NPDES Permit No. IL0002232
Notice No. JAR:10121001.jar

Public Notice Beginning Date: **April 22, 2013**

Public Notice Ending Date: **May 22, 2013**

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water,
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Permittee:
Midwest Generation, LLC
235 Remington Blvd., Suite A
Bolingbrook, IL 60440

Facility Name and Address:
Powerton Generating Station
13082 East Manito Rd.
Pekin, IL 61554
(Tazewell County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Jaime Rabins at 217/782-0610.

The applicant is engaged operation of a steam electric generating station (SIC 4911). The station operates four pulverized coal-fired wet bottom boilers to supply steam to two generating units, designated units #5 and #6 rated at 851 and 840 MW respectively. The station withdraws water from the 1400 acre cooling pond for condenser cooling and for backwashing the condenser cooling water intake screens. On-site wells supply house service water. Wastewater is generated from once-through condenser cooling, conditioning boiler feed water, backwashing the condenser cooling water intake screens, sanitary, chemical and non-chemical cleaning of plant equipment, ash handling, and precipitation which contacts the site.

Plant operation results in an average discharge of 7.33 MGD of ash treatment system effluent from outfall 001, 0.5 MGD of metal cleaning waste treatment system effluent from outfall A01, an intermittent discharge of cooling pond emergency overflow from outfall 002, an intermittent discharge of coal pile runoff treatment system effluent from outfall A02, 1.14 MGD of west yard treatment system effluent from outfall B02, 0.036 MGD of RBC treatment system effluent from outfall 004, and 1.44 MGD of treated asbestos contaminated stormwater from 006.

Once-thru cooling water is conditioned with carbon dioxide to prevent biofouling of the condensers. Discharges from outfall 001 are treated using sedimentation, coagulation (as needed), sedimentation, flocculation and reuse/recycle of treated effluent. Discharges from outfall A01 are treated using sedimentation, chemical precipitation, coagulation, flocculation, sedimentation, neutralization with discharge routed to ash treatment system. Sludge is sent to a landfill. Discharges from outfall 002 are not

treated prior to discharge. Discharges from A02 are treated using sedimentation, coagulation, flocculation and sedimentation with discharge to cooling pond. Settled solids are mostly coal fines are incinerated. Discharges from outfall B02 are treated using an oil/water separator (345 switchyard), coagulation, flocculation and sedimentation with discharge to the cooling pond. Discharges from outfall 003 are treated using an oil/water separator, coagulation, flocculation, sedimentation with discharge to the ash treatment system. Discharges from outfall 004 are treated with aeration/equalization, sedimentation, rotating biological contactor and sedimentation. Sludge is treated using aerobic digestion prior to being hauled to a publically owned treatment works. Discharges from outfall 006 are treated using multi-media filtration.

The facility utilizes 5.63 billion gallon perched cooling water pond. New source water (make-up water) is only added to the pond to replenish losses that have occurred due to overflow, evaporation, and infiltration and is provided by an intake structure on the Illinois River. Overflow is discharged via outfall 002 and occurs on a very infrequent basis, only three times in the past five years, each time in conjunction with a large precipitation event. The cooling pond meets the definition of a closed-cycle recirculating system of 40 CFR 125.93, that is a system designed using minimized make-up and blowdown flows, to withdraw water from a natural or other water source to support non-contact cooling uses within the facility. Based on low riser level conditions (EL 432'), the maximum intake velocity through the intake structure from the Illinois River into the cooling pond has been calculated by the applicant to be less than 0.5 feet per second. In accordance 40 CFR 125.3 it is the Agency's Best Professional Judgment that the intake structure is considered the Best Technology Available for minimizing adverse environmental impact because utilization of a closed-cycle recirculating system was considered the best technology available for minimizing adverse environmental impact under the now remanded rule of 40 CFR 125.94(a)(1)(i). Furthermore, the Illinois River intake structure design intake velocity less is than 0.5 feet per second which was considered the best technology available for minimizing adverse environmental impact under the now remanded rule of 40 CFR 125.94(a)(1)(ii).

This Permit recognizes and continues the year-round disinfection exemption approved by the IEPA on November 29, 1994 and included in past NPDES permit actions since that date. It is the IEPA's tentative decision that under Illinois Pollution Control Board regulations, the reach of waterbody which receives the discharge from outfall 004 is not classified for primary contact use activities and is not subject to the fecal coliform water quality standard of 35 Ill. Adm. Code 302.209.

