day per square foot over at least a 50 square mile area.

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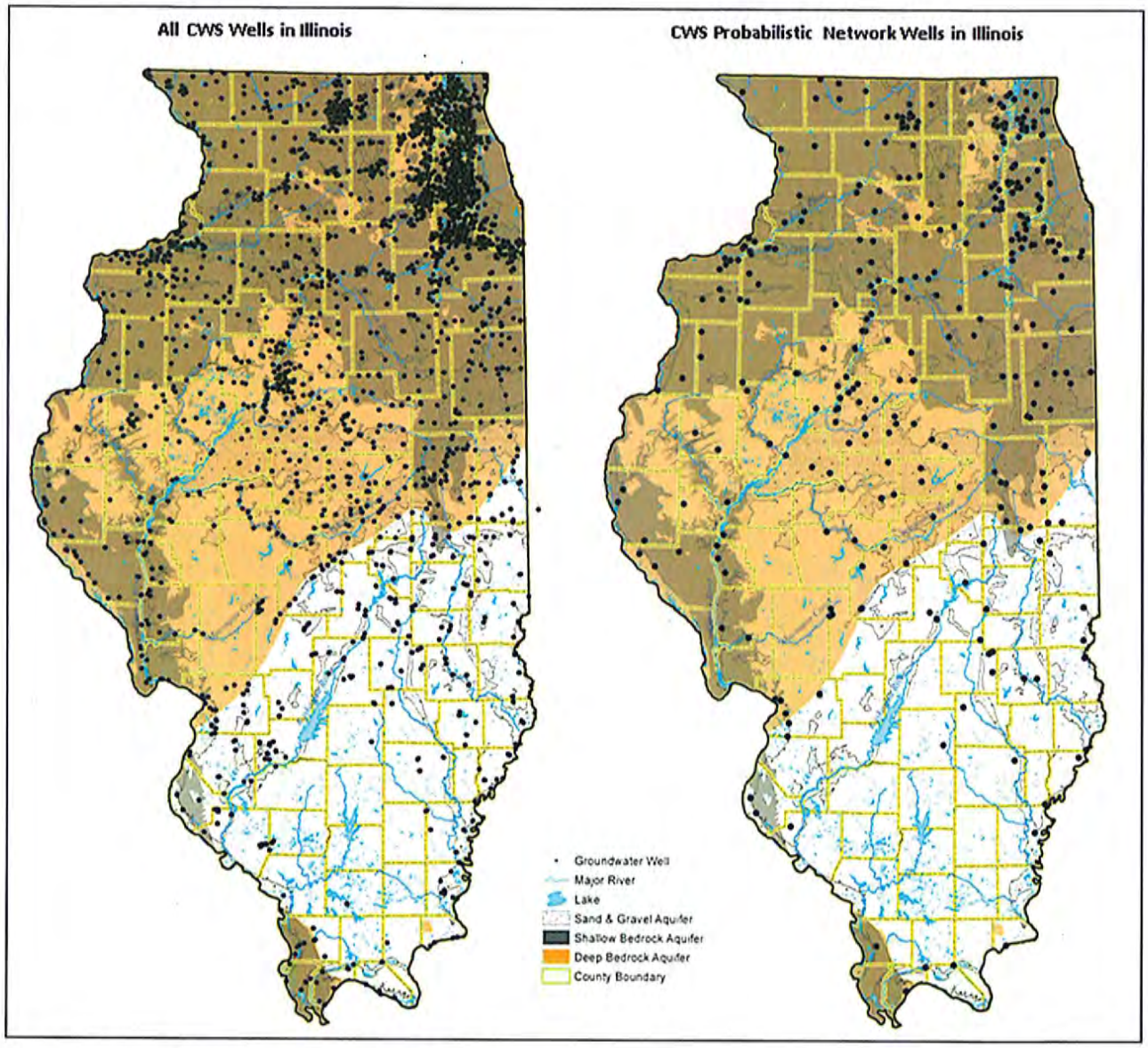

Figure 3. All CWS Wells and the Probabilistic Network

Since the probabilistic network of CWS is stratified by aquifer type the sampling data collected from wells associated with a specific aquifer used can be illustrated. For example, Figure 4 shows the network of CWS wells using the principle sand and gravel aquifer and the associated box plot statistics for IOC. Further, Figure 5 shows the IOC box plot statistics relative to the wells using shallow bedrock aquifers.

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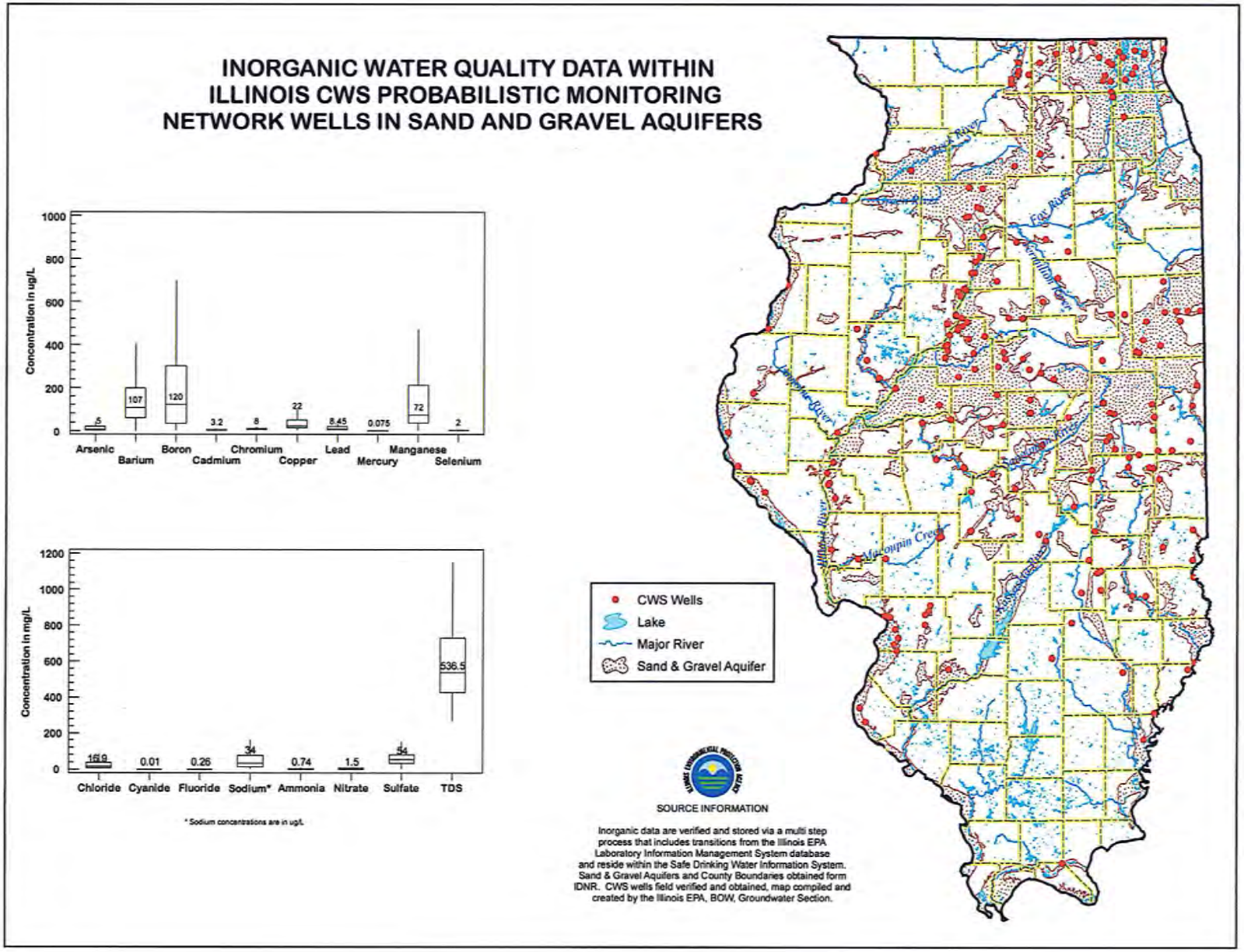

Figure 4 . Inorganic water quality data within Illinois Sand and Gravel Aquifers

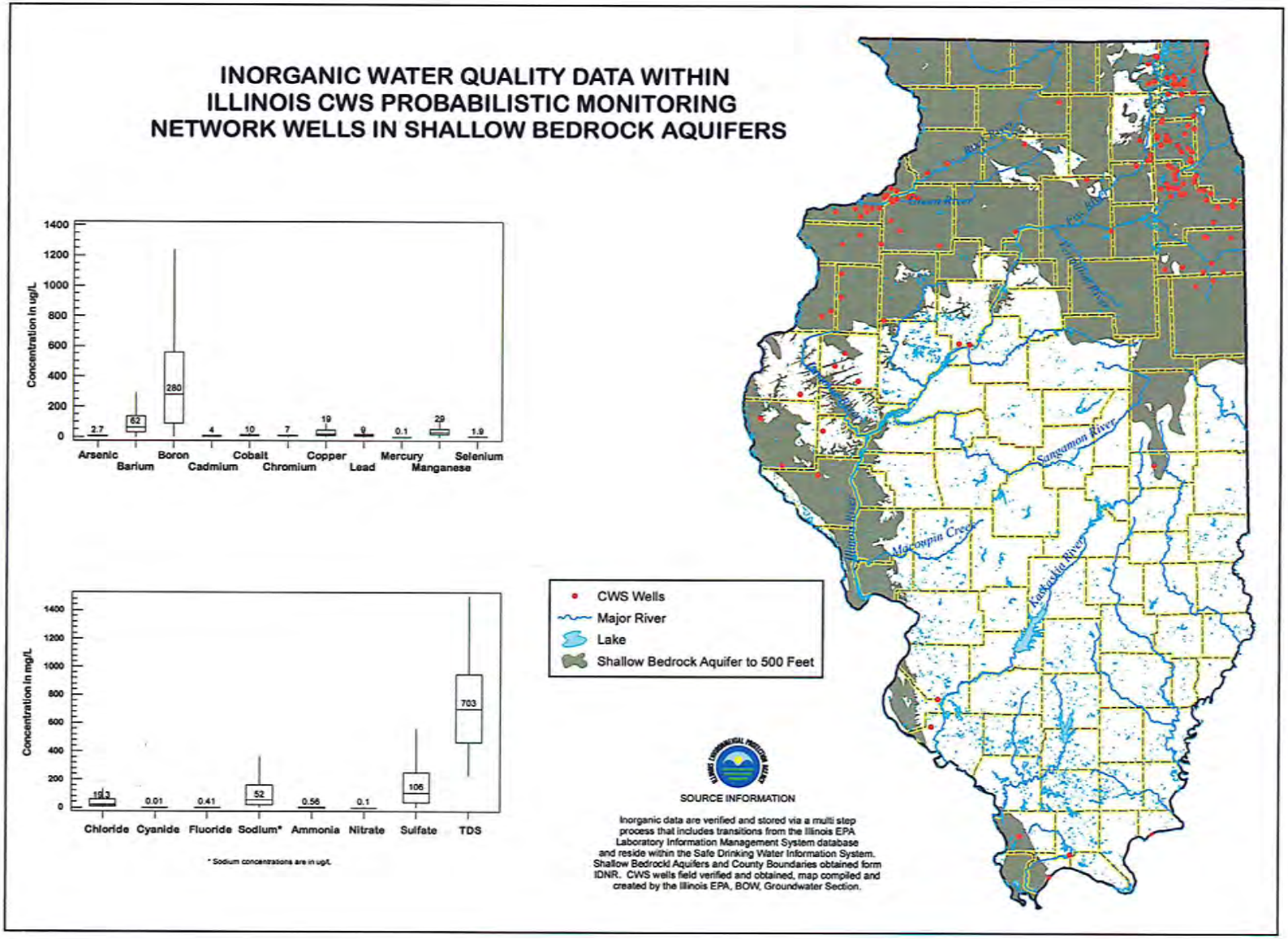

Figure 5. Inorganic water quality data within Illinois Shallow Bedrock Aquifers

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ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

FOURTH QUARTER and ANNUAL GROUNDWATER MONITORING REPORT
POWERTON GENERATING STATION

January 21, 2014

RECEIVED
JAN 23 2014
IEPA/CAS

Ms. Andrea Rhodes
Illinois Environmental Protection Agency
Division of Public Water Supplies
MC#19
1021 North Grand Avenue East
Springfield, IL 62794-9276

VIA FEDERAL EXPRESS

KPRG Project No. 12313.1

Re: Quarterly Groundwater Monitoring Results – Fourth Quarter 2013 and Annual
Powerton Generating Station – Ash Impoundments
Compliance Commitment Agreement VN W-2012-00057; ID# 6282

Dear Ms. Rhodes:

The fourth quarterly groundwater sampling for 2013 has been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Powerton Generating Station in accordance with the signed Compliance Commitment Agreement (CCA) with Illinois Environmental Protection Agency (IEPA) dated October 24, 2012. This quarterly monitoring report is being submitted by KPRG and Associates, Inc. (KPRG), on behalf of Midwest Generation, summarizing the results of the monitoring event. This report is also intended to serve as the Annul Report and includes historical data analysis/summaries.

Well Inspection and Sampling Procedures

The groundwater monitoring network around the ash ponds at this facility consists of sixteen wells (MW-1 through MW-16) as shown on Figure 1. As part of sampling procedures, the integrity of all monitoring wells was inspected and water levels obtained using an electronic water level meter (see summary of water level discussion below). All wells were found in good condition with locked protector casings and the concrete surface seals were intact.

