

NPDES Permit No. IL0076996  
Notice No. KPM:20060801.docx

Public Notice Beginning Date: **October 22, 2021**

Public Notice Ending Date: **November 22, 2021**

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 Discharger:

Prairie State Generating Company LLC  
3872 County Hwy. 12  
Marissa, Illinois 62257

Name and Address of Facility:

Prairie State Generating Company LLC  
3872 County Hwy. 12  
Marissa, Illinois 62257  
(Washington 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 Keegan MacDonna at 217/782-0610.

The applicant is engaged in operating a 1,600 megawatt pulverized coal power plant (SIC 4911). Plant operation results in an average discharge of 1.395 MGD of cooling tower blowdown from outfall 001, an emergency discharge of raw water impoundment emergency overflow from outfall 003, 0.009 MGD of treated sanitary from internal outfall A03, an intermittent discharge of recycle basin water from internal outfall B03, 0.432 MGD of coal/limestone basin water from internal outfall C03, 0.881 MGD of plant runoff basins 1A and 1B water from internal outfall D03, 0.383 MGD of west sedimentation pond water from internal outfall E03, 0.05 MGD of pumped mine water from internal outfall F03, an emergency discharge of coal/limestone basin emergency overflow from outfall 005, an emergency discharge of plant runoff basins 1A and 1B emergency overflow from outfall 006, an emergency discharge of cooling tower basin emergency overflow from internal outfall A06, an emergency discharge of recycle basin emergency overflow from internal outfall B06, an intermittent discharge of stormwater runoff pond water from outfall 007, an emergency discharge of west sedimentation pond emergency overflow from outfall 008, an intermittent discharge of stormwater runoff from outfall 009.

The following modification is proposed:

Two new wastestreams with two new outfalls were proposed in the renewal application: an emergency discharge of newly constructed southwest sedimentation pond emergency overflow from outfall 010 and an emergency discharge of proposed northeast sedimentation pond emergency overflow from outfall 011. Internal outfalls for pumping water from the new sedimentation ponds to the raw water impoundment were added, outfalls G03 and H03.

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

Outfall	Receiving Stream	Latitude	Longitude	Stream Classification	Integrity Rating
001	Kaskaskia River	38° 16' 09" North	89° 55' 02" West	General Use	Not Rated
003	Unnamed Tributary to Mud Creek	38° 16' 32" North	89° 40' 30" West	General Use	Not Rated
005	Unnamed Tributary to Mud Creek	38° 16' 54" North	89° 40' 28" West	General Use	Not Rated
006	Unnamed Tributary to Mud Creek	38° 16' 05" North	89° 39' 42" West	General Use	Not Rated
007	Unnamed Tributary to Mud Creek	38° 16' 21" North	89° 40' 30" West	General Use	Not Rated
008	Unnamed Tributary to Mud Creek	38° 16' 22" North	89° 41' 07" West	General Use	Not Rated
009	Unnamed Tributary to Mud Creek	38° 16' 18" North	89° 40' 39" West	General Use	Not Rated
010	Unnamed Tributary to Mud Creek	38° 16' 32" North	89° 42' 04" West	General Use	Not Rated
011	Unnamed Tributary to Mud Creek	38° 17' 16" North	89° 40' 50" 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 001 is on the 2018 303(d) list of impaired waters and is not a biologically significant stream on the 2008 Illinois Department of the Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*.

Designated Use

Aquatic Life, Public and Food Processing Water Supply, and Fish Consumption

Potential Cause

Alteration in Stream-Side Vegetative Cover, Cause Unknown, Changes in Water Depth and Velocity Patterns, Flow Alteration-Changes in Depth and Flow Velocity, Loss of Instream Cover, Low Flow Alterations, Dissolved Oxygen, Sedimentation/Siltation, Atrazine, and Mercury

The stream segment receiving the discharge from outfalls 003 and 005 - 011 is not on the 2018 303(d) list of impaired waters and is not a biologically significant stream on the 2008 Illinois Department of the Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*.

The discharges from the facility shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
<u>Outfall 001:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Temperature						35 IAC 302.211
Total Residual Chlorine					0.038	40 CFR 125.3 & 35 IAC 302.208
Total Suspended Solids				15	30	35 IAC 304.124