The stations sewage treatment plant discharges via outfall 004 into the Unit 1-4 discharge canal. This 3'500 foot canal is used to pump water from the Illinois River for the station's cooling pond. This creates a flow of 144 MGD away from the Illinois River. The cooling pond make-up pumps run almost continuously. When these pumps are not on, flow out of the canal is for the most part nonexistent. This is due to the canal being graded to promote the flow of the river to the inlet of the pumps. The normal depth of the canal is four to five feet. The average flow of the sewage treatment plant is 0.032 MGD which allows for a dilution rate of one part sewage effluent to 4,500 parts canal water. The entire length of the canal is inside station property. The canal consists of a steep embankment which is covered with thick vegetation growth, making access to the canal difficult. At the mouth of the canal "No-Tresspassing" signs are posted. The average fecal coliform bacteria concentration of the effluent was reported in the most recent application dated December 18, 2012 as 422 cells per 100 mL which is predicted to die-off to the level of the water quality standard (200 cells per 100 mL) in the canal. The canal which receives the discharge from outfall 004 has been determined to be unsuited to support primary contact activities (swimming) as it is located entirely on plant property, not open to public recreation and thus incidental contact is not predicted to occur on a regular basis. Anyone knowing of primary contact activities occurring within this water segment is invited to submit comments to the IEPA. Comments should give the nature of the activities (i.e swimming, fishing, canoeing, etc.), the location and months of the year when these activities have been observed. The IEPA is also interested in obtaining information on the proximity of residential dwellings and the accessibility of the public to this water segment. Anyone with such information is asked to submit comments to the IEPA on this draft permit action. Instructions for submitting comments are contained earlier in this document.

The following modifications are proposed:

1. Approximately 150 feet of the old intake channel will be filled in so that land may be used for the location of equipment in the future. As a result, outfall 001 will be relocated from 40° 32' 50" North by 89° 40' 42" West to 40° 32' 52" North by 89° 40' 41" West, outfall 003 which is an alternate conveyance for the East Yard Treatment System will be eliminated along with outfall 005. The condensate storage tank currently discharged from outfall 005 will be redirected to the east yard drain lines. An anti-degradation assessment was not conducted for the relocation of outfall 001 because the outfall will continue to report to the same receiving stream and the change in location is minor.
2. The discharger address was changed.

Application is made for the existing discharges which are located in Tazewell County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications

| Outfall | Receiving Stream | Latitude | | Longitude | | Stream Classification | Biological Stream Characterization |
|---|---|---|---|---|---|---|---|
| 001 | Illinois River | 40° 32' 52" | North | 89° 40' 41" | West | General Use | Not Rated |
| 002 | Unnamed tributary to the Illinois River | 40° 32' 21" | North | 89° 41' 56" | West | General Use | Not Rated |
| 004 | Illinois River | 40° 32' 39" | North | 89° 40' 51" | West | General Use | Not Rated |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 006 | | Illinois River | | 40° 32’ 34” | North | | 89° 40’ 47” | West | | General Use | | Not Rated |

To assist you further in identifying the location of the discharge please see the attached map.

The stream segment receiving the discharge from outfall 002 is not listed on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List and has not been assessed.

The stream segment D-05 receiving the discharge from outfalls 001, 003, 004, 005 and 006 is listed on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List. The Illinois River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating. The impaired designated uses and pollutants causing impairment are tabulated below:

| Impaired Designated Uses | Pollutants Causing Impairment |
|---|---|
| Fish Consumption | Mercury and Polychlorinated biphenyls |
| Primary Contact Recreation | Fecal Coliform |