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Table 3. East Yard Run-off Basin Analytical Results - Midwest Generation LLC, Powerton Station, Pekin, IL

Date	12/14/2012		2/28/2013		5/13/2013		7/29/2013		10/22/2013	
Parameter	DL	Result	DL	Result	DL	Result	DL	Result	DL	Result
Antimony	0.0050	ND	0.003	ND	0.0030	ND	0.0030	ND	0.0030	ND
Arsenic	0.0050	0.0062	0.001	0.0043	0.0010	0.0030	0.0010	0.0066	0.0010	0.0036
Barium	0.0020	0.19	0.001	0.15	0.0025	0.16	0.0025	0.33	0.0025	0.098
Beryllium	0.0010	ND	0.001	ND	0.0010	ND	0.0010	ND	0.0010	ND
Boron	0.40	0.41	0.01	0.35	0.050	0.35 ^	0.050	0.43	0.050	0.38
Cadmium	0.0010	ND	0.001	ND	0.00050	ND	0.00050	0.0014	0.00050	ND
Chloride	50	220	50	200	10	130	10	150	10	170
Chromium	0.0030	0.0094	0.004	0.0041	0.0050	ND	0.0050	0.021	0.0050	ND
Cobalt	0.0030	ND	0.002	ND	0.0010	ND	0.0010	0.0023	0.0010	ND
Copper	0.010	ND	0.003	0.0032	0.0020	0.0057	0.0020	0.022	0.0020	0.0032
Cyanide	0.0050	ND	0.005	ND	0.010	ND	0.010	ND	0.010	ND
Fluoride	0.25	0.68	0.25	0.29	0.10	0.42	0.10	0.47	0.10	0.45
Iron	0.010	ND	0.01	0.025	0.10	0.62	0.10	6.6	0.10	2.6
Lead	0.0050	ND	0.001	ND	0.00050	0.0044	0.00050	0.024	0.00050	ND
Manganese	0.0020	0.0026	0.001	0.0037	0.0025	0.060	0.0025	0.14	0.0025	0.021
Mercury	0.00020	ND	0.0002	ND	0.00020	ND	0.00020	ND	0.00020	ND
Nickel	0.010	ND	0.005	0.0066	0.0020	0.0029	0.0020	0.010	0.0020	0.0027
Nitrogen/Nitrate	0.02	0.49	0.02	0.48	0.10	ND	0.10	0.14	0.10	ND
Nitrogen/Nitrate, Nitrite	NS	NS	NS	NS	0.10	ND ^	0.10	0.14	0.10	0.12
Nitrogen/Nitrite	0.15	ND	NS	NS	0.020	ND	0.020	ND	0.020	0.024
Perchlorate	NS	NS	NS	NS	0.0040	ND	0.0040	ND	0.0040	ND
Selenium	0.0050	ND	0.001	0.0037	0.0025	ND	0.0025	ND	0.0025	ND
Silver	0.010	ND	0.005	ND	0.00050	ND	0.00050	ND	0.00050	ND
Sulfate	50	280	50	220	50	160	50	240	50	240
Thallium	0.0010	ND	0.001	ND	0.0020	ND	0.0020	ND	0.0020	ND
Total Dissolved Solids	26	940	26	820	10	590	10	630	10	750
Vanadium	0.0080	0.015	0.005	0.011	0.0050	0.0071	0.0050	0.043	0.0050	0.0066
Zinc	0.020	ND	0.006	ND	0.020	0.042	0.020	0.27	0.020	ND
Benzene	0.005	ND	0.005	ND	0.00050	ND	0.00050	ND	0.00050	ND
BETX	0.03	ND	0.03	ND	0.00250	ND	0.00250	ND	0.00250	ND

Notes: All values are in mg/L (ppm) unless otherwise noted.
^ - Denotes instrument related QC exceeds the control limits
DL - Detection limit
NA - Not Applicable
ND - Not Detected
NM - Not Measured
NR - Not Required
NS - Not Sampled

TITLE 17: CONSERVATION
CHAPTER I: DEPARTMENT OF NATURAL RESOURCES
SUBCHAPTER h: WATER RESOURCES

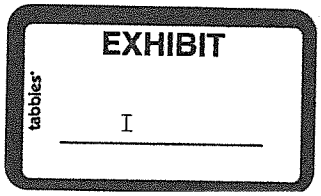
PART 3702
CONSTRUCTION AND MAINTENANCE OF DAMS

Section

AUTHORITY: Implementing and authorized by Sections 23 and 23a of the Rivers, Lakes and Streams Act [615 ILCS 5/23, 23a, and 35].

SOURCE: Adopted at 4 Ill. Reg. 37, p. 808, effective September 2, 1980; codified at 7 Ill. Reg. 2753; amended at 11 Ill. Reg. 1941, effective January 13, 1987; recodified from 92 Ill. Adm. Code 702, Department of Transportation, to the Department of Natural Resources at 22 Ill. Reg. 7362; amended at 38 Ill. Reg. 949, effective December 27, 2013.

Section 3702.10 Purpose



a) The purpose of this Part is to provide information on the procedures that the Illinois Department of Natural Resources (Department), Office of Water Resources (OWR) will follow in its dam safety inspection and regulation program. This Part covers permit and other procedures for construction and maintenance of new dams and for necessary modification and maintenance of existing dams.

b) The establishment of rigid criteria or rigid standards for new and existing dams is not intended. This Part sets forth minimum standards which are consistent with current engineering practices. Variations from these standards may be necessary because of specific conditions at individual dams.

c) Adherence to this Part does not guarantee the safety of a dam or relieve the owner of liability in case of a dam failure. The OWR does not undertake to insure or certify the adequacy of any dam structure or appurtenance.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.20 Definitions

"As-Built Plans" A set of plans marked to show all deviations from the permitted construction plans.

"Construct" To erect, build, emplace, or remove a structure capable of storing or diverting water.

"Corps Guidelines" The U.S. Army Corps of Engineers' "Recommended Guidelines for Safety Inspection of Dams" which is Appendix D of ER 1110-2-106, National Program for Inspection of Non-Federal Dams, 33 CFR 222, as of July 1, 1983, not including any later amendments or editions.

"Dam" All obstructions, walls, embankments, or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Not included are underground or elevated tanks to store water.

"Dam Abutment" The intersection of the left or right side of the dam embankment with natural ground surface.

"Dam Height" Height of the dam in feet as measured from the natural bed of the stream or water course at the downstream dam slope toe of the barrier to the top of the embankment or barrier.

"Department" The Illinois Department of Natural Resources.

"Director" The Director of the Illinois Department of Natural Resources or his/her designated representative.

"Drawdown" The magnitude of the change in surface elevation of a lake or body of water as a result of the withdrawal of water therefrom.

"Engineer" A structural and/or professional engineer registered in The State of Illinois, under the Professional Engineering Practice Act [225 ILCS 325] and the Structural Engineers Act [225 ILCS 340], with expertise in the investigation, design, construction, and operation of dams.

"Flood Plain" The land adjacent to a body of water which has been or may hereafter be covered by flood water.

"Freeboard" The difference in elevation between the top of dam and the maximum water surface that would be attained during the passage of the selected flood occurrence.

"Impounding Capacity" The total volume of water, expressed in acre-feet, that is stored in the reservoir above the natural bed of the stream or watercourse when the water surface is at the top of the embankment or barrier.

"In Conformance With All Applicable Standards Existing At The Time Of Its Construction" Built in accordance with an Illinois Department of Natural Resources, Office of Water Resources (or its predecessors) permit or having written verification from the Department of a permit not being required.

"In Good Repair" Maintained so as to be in sound condition, free from defect or damage which may hinder the structure's functions as designed.

"Major Modification" Major structural and/or hydraulic modification which involves extensive reconstruction of a dam and/or its appurtenances.

"Normal Pool" The water surface elevation corresponding to the elevation of the principal spillway crest in the case of an ungated spillway, or the top of the spillway gates in a closed position in the case of a gated principal spillway. A dam may have more than one normal pool if operating procedures require varying water surface elevations.

"OWR" The Illinois Department of Natural Resources, Office of Water Resources.

"PMF" The probable maximum flood. The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in a region.

"Qualified Personnel" Federal or State personnel having the same experience as an engineer.

"Rural Areas" Areas of the State not classified as Urban Areas.

"Selected Flood Occurrence" That flood occurrence which corresponds to the recommended total spillway design flood for the particular classification of dam as defined in this Part.

"This Part" The Illinois Department of Natural Resources' Rules for "Construction and Maintenance of Dams" (17 Ill. Adm. Code 3702).

"Urban Areas" Areas of the State where residential, commercial or industrial development currently exists or, based upon adopted or proposed land use plans or controls, is expected to occur within ten years of the application date. In determining urban areas, the expertise of local officials, regional or local planning commissions, city and county planners, and private development planners, as well as all available mapping may be utilized. Areas with isolated or widely scattered buildings will generally not be classified urban areas.

"Urban Development" The residential, commercial or industrial use of flood plain areas, immediately upstream and downstream of a dam, excluding isolated farm buildings.

"Watershed" Total land area above a given point (e.g. a dam) on a stream or waterway that contributes runoff to that point.

"Wave Generation Height" The vertical distance between a crest and the preceding trough of a wave caused by wind blowing over a water surface or caused by mechanical methods such as waves generated by motor boats.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.30 Applicability

a) Classification

1) Dams will be categorized in one of three classes, according to the degree

of threat to life and property in the event of a dam failure. The three classes of dams are:

A) Class I – Dams located where failure has a high probability for causing loss of life or substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed. A dam has a high probability for causing loss of life or substantial economic loss if it is located where its failure may cause additional damage to such structures as a home, a hospital, a nursing home, a highly traveled roadway, a shopping center, or similar type facilities where people are normally present downstream of the dam. This is similar to U.S. Army Corps of Engineers HIGH HAZARD POTENTIAL category as defined in the Corps Guidelines, and the U.S. Soil Conservation Service Class (c) dams as defined in Soil Conservation Service Technical Release No. 60.

B) Class II – Dams located where failure has a moderate probability for causing loss of life or may cause substantial economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed. A dam has a moderate probability for causing loss of life or substantial economic loss if it is located where its failure may cause additional damage to such structures as a water treatment facility, a sewage treatment facility, a power substation, a city park, a U.S. Route or Illinois Route highway, a railroad or similar type facilities where people are downstream of the dam for only a portion of the day or on a more sporadic basis. This is similar to U.S. Army Corps of Engineers SIGNIFICANT HAZARD POTENTIAL category and the U.S. Soil Conservation Service Class (b) dams.

C) Class III – Dams located where failure has low probability for causing loss of life, where there are no permanent structures for human habitation, or minimal economic loss in excess of that which would naturally occur downstream of the dam if the dam had not failed. A dam has a low probability for causing loss of life or minimal economic loss if it is located where its failure may cause additional damage to agricultural fields, timber areas, township roads or similar type areas where people seldom are present and where there are few structures. This corresponds to U.S. Army Corps of Engineers LOW HAZARD POTENTIAL category and U.S. Soil Conservation Service Class (a) dams.

2) Dams will be categorized in one of three size classifications. The size classifications shall be based on dam height and impounding capacity. If either the height or impounding capacity meets the minimum requirement for the larger size, the dam will be classified in the larger size category.

CLASSIFICATION	IMPOUNDING CAPACITY ACRE-FEET	DAM HEIGHT FEET
Small	< 1,000	< 40
Intermediate	> 1,000 to < 50,000	> 40 to < 100
Large	> 50,000	> 100

b) New Dams

1) Class I and II Dams
The owner of a proposed Class I or II dam shall obtain an OWR permit prior to the start of construction. The owner must do all construction and maintenance of the dam in accordance with this Part, as it applies to Class I or II dams.

2) Class III Dams

A) The owner of a proposed Class III dam shall obtain an OWR permit prior to the start of construction if the dam meets any of the following criteria:

i) the drainage area of the proposed dam is 6400 acres or more in a rural area or 640 acres or more in an urban area; or

ii) the dam is 25 feet or more in height, provided that the impounding capacity is greater than 15 acre-feet; or

iii) the dam has an impounding capacity of 50 acre-feet or more, provided that the dam height is greater than 6 feet.

B) If a permit is required for the Class III dam under any of these criteria, then the owner must do all construction and maintenance of the dam in accordance with this Part, as it applies to Class III dams.

c) Existing Dams

The owner of a dam that was permitted and built in compliance with an OWR permit before September 2, 1980 and that is currently in good repair shall not be required, except in compliance with Section 3702.150 or 3702.190, to make changes in the design, structure or construction of the dam. The owner of a dam that was permitted and built before September 2, 1980, but is not in accordance with the OWR permit or is not in good repair, shall be required to meet all current standards for existing dams. The owner of a dam built after September 2, 1980 shall be required to meet all standards for proposed dams existing at the time of its construction. Operation, maintenance, inspection and financial responsibility standards must be complied with at all dams.

1) Class I and II Dams

A) OWR has developed an inventory of dams in Illinois. OWR and federal agencies have conducted and are conducting inspections of existing dams having a potential for loss of life or property damage in case of a dam failure. As inspection reports are completed, OWR will furnish in writing to the owner of the dam a detailed and specific list of defects discovered in the course of the inspection of the dam, including the specific nature of any inadequacies of the capacity of the spillway system and any indications of seepage, erosion or other evidence of structural deficiency in the dam or spillway, together with a statement of the applicable standards of this Part that, if complied with by the owner of the dam, will put the dam into compliance with this Part.

B) If an inspection by OWR, or in which OWR concurs, finds that a dam is in an unsafe condition, OWR will notify the appropriate officials of the affected city or county, the State's Attorney of the county in which the dam is located, and the Illinois Emergency Management Agency (IEMA), and will assist IEMA in any emergency actions deemed necessary by IEMA.

C) OWR will notify the owner of an inspected dam if the owner must obtain a permit or amendment to an existing permit for the dam. Separate permit applications are required for each dam.

D) If an existing Class I or II dam has been inspected and found to have serious deficiencies requiring major modifications, within 90 days after receipt of notice from OWR that a permit or amendment to an existing permit is required under this Part, the owner of the dam must provide written assurance to OWR of the following: the

owner's intention to rectify the deficiencies noted, the date the owner will submit a completed permit application, the time frame for initiating and completing the appropriate remedial measures, and the methods and designs to be used for the remedial measures.

E) If an existing Class I or II dam has been inspected and found to have no serious deficiencies requiring major modifications, OWR will notify the owner of the dam that it must submit, within 90 days, a permit application including the following, if the following has not been previously provided to OWR:

i) an Operating Plan (Section 3702.40(b)(4));

ii) a Maintenance Plan (Section 3702.40(b)(5));

iii) a Financial Responsibility Statement (Section 3702.40(b)(6)); and

iv) a Right of Access Statement (Section 3702.40(b)(7)(A)).

F) An owner initiating major modifications to an existing Class I or Class II dam must obtain a new permit or amendment to an existing permit prior to the initiation of the modifications.

2) Class III Dams

A) Using the inventory of dams or other similar information, OWR, over a period of time, upon receipt of a complaint or upon its own investigation, may contact owners of those existing Class III dams that:

i) have a drainage area of 6400 acres or more in a rural area or 640 acres or more in an urban area; or

ii) are 25 feet or more in height, provided that the impounding capacity is greater than 15 acre-feet; or

iii) have an impounding capacity of 50 acre-feet or more, provided that the dam height is greater than 6 feet.

B) OWR will inform the owners of the dams that they must submit to OWR a maintenance program and a statement indicating actions to be taken to remedy the noted deficiencies.

C) If an inspection by OWR, or in which OWR concurs, finds that a dam is in an unsafe condition, OWR will notify the appropriate officials of the affected city or county, the State's Attorney of the county in which the dam is located, and IEMA.

D) Owners of existing Class III dams in locations where there is potential for downstream urban development, which could cause a change in dam classification in the foreseeable future, when so notified by OWR, shall be required to report annually the existing land uses downstream of the dam. Extent of downstream land use to be reported is dependent upon factors such as slope and width of flood plain and density and intensity of downstream development. Extent downstream will not exceed 2 miles unless otherwise indicated by OWR. The owner may provide information indicating that an extent downstream shorter than 2 miles is appropriate. The width of flood plain shall be the width of the area inundated by the 100-year flood.

E) Owners of Class III dams desiring to make major modifications to their dams shall obtain an OWR permit or an amendment to an existing OWR permit for the work prior to the initiation of the modifications.

d) Designation by OWR of Dam Classification
Before assigning or changing the dam classification for a new or existing dam, OWR shall give notice and opportunity for hearing pursuant to Section 3702.170 to the applicant or existing dam owner and other interested persons of that action.