Chromium (Total)				0.2	0.2	40 CFR 423
	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
<u>Outfall 001 cont.:</u>						
Zinc				1	1	40 CFR 423
126 Priority Pollutants				No Detectable Amount		40 CFR 423
Manganese				1	2	35 IAC 304.124
Chloride					500	35 IAC 302.208
Mercury					12 ng/L*	35 IAC 302.208
Ammonia						35 IAC 302.212
Mar-May, Sep-Oct					7.6	
Jun-Aug					10.1	
Nov-Feb					6.9	
Fluoride				Monitor Only		
Lead				Monitor Only		
Silver				Monitor Only		
*On a 12-month rolling average						
<u>Outfall 003:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Suspended Solids				15	30	35 IAC 304.124
Iron (Total)				2	4	35 IAC 304.124
Oil/Grease				15	30	35 IAC 304.124
<u>Outfall A03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
BOD <sub>5</sub>	4.4	9.8	35 IAC 304.120	30	60	35 IAC 304.120
Total Suspended Solids	4.4	9.8	35 IAC 304.120	30	60	35 IAC 304.120
Fecal Coliform				Monitor Only		
<u>Outfall B03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Residual Chlorine					0.2	40 CFR 423
Total Suspended Solids				30	100	40 CFR 423
Oil/Grease				15	20	40 CFR 423
Chromium (Total)				0.2	0.2	40 CFR 423
Zinc				1	1	40 CFR 423

126 Priority Pollutants				No Detectable Amount	40 CFR 423	
Boron				Monitor Only		
	LOAD LIMITS lbs/day DAF (DMF)			CONCENTRATION LIMITS mg/L		
PARAMETER	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION	30 DAY AVERAGE	DAILY MAXIMUM	REGULATION
<u>Outfall B03 cont.:</u>						
Iron (Total)				Monitor Only		
Ammonia				Monitor Only		
<u>Outfall C03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Suspended Solids					50	40 CFR 423
Boron				Monitor Only		
<u>Outfall D03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Suspended Solids				30	100	40 CFR 423
Oil/Grease				15	20	40 CFR 423
Boron				Monitor Only		
<u>Outfall E03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		
Iron (Total)				Monitor Only		
SWPPP						

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
<u>Outfall F03:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Suspended Solids				Monitor Only		
Iron (Total)				Monitor Only		
<u>Outfall G03:</u>						
Flow (MGD)						
pH				Monitor Only		
TSS				Monitor Only		
<u>Outfall H03:</u>						
Flow (MGD)						
pH				Monitor Only		
TSS				Monitor Only		
<u>Outfall 005:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Suspended Solids				15	30	35 IAC 304.124
Boron				Monitor Only		
Manganese				Monitor Only		
Sulfate				Monitor Only		
Chloride				Monitor Only		
Mercury				Monitor Only		
<u>Outfall 006:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Temperature				Monitor Only		
Total Residual Chlorine				Monitor Only		
Total Suspended Solids				Monitor Only		
Oil/Grease				Monitor Only		
Mercury				Monitor Only		

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		REGULATION	CONCENTRATION LIMITS mg/L		REGULATION
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
<u>Outfall A06:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		
Total Residual Chlorine					0.2	40 CFR 423
Total Suspended Solids				12	24	40 CFR 122.44L
Chromium (Total)				0.2	0.2	40 CFR 423
Zinc				1	1	40 CFR 423
126 Priority Pollutants				No Detectable Amount		40 CFR 423
Fluoride				Monitor Only		
Chloride				Monitor Only		
Cadmium				Monitor Only		
Copper				Monitor Only		
Lead				Monitor Only		
Nickel				Monitor Only		
Silver				Monitor Only		
Ammonia				Monitor Only		
<u>Outfall B06:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		35 IAC 304.125
Total Residual Chlorine					0.2	40 CFR 423
Total Suspended Solids				15	30	35 IAC 304.124
Oil/Grease				15	20	40 CFR 423
Chromium (Total)				0.2	0.2	40 CFR 423
Zinc				1	1	40 CFR 423
126 Priority Pollutants				No Detectable Amount		40 CFR 423
Iron (Total)				Monitor Only		
Ammonia				Monitor Only		
<u>Outfall 007:</u>						
SWPPP						

PARAMETER	LOAD LIMITS lbs/day		REGULATION	CONCENTRATION		REGULATION
	DAF (DMF)			LIMITS mg/L		
	30 DAY AVERAGE	DAILY MAXIMUM		30 DAY AVERAGE	DAILY MAXIMUM	
<u>Outfall 008:</u>						
Flow (MGD)						
pH				6 – 9 s.u.		
Iron (Total)				Monitor Only		
SWPPP						
<u>Outfall 009:</u>						
SWPPP						
<u>Outfall 010:</u>						
Flow						
pH				6 – 9 s.u.		35 IAC 304.125
TSS				15	30	35 IAC 304.124
SWPPP						
<u>Outfall 011:</u>						
Flow						
pH				6 – 9 s.u.		35 IAC 304.125
TSS				15	30	35 IAC 304.124
SWPPP						

Load Limit Calculations:

A. Load limit calculations for the following pollutant parameters were based on a design average flow of 0.0175 MGD and a design maximum flow of 0.0195 MGD and using the formula of average or maximum flow (MGD) X concentration limit (mg/l) X 8.34 = the average or maximum load limit (lbs/day): BOD<sub>5</sub> and Total Suspended Solids.