The discharge(s) from the facility shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | |
|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION | 30 DAY AVERAGE | DAILY MAXIMUM | REGULATION |
| Outfall: 001 Ash Treatment System Effluent (DAF = 7.33 MGD) | | | | | | |
| Flow (MGD) | | | | | | |
| pH | | | | | | 40CFR423.12(b)(1) |
| Total Suspended Solids | | | | 15 | 30 | 35 IAC 304.124 |
| Oil and Grease | | | | 15 | 20 | 40CFR423.12(b)(4) |
| Mercury | | | | Monitor Only | | 35 IAC 309.146 |
| Outfall: A01 Metal Cleaning Waste Treatment System Effluent ( DAF = 0.5 MGD) | | | | | | |
| Flow (MGD) | | | | | | |
| Total Suspended Solids | | | | 30 | 100 | 40CFR423.12(b)(5) |
| Oil and Grease | | | | 15 | 20 | 40CFR423.12(b)(5) |
| Iron | | | | 1.0 | 1.0 | 40CFR423.12(b)(5) |
| Copper | | | | 0.5 | 1.0 | 40CFR423.12(b)(5) |
| Outfall: 002 Cooling Pond Emergency Overflow ( Intermittent Discharge) | | | | | | |
| Flow (MGD) | | | | | | |
| pH | | | | | | 35 IAC 302.204 |
| Outfall: A02 Coal Pile Runoff Treatment System Effluent ( Intermittent Discharge) | | | | | | |
| Flow (MGD) | | | | | | |
| Total Suspended Solids | | | | 15 | 30 | 35 IAC 304.124 |
| Oil and Grease | | | | 15 | 20 | 40CFR423.12(b)(3) |
| Outfall: B02 West Yard Treatment System Effluent (DAF = 1.14 MGD) | | | | | | |
| Flow (MGD) | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total Suspended Solids | | | | 15 | 30 | 35 IAC 304.124 |
| Oil and Grease | | | | 15 | 20 | 40CFR423.12(b)(3) |
| Outfall 004 RBC Sewage Treatment Plant Effluent (DAF = 0.036 MGD) | | | | | | |
| Flow (MGD) | | | | | | |
| pH | | | | | | 35 IAC 304.125 |
| Total Suspended Solids | | | | 30 | 60 | 35 IAC 304.120(a) |
| $BOD_5$ | | | | 30 | 60 | 35 IAC 304.120(a) |
| Total Residual Chlorine | | | | | 0.05 | 40 CFR 125.3 |
| Outfall 006 Treated Asbestos Contaminated Stormwater ( DAF = 1.44 MGD) | | | | | | |
| Flow (MGD) | | | | | | |
| Asbestos | | | | | 7 million Fibers/L | 40 CFR 131.36 |

The following explain the conditions of the proposed permit:

The special conditions clarify the following: flow, pH, temperature, total residual chlorine, polychlorinated biphenyls, DMRs, intake screen backwash, monitoring location, bypass and upset provisions, operator requirements, dissolved oxygen, semi-annual metals sampling and stormwater.

The subject facility has applied for an NPDES permit modification to allow a new waste stream. A new air emissions system has been mandated that requires an ultraclean water input. A reverse osmosis (RO) system will be employed to create purified water from site well water. This water will be consumed in the air emissions control system and will not be discharged. A waste stream of RO reject water will be created at 0.14 MGD to be discharged to the plant cooling pond, which is not a water of the State. The cooling pond blows down to the Illinois River during high rain fall events. This outfall discharged three times in the last three years, averaging 0.22 MGD. The RO effluent will consist of dissolved salts concentrated from the groundwater source at a total dissolved solids concentration of 2300 mg/L.

**Identification and Characterization of the Affected Water Body.**

The Illinois River (segment D-5) has a 7Q10 flow of 2983 cfs and is a General Use water. The river is listed on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption and primary contact uses. The causes of the fish consumption use impairment are given as PCBs and mercury. The cause of primary contact use impairment is fecal coliform. Aquatic life use is found to be fully supported in this segment. The Illinois River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating. The Illinois River is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard. The IDNR WIRT system lists the state threatened or endangered smooth softshell turtle as residing in the receiving stream.

**Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.**

The pollutant loading in this effluent consists of dissolved solids that originate in the well water used to make purified water in the RO system. The cooling pond would receive 2685 pounds of natural salts per day as a result of the new discharge. This amount would eventually find its way to the Illinois River when the cooling pond overflows to the river. No adverse impacts are anticipated in the river as this is an insignificant amount of salts relative to the flow of the river. No water quality standards will be exceeded.

**Fate and Effect of Parameters Proposed for Increased Loading.**

The salts, mostly calcium and magnesium salts typical of Illinois groundwater, are a natural component of the water in the unnamed tributary of the Illinois River receiving the intermittent discharge from the cooling pond. The new reverse osmosis reject water discharge (0.14 MGD) to the cooling pond, which has a volume of 5.63 billion gallons, has a daily dilution ratio of 40,214:1 and an annual dilution ratio of 110:1. The new discharge will have a very small potential to impact the water quality of the pond given the dilution ratio and the natural and benign nature of the effluent. While natural salts will increase slightly in the unnamed tributary when discharge from the cooling pond occurs, water quality standards will not be exceeded. The increased loading of salts will have a very minimal effect on the concentration in the discharged effluent.