1) Initial Assignment of Dam Classification

A) New Dams
The classification of new dams will be based upon information available to OWR. This information includes, but is not limited to, USGS quadrangle maps of the downstream area, the preliminary report and support data from the owner's engineer, known elevations of structures downstream of the proposed dam, information from the public, and previous study data. This information is available from OWR data and data supplied by the owner's engineer, the public and federal or State agencies. The owner of the proposed dam shall submit information to establish the degree of threat to life and property damage in the event of a dam failure.

B) Existing Dams

i) The classification of existing dams that have been inspected by the U.S. Army Corps of Engineers, other federal agencies, or OWR will be based upon that agency's inspection report.

ii) The classification of existing dams that have not been inspected by a federal agency or OWR but that have had major modifications proposed by the dam owner will be processed as new dams in accordance with subsection (d)(1)(A).

2) Change in Dam Classification
Upon receipt and verification of information indicating that significant change in the degree of threat to life or property from a dam failure has occurred since the dam's original classification, the classification of that dam shall be changed to reflect the new hazard potential. Upon reclassification, the dam owner shall be subject to the applicable dam safety requirements for the current classification (subsection (c)).

e) Removal of Dams
The owner of a Class I, II or III dam who wishes to remove a dam shall obtain, prior to the initiation of the dam removal, an OWR permit to remove the dam in accordance with Section 3702.50 governing the removal of dams.

(Source: Amended at 38 Ill. Reg. 949, effective December 27, 2013)

Section 3702.35 Permit Application Fee

a) If a permit is required for the activity, permit applicants must pay a non-refundable permit application review fee. The fee will be determined by the Department, and the applicant shall be notified of that determination immediately after review of the application. When appropriate and when it is in the best interest of the State, the Department may enter into agreements to allow other State agencies to offset the cost of fees by providing in-kind services in lieu of cash payments. As outlined in this subsection (a), the review fee shall be calculated based on the determination of the base review fee, the application of an escalation adjustment factor, and the addition of the review fees from any other applicable Parts (see subsection (a)(3)). Further processing of the application will not be initiated until the review fee is received.

1) The base review fee shall be as follows:

Construction of New Dam	
Class I & II	$5000
Class III	$4500
Major Modification of Existing Dam	
Class I & II	$3500
Class III	$2500
Operating Authorization for Existing Dam (as required under Sections 3702.30(c)(1)(E) and 3702.100)	
All classifications	$1500
Removal of Dam	
All classifications	$2500

2) Annual Escalation Adjustment

A) The base review fee amounts in subsection (a)(1) shall be adjusted on July 1 each year to account for inflation. The U.S. Bureau of Labor Statistics' Consumer Price Index Table for all urban consumers (CPI-U), U.S. city average, all items, base period 1982-1984 = 100 (Series ID: CUUR0000SA0) (available on the U.S. Bureau of Labor Statistics' website) shall be used to calculate the adjustment factor. The adjustment factor shall be directly proportional to the change in the CPI since June 2013 and shall be calculated according to the following formula:

$$\text{Adjustment factor} = \frac{\text{CPI (May of current year)} - \text{CPI (June 2013)}}{\text{CPI (June 2013)}}$$

B) The base fee amounts in subsection (a)(1) shall be multiplied by this factor and rounded to the nearest $10 to compute the review fee for the coming fiscal year (July 1 through June 30). The review shall be capped at $5000. The dollar amounts that result from these calculations will be posted on the Department's website at www.dnr.illinois.gov.

3) Review Fee for Multiple-Regulation Projects
If the construction activity being applied for also requires authorization under 17 Ill. Adm. Code 3700, 3704 and/or 3708, the review fee for each

Part shall be added to calculate the total review fee. The total review fee shall be capped at $5000.

b) Submission of Fees

1) Except when possible through electronic fee submittal, the applicant shall submit the required fee amount in the form of a check or money order made payable to the Illinois Department of Natural Resources.

2) If the review fee is not received within 90 days after the Department's notification of the amount of that fee, the application shall be deemed withdrawn. A new application and review fee will need to be submitted to restart the application process.

3) Insufficient payment or failure of a permit application fee payment to clear the bank it is drawn against will result in the automatic withdrawal of the application.

4) All fees shall be deposited into the State Boating Act Fund (see 615 ILCS 5/35).

c) Refund of Permit Application Fees
Except for refunding of overpayments, permit application fees shall not be refunded. Application fees are tendered for consideration of the application only and do not imply any promise of permit issuance by the Department.

(Source: Added at 38 Ill. Reg. 949, effective December 27, 2013)

Section 3702.40 Requirements for Approval of Permits for Construction of New Dams and Major Modifications of Existing Dams

a) The following are OWR requirements which must be met in order to obtain a permit for construction of a new dam or major modification of an existing dam. Applicants are encouraged to submit to OWR a preliminary report for approval of concept prior to completion of the permit application form. The preliminary and all subsequent plans and reports shall be prepared under the direction of an engineer or other qualified personnel. The engineer or qualified personnel may be assisted by other professional personnel applying the disciplines of Hydrologic engineering, hydraulic engineering, soil mechanics, structural engineering, or engineering geology.

b) OWR staff will be available for consultation prior to initiation of design studies, and at any time during the development of the permit application if questions

should arise.

1) Structural and Geotechnical Design Requirements

The basis for OWR review and approval of the structural and geotechnical design requirements of Class I, II and III dams is the Corps Guidelines subject to modification as indicated in this Part. The criteria for structural and geotechnical design contained in the Corps Guidelines are minimum criteria. Variations from the criteria may be required or allowed by OWR for special physical conditions at the proposed site as necessary or appropriate to meet the interest of the overall structural and geotechnical requirements of this Part. Technical publications, other than the Corps Guidelines, may be used by OWR to assure the use of current and applicable data for the structural and geotechnical review of the dam design.

2) Hydrologic and Hydraulic Design Requirements

The basis for OWR review and approval of the hydrologic and hydraulic design requirements for Class I, II and III dams is the Corps Guidelines, subject to modifications as indicted herein. Technical publications other than the Corps Guidelines may be used to assure the use of current and applicable data for the hydrologic and hydraulic review of dam design.

A) Proposed Dams

The following minimum spillway design floods shall be used for proposed structures:

i) Principal Spillway Design Flood

CLASSIFICATION	SIZE	PRINCIPAL SPILLWAY DESIGN FLOOD
Class I	All	100-yr.
Class II	All	50-yr.
Class III	All	25-yr.

ii) Total Spillway Design Flood

CLASSIFICATION	SIZE	PRINCIPAL SPILLWAY DESIGN FLOOD	
Class I	Small	0.5 PMF	
	Intermediate	1.0 PMF	
	Large	1.0 PMF	
Class II	Small	100-yr.	
	Intermediate	0.5 PMF	
	Large	1.0 PMF	
Class III	Small	100-yr.	*
	Intermediate	100-yr.	
	Large	0.5PMF	

*For proposed Class III dams where the dam height multiplied by the impounding capacity is less than or equal to 300, no specific total spillway capacity is required.

iii) For all proposed Class II or III dams, a determination of alternatives for increasing the total spillway capacity to accommodate the PMF shall also be submitted to OWR. The initial dam design shall provide for the capability of increasing the spillway capacity. Future downstream land use, land use controls, and growth projections will be considered in the review of the spillway capacity design.

B) Existing Dams

The minimum spillway design flood for modifications to existing dams built after September 2, 1980 shall be the same as the criteria for proposed dams. The minimum spillway design flood for modifications to existing dams that were constructed and in service on or before September 2, 1980, are as follows:

i) Principal Spillway Design Flood

CLASSIFICATION	SIZE	PRINCIPAL SPILLWAY DESIGN FLOOD

Class I	All	100-yr.
Class II	All	50-yr.
Class III	All	No specific requirement

ii) Total Spillway Design Flood

CLASSIFICATION	SIZE	PRINCIPAL SPILLWAY DESIGN FLOOD
Class I	Small	0.3 PMF
	Intermediate	0.6 PMF
	Large	0.6 PMF
Class II	Small	100-yr.
	Intermediate	0.3 PMF
	Large	0.6 PMF
Class III	Small	100 yr. *
	Intermediate	100-yr.
	Large	0.3 PMF

*For modifications to existing Class III dams where the height multiplied by impounding capacity is less than or equal to 300, no specific total spillway capacity is required.

iii) The Department may approve total spillway design capacities for existing dams other than the spillway design floods listed above. A total spillway design capacity less than the 100-yr. flood will only be allowed for small size, Class III structures with dam height multiplied by impounding capacity less than or equal to 300. Any submittal for variation from the above-listed spillway design flood must include a detailed hydraulic risk assessment that shows that additional spillway capacity will not provide a decrease in potential loss of life or property damage or a detailed economic risk assessment that shows that the chosen spillway design alternative provides the minimum rehabilitation costs plus damage losses; a detailed early warning and emergency evacuation plan coordinated with the local IEMA; and a list (with mailing

addresses) of all persons living within the dam breach wave inundation area.

iv) All hearings regarding variation from the above-listed spillway design criteria shall be in accordance with Section 3702.170 of this Part.

C) For Class I and II dams, a dam breach wave analysis for downstream impacts from failure during the total spillway design flood and impoundment initially at normal pool shall be required for:

i) a nearly instantaneous total failure and

ii) should the applicant so desire, a failure to the degree and timing believed reasonable by the applicant.

D) Dewatering Capabilities

i) All new Class I and II dams, all new Class III dams unless exempted by OWR for functional reasons, and existing Class I and II dams requiring major modifications shall have a capability for dewatering the reservoir within a reasonable period of time. In determining a reasonable time period, OWR shall consider the damage potential posed by possible failure, risk and nature of potential failure, purpose of the dam and reservoir, capability and stability of available drainage courses to convey the waters released in the event of an emergency dewatering, and influence of rapid drawdown on stability of the dam. Although each permit must be considered based on its individual circumstances, in general, a reasonable time to dewater 50% of the normal pool storage volume is 7 days for Class I dams, 14 days for Class II dams and 30 days for Class III dams.

ii) No dewatering capability shall be required for any existing Class III dam or for any existing Class I or II dam which OWR determines to require no major modifications thereto under this Part.

E) Specific requirements for minimum freeboard allowances are not appropriate because of the many factors involved in such

determinations. The applicant must assess the factors affecting the individual project and develop the appropriate minimum freeboard allowance. Many projects are reasonably safe without freeboard allowance because they are designed for overtopping, or because other factors minimize possible overtopping. Conversely, freeboard allowances of several feet may be necessary to provide a safe condition for some dams. Factors that should be considered include the duration of high water levels in the reservoir during the design flood; the effective wind fetch and reservoir depth available to support wave generation; the probability of high wind speed occurring from a critical direction; the potential wave runup on the dam based on roughness and slope; and the ability of the dam to resist erosion from overtopping waves.

F) The applicant must provide stilling basins or other appropriate structures or devices capable of dissipating the energy created at the outlet of the principal spillway and at dewatering outlets for all flows.

3) Erosion Protection Requirements

A) As a minimum the applicant shall adequately protect by structural or nonstructural means the upstream face of earth embankment dams from an elevation below normal pool of two feet or 0.50 times the anticipated wave height (if greater than 2.0 feet) up to the minimum freeboard elevation. In addition, if normal pool water surface varies, the upstream face shall be protected within the range of variation.

B) The applicant shall vegetate or otherwise protect from erosion the downstream face and top of earth embankment dams. The applicant should design earth embankment dams to provide a dam section which can be easily maintained.

C) The applicant shall provide riprap or other appropriate protection as necessary at dam abutments, dam slope toes (the line of the dam embankment slopes where it intersects the natural ground at the upstream or downstream edge), spillways, stilling basins, and at other locations which, if left unprotected, could lead to damage to, or failure of the dam.

D) If the spillway design of the dam requires that an earth emergency spillway pass any portion of the 100-year flood, the applicant shall

protect the earth emergency spillway against erosion consistent with the dam classification and physical characteristics of the dam site. The applicant must construct all earth emergency spillways on in situ material or on well compacted cohesive materials that will be stable during design flows.

E) The applicant shall submit plans for control of erosion and water pollution during the anticipated construction or major modifications, including plans for adequate measures to limit the erosion of the soil from exposed slopes after completion of construction. Such plans shall indicate that adequate control measures will be taken during construction to protect the quality of stream flow below the project site, and during the estimated time for filling.

4) Operating Requirements

An applicant for a Class I or II dam shall submit an operational plan specifying the method and schedule for the operation of the dam and the routine operating procedures to keep the dam in good working order, including an emergency warning plan. The emergency warning plan must outline the procedures to be followed during major storm events or other emergency situations. Under this plan, a person designated by the dam owner would monitor dam conditions, and would warn appropriate state and local officials if major problems require immediate repairs and would indicate how the owner plans to accomplish the needed repairs, and indicate if evacuation of persons in areas downstream of the dam may be necessary.

5) Maintenance Requirements

As a condition of each permit, dam owners shall submit a maintenance plan detailing the procedures and schedules to be followed to maintain the dam and its appurtenances in a reasonable state of repair. The maintenance plan shall include but not be limited to the following:

A) Class I and II Dams

The dam owner shall retain an engineer or other qualified personnel to make an initial inspection and report and subsequent inspections and reports as required by this Part. The owner of a Class I dam shall submit the report annually on forms furnished by OWR. The owner of a Class II dam shall submit the report every

three years on forms furnished by OWR. In the intervals between the engineer or other qualified personnel reports on Class II dams, the owner shall file with OWR an annual statement on forms furnished by OWR stating that he is maintaining the dam in accordance with the maintenance plan prepared by his engineer or other qualified personnel and indicating any change in land use which may have occurred in the 100-year flood plain within the previously accepted limits downstream of the dam. The reports shall outline modifications made to the dam, any deficiencies found, detail the remedial measures necessary, and the method and time the owner will use to correct the deficiencies found. The dam owner may be required to provide additional inspections and reports by an engineer or other qualified personnel, following unusual storms or seismic events; provided such inspection procedures are required as a part of the maintenance plan approved by OWR in issuing a permit. A sketch showing land use in the flood plain downstream of the dam shall be included in the reports. The extent of downstream land use to be reported is dependent upon factors such as slope and width of the 100-year flood plain and the density and intensity of downstream development. The extent downstream will not exceed 2 miles unless otherwise indicated by OWR. The owner may provide information for review by OWR indicating that an extent downstream which is shorter than 2 miles may be appropriate.

B) Class III Dams

The owner of a new Class III dam or owner of an existing Class III dam qualifying under the provisions of Section 3702.30 (relating to the major modification of existing Class III dams), shall retain an engineer or other qualified personnel to make an initial inspection and report and subsequent inspections and reports on a 5-year interval, in accordance with this Part. The dam owner shall submit to OWR on forms furnished by OWR the engineer's initial report and subsequent fifth year reports. The reports shall include a description of flood plain land use downstream of the dam. In the intervals between the engineer's reports, the owner shall file with OWR an annual statement on forms furnished by OWR stating that he is maintaining the dam in accordance with the maintenance plan prepared by his engineer or other qualified personnel and indicating any change in land use downstream of the dam. The extent of downstream land use to be reported is dependent upon factors such as slope and width of the 100-year flood plain and the

density and intensity of downstream development. The extent downstream will not exceed 2 miles unless otherwise indicated by OWR.