The load limits appearing in the permit will be the more stringent of the State and Federal Guidelines.

A Reasonable Potential Analysis performed by the Agency found that there is no potential to exceed water quality standards for the following parameters, so the associated monitoring requirements have been removed from the permit:

Outfall  
001  
003

Removed Parameters  
Cadmium, Copper, Nickel, Sulfate  
Chloride, Manganese, Mercury, Sulfate

006  
008

Boron, Manganese, Sulfate  
Chloride, Manganese, Sulfate

Monitoring requirements for the removed parameters were also removed from internal outfalls associated with outfalls listed above (e.g. Outfalls B03, C03, D03, E03, and F03). All removed parameters were previously monitor only, so no numerical limits were removed from the permit.

The TRC limit of 0.038 at Outfall 001 is based on a recommendation from USEPA to limit TRC to no greater than the final acute value in the water quality standard. Previously used test methods had a detection level of 0.1 mg/L, but USEPA has recommended the Test Method 4500-Cl E. Low-Level Amperometric Titration Method, which can detect chlorine at concentrations as low as 10 µg/L. TRC limits on internal outfalls are based on federal categorical limits.

Limits were added for ammonia and mercury at Outfall 001 based on the results of a Reasonable Potential Analysis performed by the Agency, which showed a reasonable potential to exceed water quality standards for those parameters. The ammonia limits reflect the seasonal acute water quality standards with no mixing allowance, and the mercury limit is based on the human health water quality standard for mercury. There is no mixing allowance for ammonia because the facility has not demonstrated that a Zone of Initial Dilution is available.

Technology-Based effluent limitations for the waste streams tributary to Outfalls A03, B03, C03, and D03 have been applied at those discharge locations, because the wastewater at the point of discharge of Outfall 003 from the Raw Water Impoundment is diluted to a degree that it is impractical to apply the limits there. Additionally, the mixing of the various waste streams in the Raw Water Impoundment and the addition of intake water from the Kaskaskia River would make it impossible to verify that each internal outfall is meeting its associated technology-based effluent standards.

As part of the permit renewal application, Prairie State Generating Company requested altered sample frequencies for multiple parameters at multiple outfalls. Most of the sample frequencies were maintained at their current rates. The following sample frequencies have been changed in the permit based on submitted DMR data over the last five years:

<u>Outfall</u>	<u>Parameter</u>	<u>Previous Sample Frequency</u>	<u>New Sample Frequency</u>
001	Chromium, Manganese, Zinc	1/Week	1/Month
001	Fluoride, Lead, Silver	1/Month	1/Quarter

Prairie State Generating Company also requested the removal of the biweekly monitoring requirement for biological monitoring for entrainment in the cooling water intake structure outlined in Special Condition 23. The regulations in 40 CFR 125.87, which dictates the requirement for biological monitoring, does not include a condition allowing the removal of biological monitoring requirements. However, the monitoring frequency may be reduced if the permittee has performed biological monitoring for at least two years, if the supporting data shows that less frequent monitoring would allow for the detection of seasonal and daily variations in the species and numbers of individuals that are entrained. Prairie State Generating Company has performed biweekly monitoring for more than two years without showing adverse effects to the environment as a result of entrainment, so the monitoring rate has been reduced to quarterly in Special Condition 23.A.2.

The following explain the conditions of the proposed permit:

The Special Conditions clarify flow monitoring and reporting, pH, temperature, total residual chlorine, monitoring location, discharge monitoring report submission, re-opener, certified operator, water treatment additives, mercury, stormwater, no fly ash transport water, no PCBs, no complexed metal bearing wastestreams, no discharge of intake debris, 126 priority pollutants, stormwater only at outfall 007, water quality standards, non-contact cooling water only at outfalls 001 and A06, emergency use only (outfalls 003, 005, 006, A06, B06, 008, 010, and 011), internal outfall monitoring, intake water withdrawal, cooling water intake structure monitoring, and non-contact stormwater and groundwater seepage only at outfall 008.

The facility's design of the cooling water intake structure affords Best Technology Available (BTA) pursuant to Section 316(b) of the CWA. Special Condition 23 contains the cooling water intake structure monitoring requirements. Nothing in the permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

**Antidegradation Assessment – Proposed Outfalls 010 and 011  
NPDES Permit No. IL0076996**

The subject facility has applied for a modified NPDES permit for two new outfalls in Lively Grove Township, Washington County, Illinois. The facility operates an energy campus that includes a power plant, coal mine, and an adjacent on-site landfill (Near Field). Construction of the Near Field has led to the need for additional stormwater ponds.