**Purpose and Social & Economic Benefits of the Proposed Activity.**

The new discharge is necessary because of clean air regulations. The air emissions of the power plant will decrease as a result of this project.

**Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.**

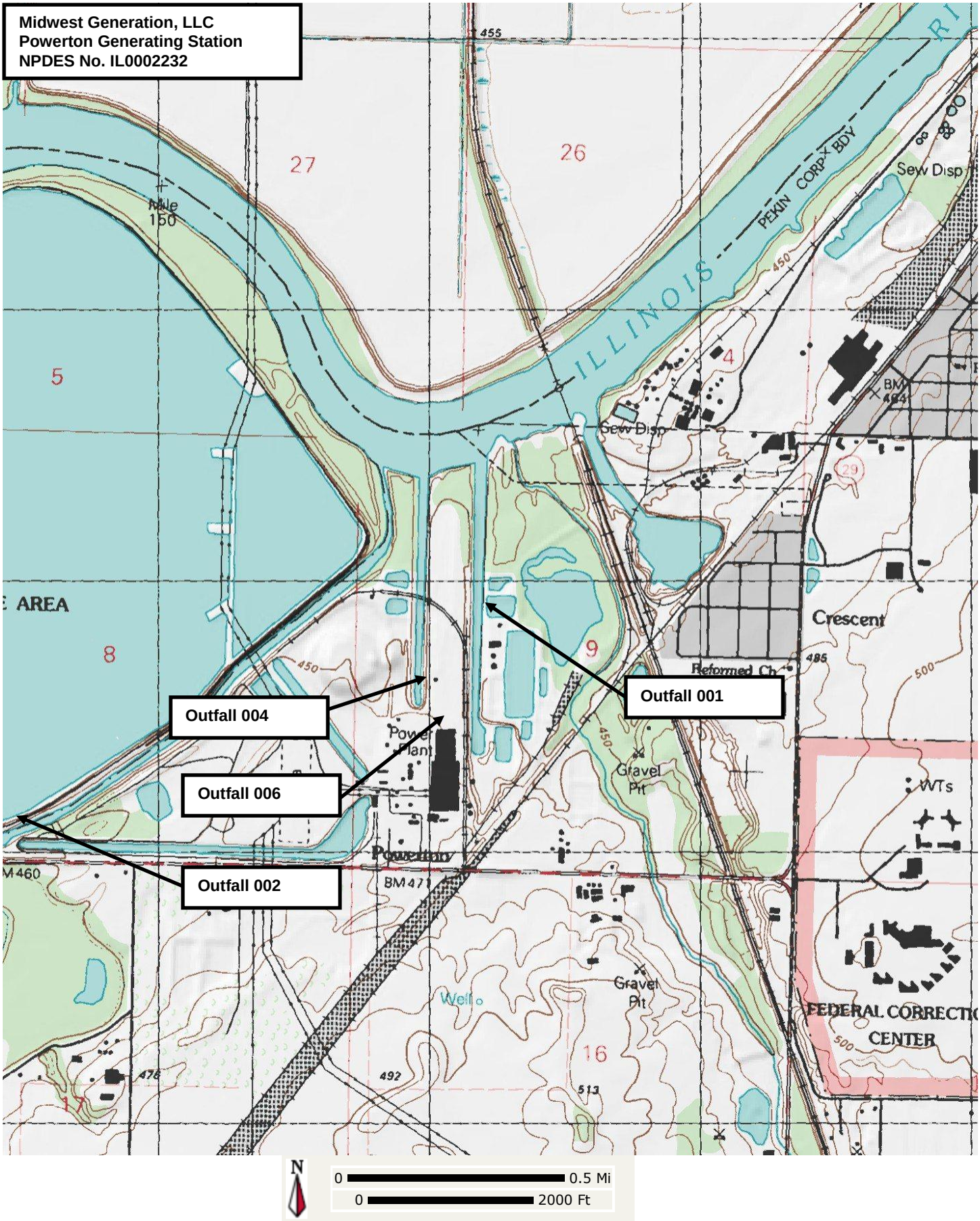
Reverse osmosis is the most environmentally friendly method of producing purified water. No additives must be used as with other methods. The system must be periodically cleaned, but the treatment chemicals used will be those already used at the station.

**Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities**

The Illinois Department of Natural Resources was consulted regarding threatened and endangered species issues via the EcoCAT system on January 21, 2011. IDNR provided a letter of this date concluding that adverse impacts are unlikely and thereby terminated consultation.

**Agency Conclusion.**

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the draft permit was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by allowing for increase air emissions control. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.


Midwest Generation, LLC
Powerton Generating Station
NPDES No. IL0002232
Outfall 001
Outfall 004
Outfall 006
Outfall 002
ILLINOIS
PEKIN CORP X BDY
Sew Disp
Crescent
Reformed Ch
Power Plant
Gravel Pit
WTs
Powerton
BM 471
Well
FEDERAL CORRECTIONAL CENTER
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Public Notice of Draft Permit

Public Notice Number JAR:10121001.jar is hereby given by Illinois EPA, Division of Water Pollution Control, Permit Section, 1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276 (herein Agency) that a draft National Pollutant Discharge Elimination System (NPDES) Permit Number IL0002232 has been prepared under 40 CFR 124.6(d) for Midwest Generation, LLC, 235 Remington Blvd., Suite A, Bolingbrook, IL 60440 for discharge into Illinois River from the Powerton Generating Station, 13082 East Manito Rd., Pekin, IL 61554, (Tazewell County).

The station operates four pulverized coal-fired wet bottom boilers to supply steam to two generating units, designated units #5 and #6 rated at 851 and 840 MW respectively. The station withdraws water from the 1400 acre cooling pond for condenser cooling and for backwashing the condenser cooling water intake screens. On-site wells supply house service water. Wastewater is generated from once-through condenser cooling, conditioning boiler feed water, backwashing the condenser cooling water intake screens, sanitary, chemical and non-chemical cleaning of plant equipment, ash handling, and precipitation which contacts the site.

Plant operation results in an average discharge of 7.33 MGD of ash treatment system effluent from outfall 001, 0.5 MGD of metal cleaning waste treatment system effluent from outfall A01, an intermittent discharge of cooling pond emergency overflow from outfall 002, an intermittent discharge of coal pile runoff treatment system effluent from outfall A02, 1.14 MGD of west yard treatment system effluent from outfall B02, 0.036 MGD of RBC treatment system effluent from outfall 004, and 1.44 MGD of treated asbestos contaminated stormwater from 006.

The application, draft permit and other documents are available for inspection and may be copied at the Agency between 9:30 a.m. and 3:30 p.m. Monday through Friday. A Fact Sheet containing more detailed information is available at no charge. For further information, call the Public Notice Clerk at 217/782-0610.

Interested persons are invited to submit written comments on the draft permit to the Agency at the above address. The NPDES Permit and Joint Public Notice numbers must appear on each comment page. All comments received by the Agency not later than 30 days from the date of this publication shall be considered in making the final decision regarding permit issuance.

Any interested person may submit written request for a public hearing on the draft

If written comments and/or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing.

NPDES Permit No. IL0002232

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:
Effective Date:

Name and Address of Permittee:
Midwest Generation, LLC
235 Remington Blvd., Suite A
Bolingbrook, IL 60440

Facility Name and Address:
Powerton Generating Station
13082 East Manito Rd.
Pekin, IL 61554
(Tazewell County)

| Discharge Number and Name: | Receiving Waters: |
|---|---|
| 001 Ash Treatment System Effluent | Illinois River |
| A01 Metal Cleaning Waste Treatment System Effluent | |
| 002 Cooling Pond Emergency Overflow | Unnamed tributary to the Illinois River |
| A02 Coal Pile Runoff Treatment System Effluent | |
| B02 West Yard Treatment System Effluent | |
| 004 RBC Sewage Treatment Plant Effluent | Illinois River |
| 006 Treated Asbestos Contaminated Stormwater | Illinois River |

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK: JAR:10121001.jar

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: 001 Ash Treatment System Effluent (DAF = 7.33 MGD)