6) Financial Responsibility of Owner

A) For Class I and II dams, the owner shall document that he has the financial capability to adequately maintain or breach his dam in a safe condition. This may be established by showing that the applicant has the resources and the authority to obtain funds in the amount required to safely breach the dam within 10 days of receipt of notice of the need to breach or repair. For public bodies, this may be done by showing taxing power or other revenue generating ability and passage of an appropriate ordinance or resolution indicating the authority to take such action if necessary. If the owner cannot adequately demonstrate this financial capability, OWR may require the applicant to post a performance bond. The amount of the bond will be that estimated by OWR as reasonably necessary to safely breach the dam in an environmentally sound manner if the condition of the dam becomes a threat to life or property. The owners shall notify OWR when each performance bond has been renewed or extended in time.

B) Except in emergencies, should the cost of repair to place the dam in a safe condition be less than the cost of breaching, the performance bond may be used to pay for repair, rather than breach of the dam.

7) Other Requirements

A) The owner shall grant the State the right of access to inspect the dam site and immediate vicinity before, during and after construction and for the life of the dam and appurtenances. Except under emergency conditions, such as when the dam is in imminent danger of failure or is in the process of failing, the State shall notify the owner at least 10 days in advance of any inspection.

B) For Class I and II dams, the owner shall notify OWR prior to initiating foundation preparations, including cut-off trench excavation.

C) For Class I and II dams, OWR will require the owner to have continuous inspection during construction. The construction shall

be under the direction of an engineer, or other qualified personnel. For Class III dams, OWR may require the owner to have continuous inspection during construction if foundation conditions have not been completely determined or if the dam has been designed with minimal factors of safety.

D) For Class I and II dams - prior to commencing filling operations or refilling operations after a drawdown, the applicant shall request OWR inspection of the dam, and must receive authority from OWR before commencing filling. When drawdowns are performed on a frequent basis as a part of the approved operation plan, the authority is not necessary.

E) If OWR has not acted to grant or deny the authorization to fill within 30 days after receipt of request, the owner may proceed with filling or refilling operations.

F) For all new dams, or for major modifications to existing dams, the dam owner shall

i) own or have permanent flood easements for all land that will be inundated in the reservoir up to the proposed 100-year frequency flood pool elevation, or

ii) submit hydraulic computations showing that, for floods up to the 100-year frequency flood, the pool elevation will not be increased above existing conditions.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.50 Requirements for Approval of Permits for Removal of Dams

a) Dependent upon the size, height, reservoir impounding capacity, upstream and downstream channel conditions, existing reservoir sediment deposits, degree of hazard in case of failure, as well as any other considerations which might be peculiar to a particular dam, the following OWR requirements shall be met unless the applicant establishes that one or more specific requirements for a permit to remove a dam are not applicable.

b) A reasonable method to accomplish the following requirements will be accepted. It is strongly recommended that applicants contact OWR prior to initiation of studies and at any time during the development of the permit application if questions should arise.

1) Reservoir Dewatering - The reservoir shall be dewatered with a method and timing such that the downstream channel shall not overflow to a degree to cause damage.

2) Effecting Breach - A breach shall be made in such a manner as to be safe under all reasonably anticipated storm events.

3) Size of Breach - The waterway cross sectional area of the final breach shall be sufficient to at least pass the 100-year frequency flood with negligible backwater effect.

4) Control of Erosion at Site of Breach During and After Breaching Operations - Erosion of the dam embankment and adjacent area shall be controlled during and after breaching operations by proper breach procedure, use of appropriate structural measures, and necessary maintenance measures thereafter.

5) Downstream Channel Impacts - Effects of the breach on the downstream channel shall be assessed. Increases in water levels downstream of the breach over that which occurred prior to construction of the dam shall be negligible unless the owner can show that no damage results from such increases. If increases in water levels are not negligible or if damage can result from the breach, OWR will require the owner to mitigate such damages.

6) Restoration of Original Channel Upstream of Breach - The original channel shall be restored, or an alternate channel shall be required to provide flows approximating the original flow regime (restoration to the extent possible, of the channel and stream flows to original conditions prior to construction of the dam) through the bed of the reservoir from the breach to the upstream end of the area impacted by the reservoir.

7) Control of Sediment Deposits in Reservoir - Measures shall be undertaken to minimize movement of reservoir sediment deposits through the breach.

8) Restoration of Reservoir Lake Bed - The bed of the reservoir within the 100-year flood plain shall be restored to a condition whereby it can serve a reasonable flood plain use.

9) Plan for Maintenance - A plan for providing regular maintenance of the breach, outlet channel, inlet channel, and reservoir bed will be required by OWR, for the period of time necessary to establish plant cover or other erosion and sedimentation control.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.60 Application for Permit to Construct New Dams or Make Major Modifications to Existing Dams – Contents

Application for a permit shall be made on forms provided by OWR. Separate applications are required for each dam. The application shall include, as a minimum:

a) Construction plans and documents, sealed, signed and dated by an engineer, stating that the dam design and construction documents have been prepared under the engineer's personal supervision and are in conformance with this Part.

b) For all Class I and II dams, and for Class III dams when the dam height multiplied by the impounding capacity is greater than 300, computations for structural and geotechnical design of the dam.

c) Computations for the hydrologic and hydraulic design of the spillway or combination of the spillway and the outlet works.

d) For Class I and II dams, computations for the design flood and the 100-year frequency flood routed through the design spillway system.

e) For Class I and II dams, computations for the dam breach wave analysis for downstream impacts.

f) Computations of length of time required to dewater the reservoir, together with a detailed plan indicating methods of dewatering for normal and emergency conditions.

g) Computations for the design of minimum dam height, including freeboard.

h) Sketch showing flood plain land use downstream of the dam.

i) Computations for the design of the energy dissipating structures, including an assessment of the impact of the design discharges and other critical flows in downstream channels immediately below the energy dissipators.

j) Time schedule for the construction of the dam (applicant must notify OWR immediately if any advances in the schedule are made).

k) Agreement of the applicant to provide as-built plans and specifications upon completion of construction. These plans and specifications shall be signed by the

engineer or other qualified personnel who was responsible for inspection during the construction.

l) For all Class I and II dams, a detailed plan for inspection of the dam and its appurtenances during construction, immediately after completion, at frequent intervals during initial filling of the reservoir, and for a one-year period immediately following completion of the filling. Inspections during the initial filling shall be conducted at least every 30 days. Additional inspections will be required after major storms or seismic events. Following a seismic event, OWR will consult with IEMA and university seismic experts to determine when additional inspections will be required.

m) For all Class I and II dams, and for Class III dams when the height multiplied by impounding capacity is greater than 300, authorization for the OWR, in the event that a dam is found by OWR to be in imminent danger of failure, to enter upon the dam property if necessary to prevent or alleviate dam breach damage pursuant to Section 3702.190 and agreement by the applicant to compensate the State for costs reasonably incurred by emergency action.

n) Right of access authorization for the OWR to inspect the dam site and immediate vicinity before, during and after construction and for the life of the dam and its appurtenances. OWR shall notify the owner 10 days in advance of any inspection other than an emergency inspection.

o) For Class I and II dams, an operational plan.

p) For all Class I and II dams, and for Class III dams when the dam height multiplied by the impounding capacity is greater than 300, a maintenance plan.

q) For Class I and II dams, a financial responsibility statement.

r) Copies of ownership documents or flood easement agreements for all land that will be inundated in the reservoir up to the 100-year frequency flood pool elevation, or hydraulic computations showing no increase in the flood pool elevations above existing conditions for floods up to the 100-year frequency flood.

(Source: Amended at 38 Ill. Reg. 949, effective December 27, 2013)

Section 3702.70 Application for Permit to Remove Dams – Contents

Application for a permit to remove a dam shall be made on forms provided by OWR. Separate applications are required for each dam. The application shall include, as a minimum:

a) Plans and documents, sealed, signed and dated by an engineer, stating that the design documents have been prepared under the engineer's personal supervision and are in conformance with this Part.

b) Computations for design of the method and timing for dewatering the reservoir.

c) Design plans and computations to effect the breach, including size of breach, shape of breach and disposal of spoil material.

d) Plans and computations for controlling erosion at the site of the breach during and after the breach.

e) Computations detailing the effects of the breach on the channel downstream of the breach.

f) Plans and computations for restoring the channel upstream of the breach.

g) Plans and computations for control of sediment deposits in the reservoir.

h) Plans for the restoration of the bed of the reservoir.

i) Plans for maintenance of the breach, downstream and upstream channels, and reservoir bed.

j) A time schedule for initiation and completion of all phases of the removal of the dam operation.

k) Agreement of the applicant to provide as-built plans upon completion of removal. These plans shall be signed by the engineer or other qualified personnel who was responsible for inspection during the removal.

l) Right of access authorization for the OWR to inspect the breach site and vicinity before, during and after breaching operations and until restoration of the stream and impacted area is complete.

(Source: Amended at 38 Ill. Reg. 949, effective December 27, 2013)

Section 3702.80 Dam Breach Wave Advisories

For certain Class I or Class II dams which, because of physical conditions or density or downstream land use, would be a threat to life and property if failure occurred, OWR may file a dam breach wave advisory with the appropriate county clerk outlining the probable extent and

impact of a dam failure on the affected downstream area.

Section 3702.90 Datum For Dam Elevations

All elevations for Class I and Class II dams shall be on the National Geodetic Vertical Datum (same as mean sea level (MSL) 1929 adj.). Where possible, Class III dams shall also be on the NGVD datum. (Datum means the level surface used for reference in determining the elevations of features of a dam)

Section 3702.100 Permits Not Transferable

Permits issued pursuant to this Part are not transferable. Upon transfer of ownership of a dam whether previously permitted or not, the new owner must immediately apply for a permit under his own name. The application for permit may incorporate by reference all information from the previous permit that is determined by OWR to be pertinent to the new permit.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.110 Acceptance Of Other Agency Permits

If an applicant demonstrates to OWR that he has met the requirements of another state or federal agency's permit for a new dam or major modifications to an existing dam, and that the other permit requirements are substantially equivalent to corresponding requirements under this Part, then submittal of the other permit with the completed Application for Permit form will be considered sufficient evidence that the corresponding requirements of this Part have been met.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.120 Use Of Joint Permit Forms

OWR may enter into agreements with federal or state agencies having appropriate permit authority for construction of dams, to develop a single Application for Permit form to satisfy the requirements of each of the concerned agencies.

Section 3702.130 Permit Application

a) Notice and Comment

1) Upon receipt of a complete application, OWR shall prepare and distribute a public notice of the application, allowing a period of twenty-one (21) days for the submission of comments. OWR may extend the comment period upon written request showing just cause. The extension shall not exceed fifteen (15) days.

2) Public notices shall be released as a news item through the Department's Office of Public Affairs, and shall be mailed to the following:

A) Adjacent upstream and downstream property owners.

B) Interested state and federal agencies.

C) Area legislators.

D) Local officials.

E) Interested groups and organizations.

3) Failure to publish this notice will not affect the substantive or procedural rights of any affected party.

4) If relevant objections are received in response to the public notice, they shall be forwarded to the applicant suggesting that a mutually satisfactory resolution be achieved if possible. If a resolution cannot be achieved, the applicant shall advise OWR of his views regarding the validity of the statements contained in the objection. OWR will then evaluate the objections and the applicant's response and determine the appropriate resolution.

b) Public Hearing

1) If the application is for a new dam, or for major modification to an existing dam, OWR may hold a public hearing to take evidence concerning the proposed project. A public hearing pursuant to Section 3702.170 shall be held in addition to the notice and comment procedures outlined in the prior subsection (Section 3702.130(a)) when OWR determines that such a hearing is in the public interest, or believes it to be the most appropriate means of receiving information concerning the application.

2) If the application is for an existing dam which requires no major modifications, OWR will not hold a hearing unless OWR determines that it is in the public interest to do so.

Section 3702.140 Permit Approval

a) The Department shall either approve or deny an application for permit within

ninety (90) days of the receipt of the complete application (or one-hundred and fifty (150) days in the event a hearing is held) unless a longer time period is agreed to in writing by the applicant. If the Department has neither approved nor denied the application within these time limits, the application will be deemed approved. The time limit for final Department action on a permit application shall be computed from the date on which the Department has received all information required in Sections 3702.40 and 3702.60 or 3702.50 and 3702.70. The applicant will be advised within forty-five (45) days of the receipt of the application if additional data are required. If additional data or revised plans are required by the Department, the time between the request and the receipt of the requested material will not be counted in these time periods. Also, the time required for resolution of relevant objections shall not be counted in these time periods.

b) OWR may give emergency approval of construction if the applicant agrees to make all modifications, at the applicant's expense, which are reasonably required by OWR, upon completion of a detailed review and expiration of the public comment period. (An example of a situation in which emergency approval might be granted is: If a dam was severely deteriorated and immediate repairs were necessary to prevent dam failure.)

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.150 Enforcement, Administrative Order, and Judicial Action

Before requiring major modifications or breach of an existing dam, or engineering studies and surveys necessary to determine the proper design for any such remedial measures, OWR shall provide notice and opportunity for a hearing. The Director shall require breach or modification of an existing dam only upon a determination that the dam constitutes a serious threat to life or a threat of substantial property damage. If the Director finds that major modification or removal is required, the Director will issue an order to the dam owner requiring that he take the appropriate corrective action. The order may provide that all existing OWR permits applicable to the dam be revoked. If a dam owner fails to comply with this Part or conditions of a permit issued under this Part, or an order issued under this Part, the Director may seek appropriate judicial action to obtain compliance.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.160 Dam Owner Non-Compliance

a) OWR will review all instances of alleged non-compliance with this Part or conditions of a permit or order issued under this Part. OWR will provide the owner reasonable opportunity to submit all relevant information concerning the issue of compliance.

b) If OWR finds non-compliance, OWR may issue a notice of non-compliance to the dam owner, specifying the nature of the non-compliance, the nature of the dam deficiencies if known, and the hazards which may result if known. OWR may issue a notice of non-compliance if the non-compliance is not a substantial risk to human life, and that continued non-compliance is not likely to result in a hazard to human life.

c) OWR may request that the Director hold a hearing pursuant to Section 3702.170 on the issue of non-compliance, if it finds that there are issues of fact or law for which a hearing is the most appropriate means of receiving information.

d) If the Director finds non-compliance, the Director may issue an order, and if necessary seek judicial enforcement, pursuant to Section 3702.150.

e) OWR will send orders issued by the Director and notices of significant non-compliance, related dam deficiencies, and the hazards which may result, to: the appropriate officials of the affected city or county, the State's Attorney of the county in which the dam is located, IEMA, and all known downstream property owners and residents who might be threatened as a result of the deficiencies.

f) OWR will also provide general information concerning the defective dam or other non-compliance, as appropriate, to concerned officials, property owners and users, and other interested persons.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.170 Permit, Enforcement, Dam Classification, Existing Dam Spillway Design Variation, and Non-Compliance Hearing Procedures

Permit, enforcement, dam classification, existing dam spillway design variation and non-compliance hearings shall be held in accordance with the procedures established in contested cases under Article 10 of the Illinois Administrative Procedure Act. In addition, for all hearings held by the Director or OWR under this section, the following procedures shall apply:

a) All affected parties shall be afforded an opportunity for hearing after reasonable notice is served personally or by certified or registered mail upon the parties or their agents.

b) The Director may issue subpoenas for the attendance of witnesses or to produce books and papers.

c) The record of hearing shall include verbatim all written testimony and evidence,

as well as all oral proceedings recorded stenographically or otherwise.

d) A final decision or order shall be in writing including findings and the rationale for the decision; and the parties or their agents shall be notified personally or by registered or certified mail of the decision.

e) A decision or order to require breaching or modification of a dam shall include:

1) A detailed and specific list of defects discovered by inspection of the dam and

2) A statement of the requirements with which the owner must comply pursuant to this Part.

f) In any hearing held pursuant to Section 3702.30(d) of this Part, the burden of proof shall lie with the party requesting the hearing. In any hearing held pursuant to Section 3702.150 or 3702.160, the burden of proof shall lie with OWR.