This discharge consists of: Approximate Flow

1. Bottom Ash and Economizer Ash Sluice Wastewater — 10.9 MGD
2. Alternate Route for Boiler Room Sump — Intermittent
3. Intermittent Route for Boiler Room Floor and Roof Drains — Intermittent
4. Slag Tank Overflow Sump Wastes; Tripper Room Dust Extractor; Tail End and Tripper Room Washdown; Alternate Route for Boiler Room Floor Drains; Alternate Route for RO Reject and Cleaning Wastes — 6.2 MGD
5. Demineralizer Sand Filter Backwash — 0.1 MGD
6. East Yard Runoff Basin Effluent — Intermittent
   a. East Yard Area Runoff — 1.0 MGD
   b. Units 1-4 Roof and Yard Drains — Intermittent
   c. Boiler Room Sump Wastes — 0.3 MGD
   d. Boiler Room Roof and Building Drains — Intermittent
   e. Polymer Building Floor Drains — 0.01 MGD
   f. Scrubber and Limestone Building Area Drains — 0.01 MGD
   g. Condensate Storage Tank — Intermittent
7. Demineralizer Regenerant and RO Wastes to South Equalization Basin; Alternate Route direct to Ash Treatment — 0.3 MGD
8. Metal Cleaning Wastes Treatment System Effluent — 0.50 MGD

| | | | | | | |
|---|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | | 1/Week | 24 Hour Total |
| pH | See Special Condition 2 | | | | 1/Week | Grab |
| Total Suspended Solids | | | 15 | 30 | 2/Month | 24 Hour Composite |
| Oil and Grease | | | 15 | 20 | 2/Month | Grab |
| Mercury* | | | | | 1/Month | Grab |

*Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E with a minimum reporting limit of 1 ng/l (1 part per trillion).

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Effluent Limitations and Monitoring

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| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: A01 Metal Cleaning Waste Treatment System Effluent (DAF = 0.5 MGD)

This discharge consists of: Approximate Flow

1. Boiler and Air Heater, Precipitator, and Economizer Wash Water; (Gas Side Boiler Wash Water) — Intermittent
2. Water Side Boiler Cleaning Water — Intermittent
3. Alternate Route for Demineralizer Regenerant Waste and RO Reject and Cleaning Wastes — Intermittent

| | | | | | | |
|---|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | | Daily | 24 Hour Total |
| Total Suspended Solids | | | 30 | 100 | 2/Week | 24 Hour Composite |
| Oil and Grease | | | 15 | 20 | 2/Week | Grab |
| Iron | | | 1.0 | 1.0 | 2/Week | 24 Hour Composite |
| Copper | | | 0.5 | 1.0 | 2/Week | 24 Hour Composite |

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: 002 Cooling Pond Emergency Overflow (Intermittent Discharge)

| This discharge consists of: | Approximate Flow |
|---|---|
| 1. Condenser Cooling Water | 497 MGD/Unit |
| 2. House Service Water | Intermittent |
| 3. Intermittent Ash Treatment System Effluent (Approximately 15%) | 7.33 MGD |
| 4. Coal Pile Runoff System Effluent | 1.64 MGD |
| 5. West Yard Runoff System Effluent | 1.14 MGD |
| 6. Pond Intake Screen Backwash | Intermittent |
| 7. Boiler Drains | Intermittent |

| | | | | | |
|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | Daily | Estimate |
| pH | See Special Condition 3 | | | Daily | Grab |

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: A02 Coal Pile Runoff Treatment System Effluent (Intermittent Discharge)

This discharge consists of: Approximate Flow

1. Crusher Building Area Runoff — Intermittent
2. East & West Coal Pile Runoff — 2.0 MGD
3. Equipment Building Area Runoff — Intermittent
4. Reclaim Hopper and Car Dumper Sumps — Intermittent
5. Fuel Oil Tank Area Runoff — Intermittent
6. Treated Asbestos Contaminated Stormwater — 1.44 MGD

| | | | | | | |
|---|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | | Daily | 24 Hour Total |
| Total Suspended Solids | | | 15 | 30 | 1/Week | 24 Hour Composite |
| Oil and Grease | | | 15 | 20 | 1/Week | Grab |

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: B02 West Yard Runoff Treatment System Effluent (DAF = 1.14 MGD)

| This discharge consists of: | Approximate Flow |
|---|---|
| 1. West Yard Area Runoff | 0.115 MGD |
| 2. North and South 345kV Switchyard Oil Separator Effluents | 0.377 MGD |
| 3. Oil Tank Area Oil Separator Effluent | 0.205 MGD |
| 4. Crib House Roof and Floor Drains | 0.09 MGD |
| 5. Units 5 and 6 Turbine Room Roof and Floor Drains to Oil Separators | 0.134 MGD |
| 6. Units 1-4 Area Runoff | 0.115 MGD |
| 7. 138kV Switchyard Area Runoff | 0.176 MGD |
| 8. Condenser Pit Oil Separator Effluents | Intermittent |
| 9. Parking Area Runoff | 0.39 MGD |
| 10. Administration Building Roof and Area Drains | Intermittent |

| | | | | | | |
|---|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | | Daily | 24 Hour Total |
| Total Suspended Solids | | | 15 | 30 | 2/Month | 24 Hour Composite |
| Oil and Grease | | | 15 | 20 | 2/Month | Grab |

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: 004 RBC Sewage Treatment Plant Effluent ( DAF = 0.036 MGD)

| | | | | | | |
|---|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | | Continuous | |
| pH | See Special Condition 2 | | | | 1/Week | Grab |
| Total Suspended Solids | 10 | 20 | 30 | 60 | 2/Month | 24 Hour Composite |
| $BOD_5$ | 10 | 20 | 30 | 60 | 2/Month | 24 Hour Composite |
| Total Residual Chlorine | See Special Condition 4 | | | | Daily When Chlorinating | Grab |

NPDES Permit No. IL0002232

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

| | LOAD LIMITS lbs/day DAF (DMF) | | | CONCENTRATION LIMITS mg/l | | | |
|---|---|---|---|---|---|---|---|
| PARAMETER | 30 DAY AVERAGE | DAILY MAXIMUM | | 30 DAY AVERAGE | DAILY MAXIMUM | SAMPLE FREQUENCY | SAMPLE TYPE |

Outfall: 006 Treated Asbestos Contaminated Stormwater (DAF = 1.44 MGD)

| | | | | | |
|---|---|---|---|---|---|
| Flow (MGD) | See Special Condition 1 | | | Weekly When Discharging | Single Reading |
| Asbestos | | | 7 million fibers/L | Weekly When Discharging | Grab |

NPDES Permit No. IL0002232
Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum value on the monthly Discharge Monitoring Report.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. The pH shall be in the range 6.5 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 4. All samples for TRC shall be grab samples and analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

SPECIAL CONDITION 5. This facility is not allowed any mixing with the receiving stream in order to meet applicable water quality thermal limitations. Therefore, discharge of wastewater from this facility must meet the following thermal limitations prior to discharge into the receiving stream.

A. The discharge must not exceed the maximum limits in the following table during more than one percent of the hours in the 12 month period ending with any month. Moreover, at no time shall the water temperature of the discharge exceed the maximum limits in the following table by more than 1.7° C (3° F).

| | Jan. | Feb. | Mar. | April | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| °F | 60 | 60 | 60 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 60 |
| °C | 16 | 16 | 16 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 |

B. In addition, the discharge shall not cause abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.

C. The discharge shall not cause the maximum temperature rise above natural temperatures to exceed 2.8° C (5° F).

D. The monthly maximum value and the excursion hours shall be reported on the DMR form. Excursion hours is defined as the hours in which the temperatures of part A are exceed.

SPECIAL CONDITION 6. Debris collected on river make-up intake screens is prohibited from being discharged back to the pond. Debris does not include living fish or other living aquatic organisms.

SPECIAL CONDITION 7. The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 8. There shall be no discharge of polychlorinated biphenyl compounds

SPECIAL CONDITION 9. The bypass provisions of 40 CFR 122.41(m) and upset provisions of 40 CFR 122.41(n) are hereby incorporated by reference.

SPECIAL CONDITION 10. Samples taken in compliance with the effluent monitoring requirements of outfalls 001, 002, 004 and 006 shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

Samples taken in compliance with the effluent monitoring requirements of outfalls A01, A02 and B02 shall be taken at a point representative of the discharge, but prior to comingling with other wastestreams.

SPECIAL CONDITION 11. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, http://www.epa.state.il.us/water/edmr/index.html.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 28th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using eDMRs shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 12. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. 302.

SPECIAL CONDITION 13. The use or operation of this facility shall be by or under the supervision of a Certified Class k operator.

SPECIAL CONDITION 14. In the event that the permittee shall require a change in the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.

SPECIAL CONDITION 15. In accordance 40 CFR 125.3 it is the Agency's Best Professional Judgment that the intake structure is considered the Best Technology Available for minimizing adverse environmental impact because utilization of a closed-cycle recirculating system was considered the best technology available for minimizing adverse environmental impact under the now remanded rule of 40 CFR 125.94(a)(1)(i). Furthermore, the Illinois River intake structure design intake velocity less is than 0.5 feet per second which was considered the best technology available for minimizing adverse environmental impact under the now remanded rule of 40 CFR 125.94(a)(1)(ii).