(Source: Amended at 11 Ill. Reg. 1941, effective January 13, 1987)

Section 3702.180 Assistance Concerning Non-Complying Dams

OWR will cooperate with the Illinois Emergency Management Agency to provide assistance to local officials or property owners who may wish to institute appropriate emergency procedures for downstream areas threatened with damage from failure of a non-complying dam.

Section 3702.190 Emergency Procedures

a) In the event a dam constitutes a serious threat to life or a threat of substantial property damage and is found to be in immediate danger of failure, OWR shall give the owner proper notice, providing the owner is known, is immediately available, and is competent, to take those actions necessary to prevent or alleviate threat to life and property downstream of the dam.

b) The actions may include, but are not limited to lowering normal pool level, complete dewatering, breaching of the dam, and initiating a surveillance program for dam and lake conditions. The action required of the dam owner may also include, in cooperation with appropriate state and local officials, initiating emergency procedures for evacuation of downstream areas threatened with breach damage. OWR may hold public meetings in the area and issue press releases, when these are the most expedient means for informing the concerned persons and officials of the hazard involved, or if public meetings are necessary to alleviate unfounded fears as to the severity of the hazard involved.

c) If the dam owner fails to take these actions in a timely manner, or if OWR finds that because of imminent hazard to public safety, notice and opportunity for hearing and for appropriate action by the dam owner are not feasible, then the State may pursue appropriate emergency administrative or court action to deal with the emergency.

Section 3702.200 Standard Permit Conditions

a) Permits issued under this Part shall be subject to the following standard conditions:

1) This permit is granted in accordance with the Rivers, Lakes and Streams Act [615 ILCS 5].

2) This permit does not convey title to the permittee or recognize title of the permittee to any submerged or other lands, and furthermore, does not convey, lease, provide any right or rights of occupancy or use of the public or private property on which the project or any part thereof will be located, or otherwise grant to the permittee any right or interest in or to the property, whether the property is owned or possessed by the State of Illinois or by any private or public party or parties.

3) This permit does not release the permittee from liability for damage to persons or property resulting from the work covered by this permit, and does not authorize any injury to private property or invasion of private rights.

4) This permit does not relieve the permittee of the responsibility to obtain other federal, State or local authorizations required for the construction of the permitted activity; and if the permittee is required by law to obtain approval from any federal or other State agency to do the work, this permit is not effective until the federal and State approvals are obtained.

5) The permittee shall, at the permittee's own expense, remove all temporary piling cofferdams, false work, and material incidental to the construction of the project, from the floodway, river, stream or lake in which the work is done. If the permittee fails to remove such structures or materials, the State may have removal made at the expense of the permittee. If the construction is on a public body of water and if future need for public navigation or public interests of any character, by the State or federal government, necessitates changes in any part of the structure or structures, such changes shall be made by and at the expense of the

permittee or the permittee's successors as required by the Department of Natural Resources or other properly constituted agency, within sixty (60) days from receipt of written notice of the necessity from the Department or other agency, unless a longer period of time is specifically authorized.

6) The execution and details of the work authorized shall be subject to the supervision and approval of the Department. Department personnel shall have right of access to accomplish this purpose.

7) The permittee shall file with the Department a properly executed acceptance of all terms and conditions of the permit within sixty (60) days of receipt of the permit; however, starting work on the construction authorized will be considered full acceptance by the permittee of the terms and conditions of the permit.

8) The Department in issuing this permit has relied upon the statements and representations made by the permittee; if any statement or representation made by the permittee is found to be false, the permit may be revoked at the option of the Department; and when a permit is revoked all rights of the permittee under the permit are voided.

9) If the project authorized by this permit is located in or along Lake Michigan or a meandered lake, the permittee and the permittee's successors shall make no claim whatsoever to any interest in any accretions caused by the project.

10) In issuing this permit, the Department does not approve the adequacy of the design or structural strength of the structure or improvement.

11) Noncompliance with the conditions of this permit will be considered grounds for revocation.

b) In addition, the Department shall impose special conditions, as required to assure compliance with this Part. Special conditions of a permit are those conditions of a permit not included within the standard conditions for all permits but necessary to assure compliance with 17 Ill. Adm. Code 3702. Typical examples include a) setting limits for soil testing results that will be affected by site conditions encountered during construction, b) preventing certain construction activities from taking place without approval of specific data not available at the time of permit issuance, or

c) providing time limits for construction activities to be completed.

(Source: Added at 11 Ill. Reg. 1941, effective January 13, 1987)

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Certification of Surface Impoundment Post Closure Pursuant to 35 Ill. Adm. Code. Part 841

Submit the original, with original signatures, and two (2) photocopies (or three (3) if applicable) of all application forms and supporting documentation*, including plan sheets and maps, requested in the application to:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section #13
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

1. Site Identification:

Site Name: _____ IEPA ID Number: _____

Street Address: _____ P.O. Box: _____

City: _____ State: IL Zip Code: _____ County: _____

2. Closure Type:

Indicate the type of facility. Also indicate the NPDES permit number, and date of issuance in which the latest post-closure plan was approved and when the post-closure care period began as identified by the Agency in approval of closure.

CLOSURE WITH ASH LEFT IN PLACE
CLOSURE BY REMOVAL OF ASH

NPDES Permit No. _____ Date Issued _____

CCW Post-Closure Plan Approval No._____ Date Issued _____

3. Required Information:

Pursuant to 35 Ill. Adm. Code Subtitle G, 841, to certify closure the operator of the waste management site shall submit the following documentation to the Permit Section, Division of Water Pollution Control, at the above address. Submit an original and two copies of all documents* (for plan sheets, submit three copies only).

a. Submit information documenting the post-closure care period for the unit was performed in accordance with the specifications in the approved post-closure plan required by Section 841.435 plan sheets for the closed site which indicate final contours achieved at the completion of closure activities.

b. Identify the date the facility completed post closure requirements. Necessary documentation should be provided to demonstrate that all aspects of the post closure plan were completed.

c. Date Post Corrective Action Began: _____
Date Corrective Action Completed: _____

EXHIBIT
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J

Failure to provide any of the items described above will result in rejection of the closure notice.

*"Documentation" means items. in any tangible form, whether directly legible or legible with the aid of any machine or device, including but not limited to affidavits, certificates. deeds, leases, contracts or other binding agreements, licenses. permits, photographs. audio or video recordings. maps. geographic surveys, chemical and mathematical formulas or equations. mathematical and statistical calculations and assumptions, research papers. technical reports. technical designs and design drawings, stocks. bonds, and financial records, that are used to support facts or hypotheses (35 Ill. Adm. Code 1100.103).

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (4151LCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (4151LCS 5/42). This form has been approved by the Forms Management Center.

4. Owner/Operator/Engineer Identification:

Owner/Operator		Engineer	
Name:	_____	Name:	_____
Street Address:	_____	Street Address:	_____
PO Box:	_____	PO Box:	_____
City:	_____ State: _____	City:	_____ State:
Zip Code:	_____ Phone: _____	Zip Code:	_____ Phone: _____
Contact:	_____	Contact:	_____
Email Address:	_____	Email Address:	_____

5. Signatures:

Original signatures are required. Signature stamps or applications transmitted electronically or by FAX are not acceptable.

I hereby affirm that post-closure care has been provided for the referenced site in accordance with the approved post-closure care plan, and that all information contained in this submission is true and accurate to the best of my knowledge and belief.

I do hereby swear that I am a duly authorized representative of the operator and I am authorized to sign this affidavit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5144(h))

_____
Owner/Operator Signature:

_____
Printed Name:

_____
Title:

_____
Engineer Signature

_____
Printed Name:

_____
Engineer's Title:

Registration Number: _____

Professional Engineer's Seal:

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Certification of Surface Impoundment Closure Pursuant to 35 Ill. Adm. Code. Part 841

Submit the original, with original signatures, and two (2) photocopies (or three (3) if applicable) of all application forms and supporting documentation*, including plan sheets and maps, requested in the application to:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section #13
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

1. Site Identification:

Site Name: _____ IEPA ID Number: _____

Street Address: _____ P.O. Box: _____

City: _____ State: IL Zip Code: _____ County: _____

2. Closure Type:

Indicate the type of facility. Also indicate the NPDES permit number, and date of issuance in which the latest closure plan was approved and when the closure care period began as identified by the Agency in approval of closure.

CLOSURE WITH CCW LEFT IN PLACE
CLOSURE BY REMOVAL OF CCW

NPDES Permit No. _____ Date Issued _____

CCW Closure Plan Approval No._____ Date Issued _____

3. Required Information:

Pursuant to 35 Ill. Adm. Code Subtitle G, 841, to certify closure the operator of the CCW site shall submit the following documentation to the Permit Section, Division of Water Pollution Control, at the above address. Submit an original and two copies of all documents* (for plan sheets, submit three copies only).

a. Submit information documenting that the unit has been closed in accordance with the approved closure plan required by Section 841.410 plan sheets for the closed site which indicate final contours achieved at the completion of closure activities.

b. Identify the date the facility ceased accepting CCW and the date closure was actually completed. Necessary documentation should be provided to demonstrate the final cover system for the CCW area was completed and that all other aspects of the closure plan were completed if ash was left in place (i.e., final grading, seeding, security, etc.) or necessary documentation should be provided to demonstrate the that CCW was removal was completed for the entire CCW area was and that all other aspects of the closure plan were completed.

c. Date Site Ceased Accepting CCW: _____

Date Closure Completed: _____

Failure to provide any of the items described above will result in rejection of the closure notice.

*"Documentation" means items. in any tangible form, whether directly legible or legible with the aid of any machine or device, including but not limited to affidavits, certificates. deeds, leases, contracts or other binding agreements, licenses. permits, photographs. audio or video recordings. maps. geographic surveys, chemical and mathematical formulas or equations. mathematical and statistical calculations and assumptions, research papers. technical reports. technical designs and design drawings, stocks. bonds, and financial records, that are used to support facts or hypotheses (35 Ill. Adm. Code 1100.103).

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (4151LCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (4151LCS 5/42). This form has been approved by the Forms Management Center.

IL Draft

4. Owner/Operator/Engineer Identification Identification:

Operator		Engineer	
Name:	_____	Name:	_____
Street Address:	_____	Street Address:	_____
PO Box:	_____	PO Box:	_____
City:	_____ State: _____	City:	_____ State:
Zip Code:	_____ Phone: _____	Zip Code:	_____ Phone: _____
Contact:	_____	Contact:	_____
Email Address:	_____	Email Address:	_____

5. Signatures:

Original signatures are required. Signature stamps or applications transmitted electronically or by FAX are not acceptable.

I hereby affirm that closure has been provided for the referenced site in accordance with the approved closure care plan, and that all information contained in this submission is true and accurate to the best of my knowledge and belief.

I do hereby swear that I am a duly authorized representative of the operator and I am authorized to sign this affidavit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5144(h))

_____
Owner/Operator Signature:

_____
Printed Name:

_____
Title:

_____
Engineer Signature

_____
Printed Name:

_____
Engineer's Title:

Registration Number: _____

Professional Engineer's Seal:

Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Certification of Surface Impoundment Corrective Action Pursuant to 35 Ill. Adm. Code. Part 841

Submit the original, with original signatures, and two (2) photocopies (or three (3) if applicable) of all application forms and supporting documentation*, including plan sheets and maps, requested in the application to:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section #13
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

1. Site Identification:

Site Name: _____ IEPA ID Number: _____

Street Address: _____ P.O. Box: _____

City: _____ State: IL Zip Code: _____ County: _____

2. Corrective Action Type:

Indicate the type of corrective action. Also indicate the NPDES permit number, and date of issuance of approval of the corrective plan and when the corrective action began as identified by the Agency in approval of the corrective action plan.

Collection Trench
Recovery Wells
Subsurface Groundwater Barrier

NPDES Permit No. _____ Date Issued _____

CCW Corrective Action Plan Approval No._____ Date Issued _____

3. Required Information:

Pursuant to 35 Ill. Adm. Code Subtitle G, 841, to certify corrective action completion the operator of the CCW site shall submit the following documentation to the Permit Section, Division of Water Pollution Control, at the above address. Submit an original and two copies of all documents* (for plan sheets, submit three copies only).

a. Submit information documenting that the release attributable to the unit has been mitigated in accordance with the approved corrective action plan required by Section 841.310

b. Identify the date the facility completed the corrective action requirements. Necessary documentation should be provided to demonstrate that all aspects of the corrective action plan were completed.

c. Date Post Corrective Action Began: _____

Date Corrective Action Completed: _____

Failure to provide any of the items described above will result in rejection of the corrective action notice.

*"Documentation" means items. in any tangible form, whether directly legible or legible with the aid of any machine or device, including but not limited to affidavits, certificates. deeds, leases, contracts or other binding agreements, licenses. permits, photographs. audio or video recordings. maps. geographic surveys, chemical and mathematical formulas or equations. mathematical and statistical calculations and assumptions, research papers. technical reports. technical designs and design drawings, stocks. bonds, and financial records, that are used to support facts or hypotheses (35 Ill. Adm. Code 1100.103).

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (4151LCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (4151LCS 5/42). This form has been approved by the Forms Management Center.

4. Owner/Operator/Engineer Identification:

Owner/Operator		Engineer	
Name:	_____	Name:	_____
Street Address:	_____	Street Address:	_____
PO Box:	_____	PO Box:	_____
City:	_____ State: _____	City:	_____ State:
Zip Code:	_____ Phone: _____	Zip Code:	_____ Phone: _____
Contact:	_____	Contact:	_____
Email Address:	_____	Email Address:	_____

5. Signatures:

Original signatures are required. Signature stamps or applications transmitted electronically or by FAX are not acceptable.

I hereby affirm that the corrective action has been completed for the referenced site in accordance with the approved corrective action plan, and that all information contained in this submission is true and accurate to the best of my knowledge and belief.

I do hereby swear that I am a duly authorized representative of the operator and I am authorized to sign this affidavit.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5144(h))

_____
Owner/Operator Signature:

_____
Printed Name:

_____
Title:

_____
Engineer Signature

_____
Printed Name:

_____
Engineer's Title:

Registration Number: _____

Professional Engineer's Seal:

MIDWEST
GENERATION EME, LLC
An EDISON INTERNATIONAL® Company

Amy L. Hanrahan
Senior Environmental
Engineer
Environmental Services

RECEIVED
JAN 22 2013
IEPA/CAS

IEPA-DIVISION OF RECORDS MANAGEMENT
RELEASABLE
AUG 12 2013
REVIEWER JKS

January 18, 2013

Ms. Andrea Rhodes
Illinois Environmental Protection Agency – DPWS
MC #19
1021 North Grand Avenue East
Springfield, IL 62702

VIA FEDERAL EXPRESS

Re: Compliance Commitment Agreement – ELUC
Midwest Generation, LLC, Waukegan Station; ID No. 6281
Violation Notice W-2012-00056

Dear Ms. Rhodes:

The Compliance Commitment Agreement (CCA) for the above referenced site relative to Violation Notice W-2012-00056 was signed by Midwest Generation on October 15, 2012 and executed by Illinois Environmental Protection Agency (IEPA) signature on October 24, 2012 (effective date). Item 5 (f) of the CCA requires that Midwest Generation submit a proposed Environmental Land Use Control (ELUC) to cover the remaining Waukegan Station property to the east that is not already included in the existing ComEd Former Tannery Site ELUC. The proposed ELUC extension is to be submitted to IEPA within 90 days of the effective date of the CCA.

The areal extent of the proposed ELUC extension is provided with the attached documentation (Exhibit B Figure B-4). The western boundary of the proposed ELUC extension abuts the boundary of the existing ELUC. The south boundary is defined by the existing property line. The east boundary is Lake Michigan and the north boundary is defined by the northern extent of the ash pond system. The proposed vertical extent of the ELUC is the unconsolidated overburden deposits overlying the Silurian dolomite bedrock beneath the site. The estimated vertical thickness of the unconsolidated deposits is 100 feet below ground surface based on information provided in the Hydrogeologic Assessment Report dated February 2011 that was submitted to the IEPA.

Attached is a proposed ELUC for the Waukegan Station. Please note that the formal legal description that would be included as part of Exhibit A will be completed upon IEPA approval of the proposed ELUC. This submittal fulfills the requirements set forth under Item 5 (f) of the signed CCA. Please call me at 630-771-7863 if there are any questions.

235 Remington Blvd.
Suite A
Bolingbrook, Il 60440
Tel: 630 771 7863
Fax: 949 225 0813
ahanrahan@mwgen.com

EXHIBIT
tabbies
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Sincerely,
Midwest Generation, LLC

Amy Hanrahan
Senior Environmental Engineer

cc: Ms. Maria Race, Midwest Generation EME, LLC
Mr. Basil Constantelos, Midwest Generation EME, LLC
Mr. Robert Chmielewski, Midwest Generation, LLC
Mr. Christopher Foley, Midwest Generation EME, LLC
Ms. Susan Franzetti, Nijman Franzetti, LLP
Mr. Richard Gnat, KPRG and Associates, Inc.
Mr. Bill Buscher, IEPA

PREPARED BY:

Name: Christopher M. Foley

Address: Midwest Generation, LLC
500 West Madison Street
Suite 2640
Chicago, Illinois 60661

RETURN TO:

Name: Christopher M. Foley

Address: Midwest Generation, LLC
500 West Madison Street
Suite 2640
Chicago, Illinois 60661

THE ABOVE SPACE FOR RECORDER'S OFFICE

Environmental Land Use Control

THIS ENVIRONMENTAL LAND USE CONTROL ("ELUC"), is made this _____ day of _____, 2013, by Midwest Generation, LLC, ("Property Owner") of that portion (as identified in Exhibit A) of the real property located at the common address of Waukegan Station, 401 E. Greenwood Avenue, Waukegan, Illinois 60087 ("Property").

WHEREAS, 415 ILCS 5/58.17 and 35 Ill. Adm. Code 742 provide for the use of an ELUC as an institutional control in order to impose land use limitations or requirements related to environmental contamination so that persons conducting remediation can obtain a No Further Remediation determination from the Illinois Environmental Protection Agency ("IEPA"). The reason for an ELUC is to ensure protection of human health and the environment. The limitations and requirements contained herein are necessary in order to protect against exposure to contaminated groundwater that may be present on the property as a result of past industrial activities on or in the vicinity of the property. Under 35 Ill. Adm. Code 742, the use of risk-based, site-specific remediation objectives may require the use of an ELUC on real property, and the ELUC may apply to certain physical features (e.g., engineered barriers, monitoring wells, caps, etc.).

NOW, THEREFORE, the recitals set forth above are incorporated by reference as if fully set forth herein and the Property Owner agrees as follows:

Section One. Property Owner does hereby establish an ELUC on the real estate, situated in the County of Lake, State of Illinois and further described in Exhibit A attached hereto and incorporated herein by reference (the "Property").

Attached as Exhibit B are site maps that show the legal boundary of the Property, any physical features to which the ELUC applies, the horizontal and vertical extent of the contaminants of concern above the applicable remediation objectives for groundwater and the nature, location of the source, and direction of movement of the contaminants of concern, as required under 35 Ill. Adm. Code 742.

Section Two. Property Owner represents and warrants it is the current owner of the Property and has the authority to record this ELUC on the chain of title for the Property with the Office of the Recorder or Registrar of Titles in Lake County, Illinois.

Section Three. The Property Owner hereby agrees, for itself, and its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein, that the groundwater under the Property shall not be used as a potable supply of water.

Section Four. This ELUC is binding on the Property Owner, its heirs, grantees, successors, assigns, transferees and any other owner, occupant, lessee, possessor or user of the Property or the holder of any portion thereof or interest therein. This ELUC shall apply in perpetuity against the Property and shall not be released until the IEPA determines there is no longer a need for this ELUC as an institutional control or until the IEPA, upon written request, issues a no further remediation determination approving modification or removal of the limitation(s) or requirement(s); and until a release or modification of the land use limitation or requirement is filed on the chain of title for the Property.

Section Five. **Future Improvement of Property**: This ELUC does not limit Property Owner's or its successors' or assigns' ability to construct on or otherwise improve the Property or to allow others to use the Property. Property Owner reserves the right to remove contaminated groundwater from the Property and to dispose of it as is appropriate under applicable laws.

Section Six. **Future Monitoring**: Until such time as this ELUC is released or modified pursuant to the terms of Section Four above, Property Owner shall conduct the following groundwater monitoring program on the Property:

> Monitoring wells MW-1 through MW-7 surrounding the East and West Ash Ponds will be sampled as required under Item 5 (d) of the CCA. These wells will continue to be monitored on a quarterly basis for constituents listed in 35 IAC 620.410(a), with the exception of radium 226/228. The monitoring data will be reported to IEPA within 30 days of the end of each quarter. In addition, an updated groundwater potentiometric surface map will be provided with each quarterly submittal. IEPA, upon written request, may approve a reduction in the frequency and scope of the sampling program in the future. Upon the IEPA's approval, the approved changes in the frequency and scope of the monitoring

program shall be implemented. A change in the frequency and scope of the monitoring program does not require the filing of a modification of this ELUC in the chain of title for the Property.

Section Seven. The effective date of this ELUC shall be the date that it is officially recorded in the chain of title for the Property to which the ELUC applies.

WITNESS the following signatures:
Property Owner(s)

By: _____
Its: _____
Date: _____

STATE OF ILLINOIS)
) SS:
COUNTY OF _____)

I, _____the undersigned, a Notary Public for said County and State, DO HEREBY CERTIFY, that _____, personally known to me to be the _____ of Midwest Generation, LLC, the Property Owner and personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that in said capacity signed and delivered the said instrument as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and official seal, this _____ day of _____, 2013.

_____
Notary Public

PIN NO. 08-15-200-006 (partial)

EXHIBIT A

The subject property is located in the City of Waukegan, Lake County, State of Illinois, commonly known as Waukegan Station, Waukegan, Illinois and more particularly described as:

COMMON ADDRESS:

Waukegan Station (portion)
401 E. Greenwood Avenue
Waukegan, Illinois 60087

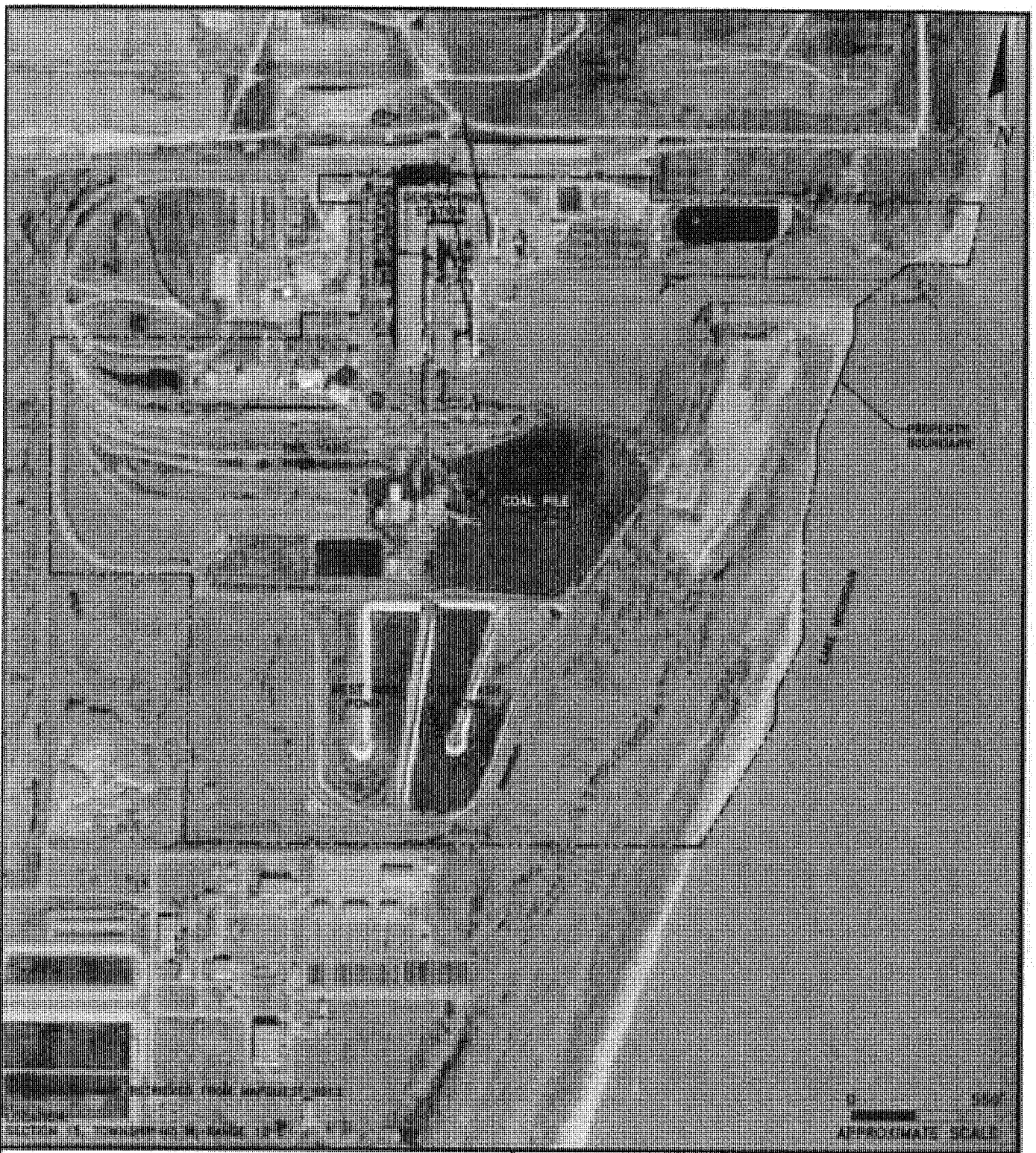
LEGAL DESCRIPTION:

(The legal description of the proposed area will be formalized upon IEPA approval of this proposed ELUC)

REAL ESTATE TAX INDEX OR PARCEL #

08-15-200-006 (partial)

EXHIBIT B
Maps



ENVIRONMENTAL CONSULTATION & REMEDIATION

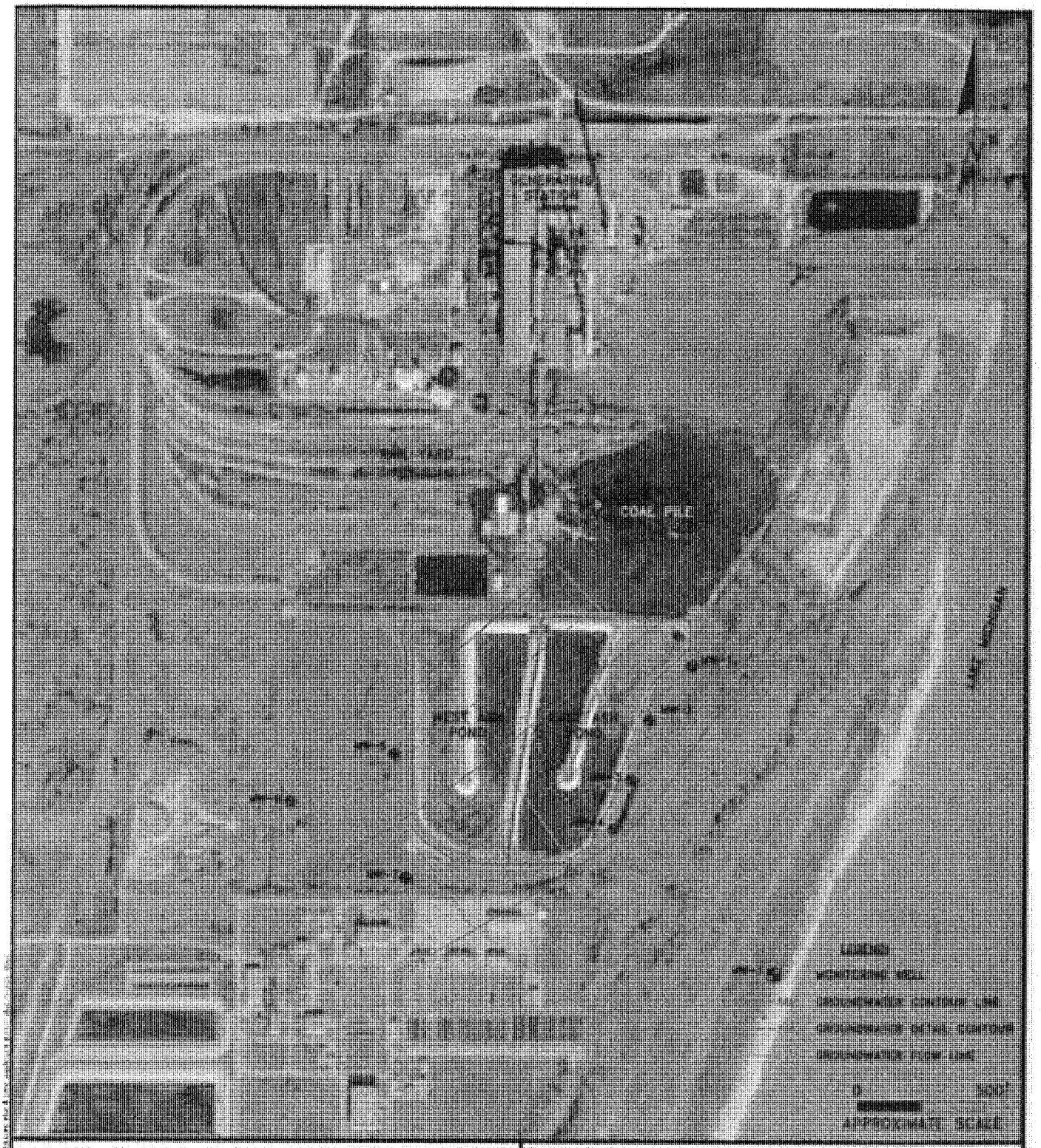
KPRG

KPRG and Associates, Inc.