In order for the Agency to evaluate the potential impacts of cooling water intake structure operation pursuant to 40 CFR 125.90(b), the permittee shall prepare and submit information to the Agency with the renewal application outlining current intake structure conditions for both the Illinois River and Pond Intake Structures at this facility, including a detailed description of the current intake structure operation and design, description of any operational or structural modifications from original design parameters, source waterbody flow information, or other information as necessary.

Upon the receipt and review of this information, the permit may be modified to require the submittal of additional information based on a Best Professional Judgment review by the Agency. This permit may also be revised or modified in accordance with any laws, regulations, or judicial orders issued pursuant to Section 316(b) of the Clean Water Act.

SPECIAL CONDITION 16. The Permittee shall monitor the effluent from outfall 001 for the following parameters on a semi-annual basis. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted to the address in special condition 11 in June and December. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

| STORET CODE | PARAMETER | Minimum reporting limit |
|---|---|---|
| 01002 | Arsenic | 0.05 mg/L |
| 01007 | Barium | 0.5 mg/L |
| 01022 | Boron | 0.1 mg/L |
| 01027 | Cadmium | 0.001 mg/L |
| 00940 | Chloride | 0.1 mg/L |
| 01032 | Chromium (hexavalent) (grab) | 0.01 mg/L |
| 01034 | Chromium (total) | 0.05 mg/L |
| 01042 | Copper | 0.005 mg/L |
| 00718 | Cyanide (grab) (available * or amendable to chlorination)) | 5.0 ug/L |
| 00720 | Cyanide (grab not to exceed 24 hours) (total) | 5.0 ug/L |
| 00951 | Fluoride | 0.1 mg/L |
| 01045 | Iron (total) | 0.5 mg/L |

| | | |
|---|---|---|
| 01046 | Iron (Dissolved) | 0.5 mg/L |
| 01051 | Lead | 0.05 mg/L |
| 01055 | Manganese | 0.5 mg/L |
| 01067 | Nickel | 0.005 mg/L |
| 00556 | Oil (hexane soluble or equivalent) (Grab Sample only) | 5.0 mg/L |
| 32730 | Phenols (grab) | 0.005 mg/L |
| 01147 | Selenium | 0.005 mg/L |
| 00945 | Sulfate | 0.1 mg/L |
| 01077 | Silver (total) | 0.003 mg/L |
| 01092 | Zinc | 0.025 mg/L |

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

*USEPA Method OIA-1677

SPECIAL CONDITION 17. The discharges identified on pages 2 and 5 of this permit as Bottom Ash and Economizer Ash Sluice Wastewater, Crusher Building Area Runoff, East & West Coal Pile Runoff and Reclaim Hopper and Car Dumper Sumps shall be individually grab sampled on a semi-annual basis. The wastes shall be analyzed for mercury utilizing USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E. The minimum reporting limit shall be one part per trillion. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The results shall be submitted to the address in special condition 11 in June and December.

SPECIAL CONDITION 18. A zone of initial dilution (ZID) is recognized for ammonia, with dimensions of 1.0 feet outward across the river from the point where the canal/ditch receiving the effluent from outfall 004 flows into the Illinois River, and 1.0 feet downstream from this point. Within the ZID 11:1 dilution is afforded. A mixing zone is recognized with dimensions of 1.2 feet outward across the river from the outfall and 1.2 feet downstream from this point. Within the mixing zone 88:1 dilution is afforded.

SPECIAL CONDITION 19. The cooling water prior to entering the plant intake structure and at the discharge into the cooling pond shall be grab sampled once per week at the same time of day within ½ hour of each other between 9:00 a.m. and 3:00 p.m. in a randomized fashion for dissolved oxygen. The results in mg/l and the time of day the influent and effluent sample was taken shall be reported to the Agency as an attachment to the DMR.

SPECIAL CONDITION 20. The Permittee shall monitor East & West Coal Pile Runoff for chloride, iron, manganese, sulfate and pH on a semi-annual basis. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except pH which shall be a grab and the results shall be submitted to the address in special condition 11 in June and December. The minimum reporting limits to be attained are listed in Special Condition 16.