SITE MAP WITH PROPERTY BOUNDARY

WAUKEGAN STATION
WAUKEGAN, ILLINOIS

Scale: 1" = 550'	Date: January 14, 2013
KPRG Project No. 18311.31	EXHIBIT B-1



ENVIRONMENTAL CONSULTATION & REMEDIATION

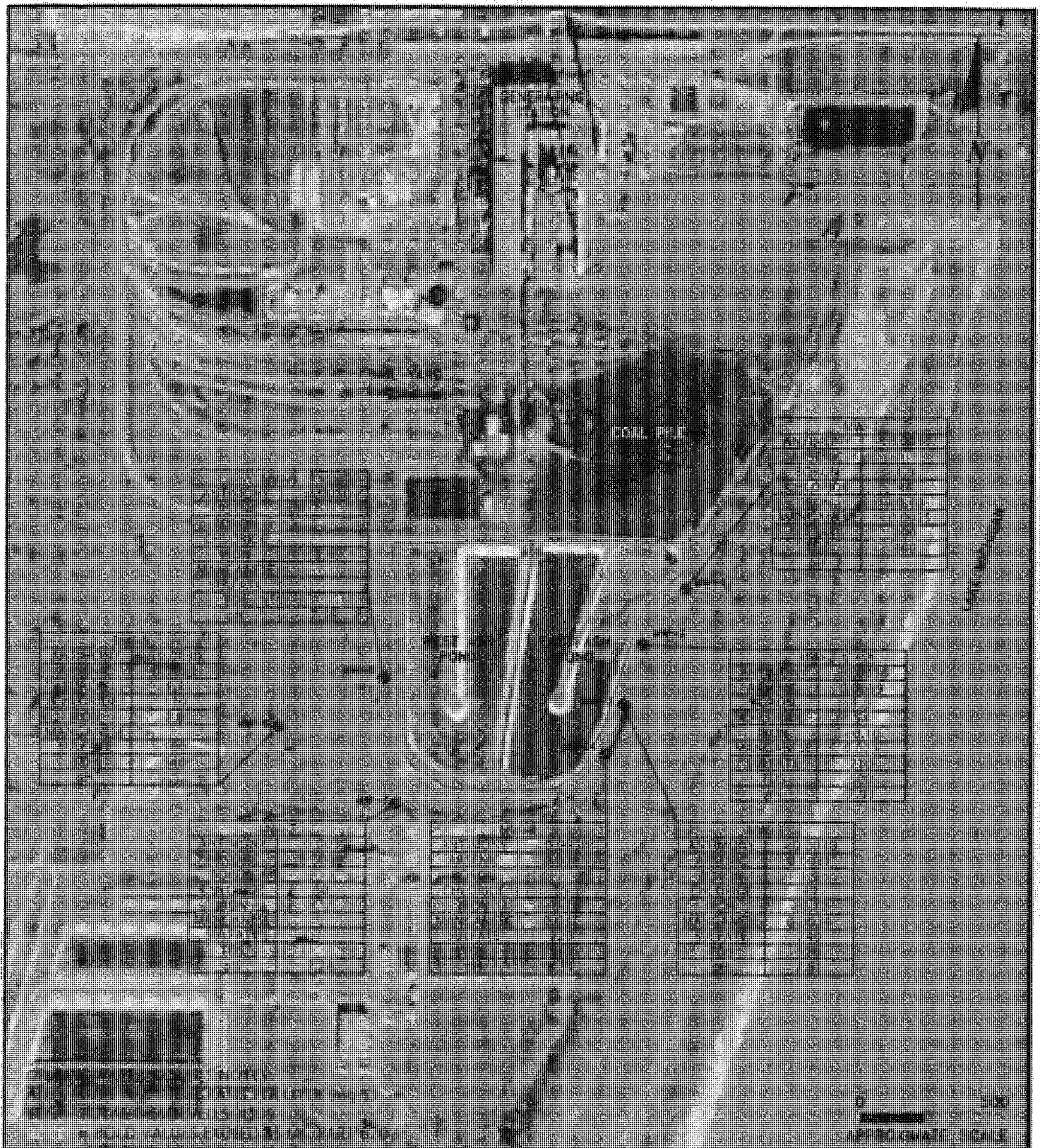
KPRG

KPRG and Associates, Inc.

GROUNDWATER CONTOUR MAP 12/2012

WAUKEGAN STATION
WAUKEGAN, ILLINOIS

Scale: 1" = 500'	Date: January 14, 2013
KPRG Project No. 18311.31	EXHIBIT B-2



ENVIRONMENTAL CONSULTATION & REMEDIATION

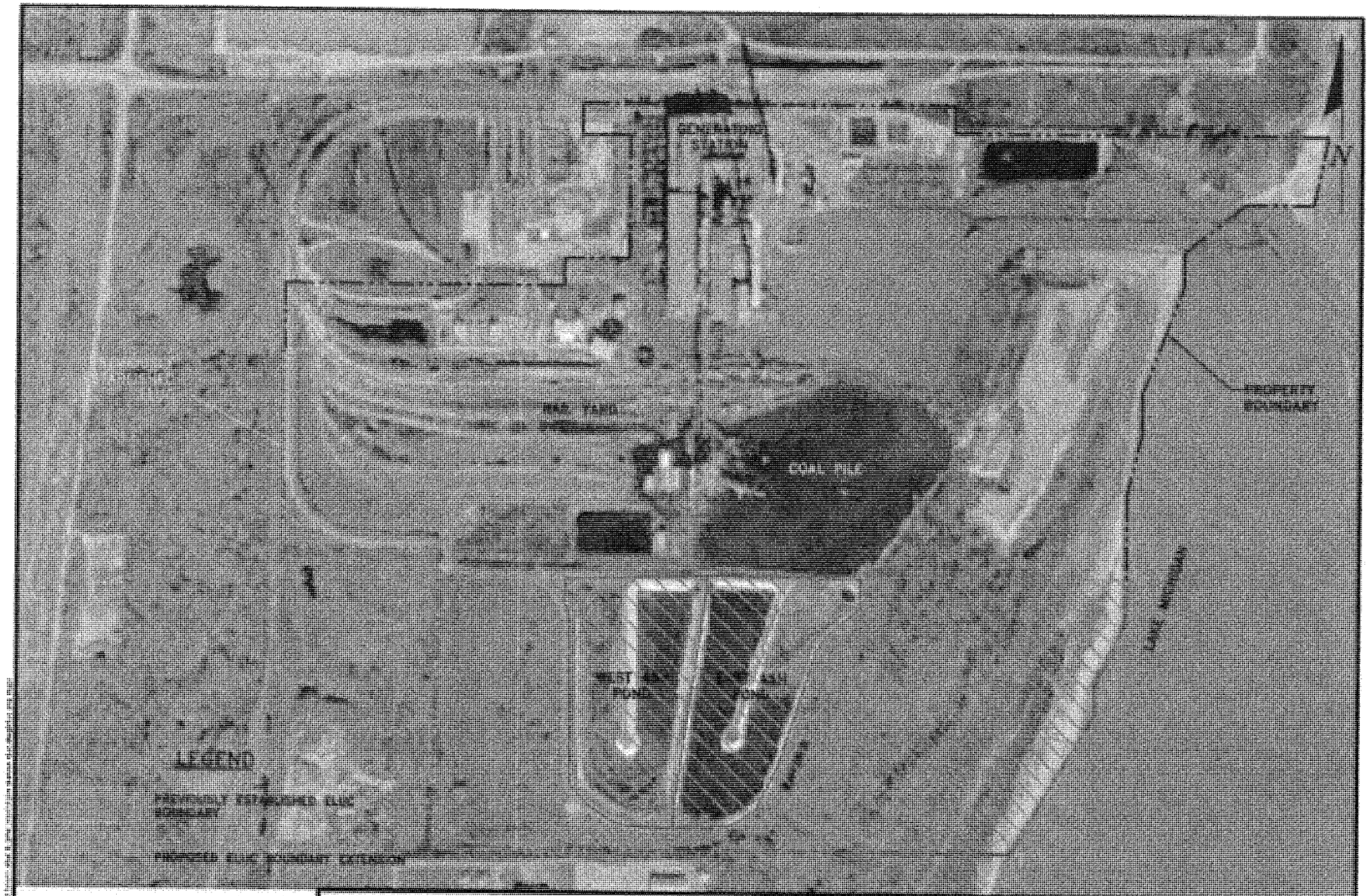
KPRG

KPRG and Associates, Inc.

AREAL DISTRIBUTION OF GROUNDWATER IMPACTS

WAUKEGAN STATION
WAUKEGAN, ILLINOIS

Scale: 1" = 500'	Date: January 14, 2013
KPRG Project No. 18311.3	EXHIBIT B-3



0 500'
APPROXIMATE SCALE

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG

KPRG and Associates, Inc.

PROPOSED ELUC BOUNDARY EXTENSION

WAUKEGAN STATION
WAUKEGAN, ILLINOIS

Scale: 1" = 500' | Date: January 14, 2013

KPRG Project No. 18311.31 | EXHIBIT B-4

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Ecological Research Series

Water Quality Criteria 1972

EXHIBIT
L

EPA-R3-73-033 March 1973

Water Quality Criteria 1972

A Report of the
Committee on Water Quality Criteria

Environmental Studies Board

National Academy of Sciences
National Academy of Engineering

Washington, D.C., 1972

At the request of
and funded by
The Environmental Protection Agency
Washington, D.C., 1972

that the suggested maximum concentrations listed below were too high for this crop.

Recommendations

Recommendations are that maximum concentrations of arsenic in irrigation water be 0.10 mg/l for continuous use on all soils and 2 mg/l for use up to 20 years on fine textured neutral to alkaline soils.

Beryllium

Haas (1932)[408] reported that some varieties of citrus seedlings showed toxicities at 2.5 mg/l of beryllium whereas others showed toxicity at 5 mg/l in nutrient solutions. Romney et al. (1962)[455] found that beryllium at 0.5 mg/l in nutrient solutions reduced the growth of bush beans. Romney and Childress (1965)[454] found that 2 mg/l or greater in nutrient solutions reduced the growth of tomatoes, peas, soybeans, lettuce, and alfalfa plants. Additions of soluble beryllium salts at levels equivalent to 4 per cent of the cation-adsorption capacity of two acid soils reduced the yields of ladino clover. Beryllium carbonate and beryllium oxide at the same levels did not reduce yields. These results suggest that beryllium in calcareous soils might be much less active and less toxic than in acid soils. Williams and LeRiche (1968)[480] found that beryllium at 2 mg/l in nutrient solutions was toxic to mustard, whereas 5 mg/l was required for growth reductions with kale.

It seems reasonable to recommend low levels of beryllium in view of the fact that, at 0.1 mg/l, 80 pounds of beryllium would be added in 100 years using 3 acre feet of water per acre per year. In 20 years, at 0.5 mg/l, water at the same rate would add 80 pounds.

Recommendations

In view of toxicities in nutrient solutions and in soils, it is recommended that maximum concentrations of beryllium in irrigation waters be 0.10 mg/l for continuous use on all soils and 0.50 mg/l for use on neutral to alkaline fine textured soils for a 20-year period.

Boron

Boron is an essential element for the growth of plants. Optimum yields of some plants are obtained at concentrations of a few tenths mg/l in nutrient solutions. However, at concentrations of 1 mg/l, boron is toxic to a number of sensitive plants. Eaton (1935,[400] 1944[401]) determined the boron tolerance of a large number of plants and developed lists of sensitive, semitolerant, and tolerant species. These lists, slightly modified, are also given in the U.S.D.A. Handbook 60 (Salinity Laboratory 1954)[459] and are presented in Table V-14. In general, sensitive crops showed toxicities at 1 mg/l or less, semitolerant crops at 1 to 2 mg/l, and tolerant crops at 2 to 4 mg/l. At concentrations above 4 mg/l, the irrigation water was generally unsatisfactory for most crops.

TABLE V-14—Relative Tolerance of Plants to Boron

(In each group the plants first named are considered as being more tolerant and the last named more sensitive.)

Tolerant	Semitolerant	Sensitive
Athel (Tamarix asphylla)	Sunflower (native)	Pecan
Asparagus	Potato	Black Walnut
Palm (Phoenix canariensis)	Acala cotton	Persian (English) walnut
Date palm (P. dactylifera)	Pima cotton	Jerusalem artichoke
Sugar beet	Tomato	Navy bean
Mangel	Sweetpea	American elm
Garden beet	Radish	Plum
Alfalfa	Field pea	Pear
Gladiolus	Ragged Robin rose	Apple
Broadbean	Olive	Grape (Sultanina and Malaga)
Onion	Barley	Kadota fig
Turnip	Wheat	Persimmon
Cabbage	Corn	Cherry
Lettuce	Milo	Peach
Carrot	Oat	Apricot
	Zinnia	Thornless blackberry
	Pumpkin	Orange
	Bell pepper	Avocado
	Sweet potato	Grapefruit
	Lima bean	Lemon

Salinity Laboratory Staff 1954[459].

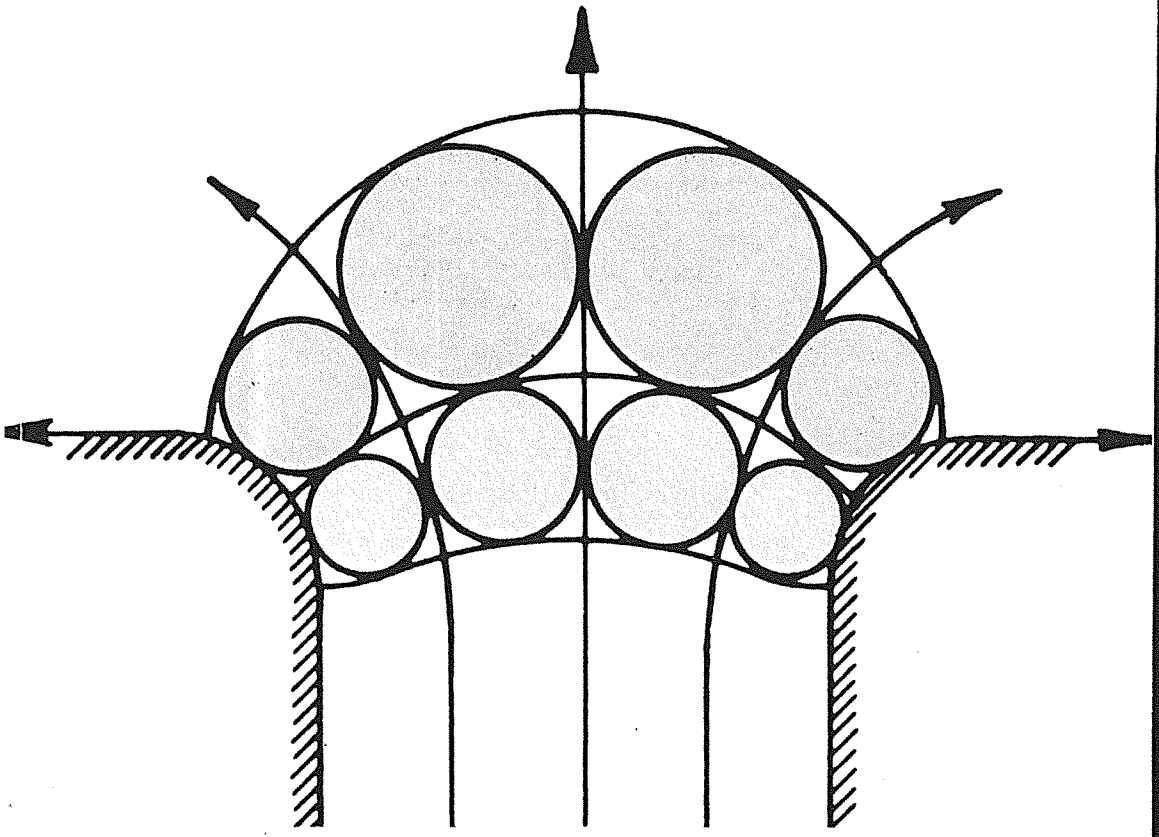
Bradford (1966),[379] in a review of boron deficiencies and toxicities, stated that when the boron content of irrigation waters was greater than 0.75 mg/l, some sensitive plants, such as citrus, begin to show injury. Chapman (1968)[387] concluded that citrus showed some mild toxicity symptoms when irrigation waters have 0.5 to 1.0 mg/l, and that when the concentration was greater than 10 mg/l pronounced toxicities were found.

Biggar and Fireman (1960)[375] and Hatcher and Bower (1958)[411] showed that the accumulation of boron in soils is an adsorption process, and that before soluble levels of 1 or 2 mg/l can be found, the adsorptive capacity must be saturated. With neutral and alkaline soils of high adsorption capacities water of 2 mg/l might be used for some time without injury to sensitive plants.

Recommendations

From the extensive work on citrus, one of the most sensitive crops, the maximum concentration of 0.75 mg boron/l for use on sensitive crops on all soils seems justified. Recommended maximum concentrations for semitolerant and tolerant plants are considered to be 1 and 2 mg/l respectively.

For neutral and alkaline fine textured soils the recommended maximum concentration of boron in irrigation water used for a 20-year period on sensitive crops is 2.0 mg/l. With tolerant plants or for shorter periods of time higher boron concentrations are acceptable.



Dynamics of Fluids in Porous Media

Jacob Bear

EXHIBIT
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ISBN 0-486-65675-6
1. Fluid dynamics. 2. Groundwater flow. I. Title.
TA357.B38 1988
620.1'064—dc19 87-34940
CIP

Table 5.5.1

Typical Values of Hydraulic Conductivity and Permeability

$-\log_{10}$ · K(cm/s)	−2	−1	0	1	2	3	4	5	6	7	8	9	10	11
Permeability	Pervious				Semipervious					Impervious				
Aquifer	Good					Poor				None				
Soils	Clean gravel	Clean sand or sand and gravel			Very fine sand, silt, loess, loam, solonetz									
					Peat	Stratified clay				Unweathered clay				
Rocks					Oil rocks			Sandstone		Good limestone, dolomite		Breccia, granite		

$-\log_{10}$ · k(cm²)	3	4	5	6	7	8	9	10	11	12	13	14	15	16
$\log_{10}k$(md)	8	7	6	5	4	3	2	1	0	−1	−2	−3	−4	−5

or equivalent hydraulic gradient of 1 atmosphere per cm.

In (5.5.11), 1 centipoise $= 10^{-2}$ poise $= 10^{-2}$ dyne sec/cm² and 1 atmosphere $=$ 1.0132×10^6 dynes/cm². The conversion from the darcy to the area units is given by:

$$1 \text{ darcy} = 9.8697 \times 10^{-9} \text{ cm}^2 = 1.062 \times 10^{-11} \text{ ft}^2$$
$$= 9.613 \times 10^{-4} \text{ cm/sec (for water at 20°C)}$$
$$= 1.4156 \times 10^{-2} \text{ US gal/min ft}^2 \text{ (for water at 20°C).}$$

In many cases the darcy is a rather large unit so that the millidarcy (md) (10^{-3} darcy) is used.

Typical examples of permeabilities of oil reservoir are summarized by Katz et al. (1959).

Table 5.5.1 (Irmay in Bear, Zaslavsky and Irmay 1968) gives a summary of hydraulic conductivity and permeability. In this table, following the United States Bureau of Reclamation, K is expressed in units of hydraulic conductivity class:

$$K_c = -\log_{10}K(\text{cm/sec}).$$

5.6 Anisotropic Permeability

In sections 4.8 and 5.2, the permeability, $\underline{\mathbf{k}}$, and the hydraulic conductivity, $\underline{\mathbf{K}}$, of a porous medium were shown to be second-rank tensors. Some brief comments on second-rank tensors are incorporated in paragraph 5.6.1. The reader is referred to such books as Morse and Feshbach (1953), Spain (1956), Spiegel (1959), Prager (1961), and Aris (1962) for additional information on this subject.

Although the discussion below is restricted to the x, y, z (or x_i, $i = 1, 2, 3$) Cartesian

coordinate system, it can eas

The porous medium is assu

5.6.1 The Principal Directions

The relationship between th
$\mathbf{J}(J_1, J_2, J_3) \equiv -\text{grad}\,\varphi$ in the
as (5.2.8) or in the more com

$$\mathbf{q} = \underline{\mathbf{K}} \cdot \mathbf{J} \quad \text{or} \quad q_i = K_{ij}J_j$$

In (5.6.1), as elsewhere in this
convention (or the *double-index*
convention, in any product of t
(and only twice) is held to be
For example, the second equat
three equations:

$$q_1 =$$
$$q_2 =$$
$$q_3 =$$

The *nine* components K_{ij} in
two-dimensional one, define t
written in the compact matri

$$\underline{\mathbf{K}} = \begin{bmatrix} K_{11} \\ K_{21} \\ K_{31} \end{bmatrix}$$

Because $\underline{\mathbf{K}}$ is a symmetrical
components (or three in a two-
equations of (5.6.2) is as a si

$$\begin{bmatrix} q_1 \\ q_2 \\ q_3 \end{bmatrix} =$$

The mixed component $K_{x_ix_j}$
when multiplied by the compor
tion of the latter to the specific
of specific discharges caused

At this point, the reader is

(a) Given the components K
ponents K'_{pq} in an x'_p systen

$$K'_{pq} =$$

Powerplant CCW Impoundment Information

Facility	Impound-ment ID	Liner Type
Will County Station		
GMZ established for N. Pond, S. Pond 1, S. Pond 2, and S. Pond 3 in 2013	N. Pond	No Liner
	S. Pond 1	Synthetic
	S. Pond 2	Synthetic
	S. Pond 3	No Liner
Waukegan Station		
	East Pond	Synthetic
	West Pond	Synthetic
Powerton		
GMZ established for Ash Basin, Sec. Ash basin, Metal Cleaning Basin and Bypass Basin in 2013	Ash Basin	Synthetic
	Sec. Ash Basin	Synthetic
	Metal Cleaning Basin	Synthetic
	Bypass Basin	Synthetic
Joliet 29		
GMZ established for the Ponds 1, 2, and 3 in 2013	Pond 1	Synthetic
	Pond 2	Synthetic
	Pond 3	Synthetic
Crawford		
Facility is closed	Basin 16	No Liner
Electric Energy Inc.		
	Pond 1	No Liner
	Pond 2	No Liner
	Land Fill Runoff Pond	Synthetic
Baldwin Energy Center		
	Pond 1	No Liner
	Pond 2	No Liner
	Pond 3	No Liner
	Pond 4	No Liner
	Pond 5	No Liner
	Pond 6	No Liner
	Pond 7	No Liner
Havana Station		
GMZ Established in 1996 for South Ash pond Pursuant to Consent Order. GMZ completed in 2009	East Pond C1	Synthetic
	East Pond C2	Synthetic
	East Pond C3	Synthetic
	East Pond C4	Synthetic

* CCW includes CCW leachate

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Powerplant CCW Impoundment Information

Facility	Impound-ment ID	Liner Type
Coffeen Station		
	Bottom Ash/Recycle Pond	No Liner
	Ash Pond 2	No Liner
	Gypsum Stack	Synthetic
	Gypsum Stack Recycle	Synthetic
	Land Fill Runoff Pond	Synthetic
Meredosia Station		
Facility is closed	Bottom Ash Pond	No Liner
	Fly Ash Pond C1	No Liner
	Fly Ash Pond C2	No Liner
Hutsonville Station		
Facility is closed	Pond A	Synthetic
	Pond B	Synthetic
	Pond C	Synthetic
	Pond D	No Liner
	Bottom Ash	No Liner
Venice		
GMZ Established 2011 for N. Pond and S. Pond	N. Pond	No Liner
Facility fueled with gas	S. Pond	No Liner
Grand Tower		
Facility fueled with gas	Ash Pond	No Liner
Kincaid Generation		
	Ash Pond	No Liner
City Water Light and Power		
	Lake Side Pond	No Liner
	Dallman Pond	No Liner
Prairie Power Inc.		
Facility is closed	N. Pond	No Liner

* CCW includes CCW leachate

Powerplant CCW Impoundment Dam Information

Facility	Impound-ment ID	First Operation Date	Dike Height	Impoundment Acreage
Newton Station				
	Primary Ash	1977	71 ft.	400 ac.
	Secondary Ash	1977	29 ft.	9.3 ac.
Coffeen Station				
	Bottom Ash/Recycle Pond	1978	41 ft.	23 ac.
	Ash Pond 2	1980	47 ft.	60 ac.
	Gypsum Stack	2010	unknown	77 ac.
	Gypsum Stack Recycle	2010	unknown	17 ac.
	Land Fill Runoff Pond	unknown	unknown	unknown
Meredosia Station				
	Bottom Ash Pond	1972	24 ft.	unknown
	Fly Ash Pond C1	1968	24 ft.	34 ac. total for both C1 & C2
	Fly Ash Pond C2	1968	24 ft.	unknown
Grand Tower				
	Ash Pond	1951	22 ft.	21.7ac.

EXHIBIT
tabbies
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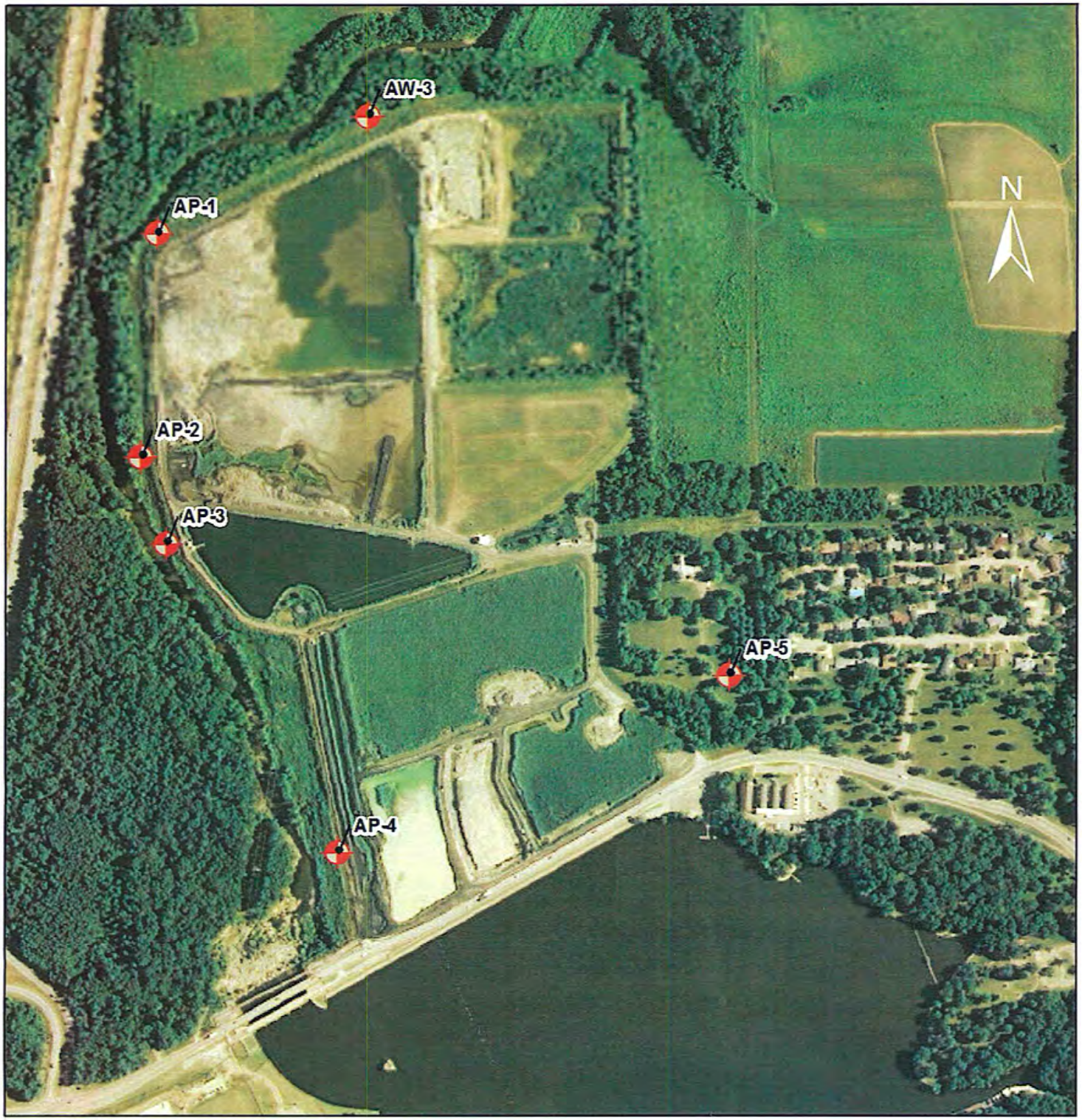

City Water Light & Power (IL0024767) Monitor Wells Sangamon County

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2013

Legend

Monitoring Wells

EXHIBIT

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0 200 400 600 800 Feet

SOURCE INFORMATION

Monitoring well data obtained from CWLP and Andrews Engineering Inc. Aerial photography obtained from Illinois DNR. Map compiled and created by Illinois EPA, Groundwater Section.