The facility is proposing the addition of two ponds, one in the southwest part of the facility and one in the northeast part. Both ponds are similar in use and discharge to the same receiving stream. The proposed stormwater ponds are identified with proposed Outfall



010 at the southwest pond and Proposed Outfall 011 at the northeast pond. These ponds are needed for buildout of the landfill facility which is needed for future operation of the power plant. Runoff that will be directed to the proposed ponds will be from the capped and seeded cover of the landfill facility and pumped back to the raw water impoundment of the power plant for reuse.

Information used in this review was obtained from the antidegradation assessment dated May 17, 2021.

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

Outfalls 010 and 011 would discharge to a General Use unnamed tributary of Mud Creek at a point where 0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The unnamed tributary of Mud Creek is not listed as biologically significant in the Illinois Department of Natural Resources publication *Integrating Multiple Taxa in a Biological Stream Rating System* or given an integrity rating in that document. The unnamed tributary of Mud Creek (tributary to IL\_OE-02) is not listed on the 2018 Illinois Integrated Water Quality Report and Section 303(d) List, because it has not been assessed. The unnamed tributary of Mud Creek is not subject to enhanced dissolved oxygen standards.

The USGS Illinois Streamstats basin characteristics program gives a watershed size of 4.14 and 0.3 square miles for Outfalls 010 and 011 respectively at the discharge point on the unnamed tributary of Mud Creek. According to the Illinois State Water Survey, the unnamed tributary of Mud Creek in the area of the proposed discharge is likely to be 7Q1.1 zero flow streams. In this region of Illinois, 7Q1.1 zero flow streams are streams with a watershed area of 5 square miles or less. These streams will exhibit no flow for at least a continuous seven day period nine out of ten years. Aquatic life communities in these headwater streams are tolerant of the effects of drying. Depending on the rainfall received before biological surveys, either a very limited aquatic life community, or no community at all would be found. Given this flow regime, no additional biological characterization is required.

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

The stormwater runoff of the proposed effluent from Outfall 010 and Outfall 011 would be characteristically similar. Outfall 010 and Outfall 011 would discharge to the unnamed tributary of Mud Creek. The proposed locations for the stormwater ponds are each part of historically agricultural use land. Property not currently utilized has been converted from crop production land to pasture and is being mowed for hay.

The ponds will be able to provide containment for a 10-year 24-hour storm event and have a pumping system to return water to the power plant for reuse. A discharge could occur if the 10-year 24-hour storm is exceeded.

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

Stormwater runoff will exit from the capped and seeded landfill cover. This landfill consists of a synthetic liner with slopes covered in soil and planted with a pasture mix. No process water or water that has been in contact with Coal Combustion Residuals (CCR) will enter either proposed pond. Process water from the landfill does not contact stormwater due to use of a synthetic liner and compacted clay as well as a collection system. The installed collection system consists of piping across the landfill cells and sumps to pump water back to the north and west leachate ponds. The design and proposed pumping stations of the stormwater ponds will result in infrequent discharges from the ponds with minimal receiving stream impacts.

Runoff from the historically agricultural areas can potentially be impacted by nutrient and suspended solids increases during storm events.

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

The proposed ponds are necessary for development of the landfill facility which is need for future power plant operation. This new facility will allow the existing work force to continue employment into the future.

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

The facility has reviewed the following alternatives:

Option 1 (Proposed Plan)– The current plan to install pumps to return water from the ponds to the power plant raw water impoundment is advantageous in that the design includes minimization of the number of discharges from the pond that may occur. This returned water would be used for make-up water for the water treatment facility and ultimately for make-up water in the power plant cooling system.

Option 2– The Marissa STP is 5 miles from the proposed site, but due to the need to transport accumulated water from the site to the town, an agreement would need to be made with the community to accept the water from the facility. The alternative was proven to be unacceptable due to coordination and cost.

Option 3 – Land application was reviewed as an alternative as there is available land on site for water application. This option was deemed unacceptable due to the ability of applied water to run off site along with accumulated stormwater during periods of excess precipitation.

Option 4 – Removal of the pumping systems proposed for the ponds were reviewed but would result in more frequent discharges. The unnamed tributary to Mud Creek is an intermittent stream and discharges from the proposed ponds could make up a large portion of its flow at certain times of the year. Because the power plant has a need for make-up water and it is more economically feasible to pump from the two proposed ponds than the more distant Kaskaskia River, this option was deemed unacceptable.

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

On May 8, 2021 the Applicant submitted a consultation request to IDNR's EcoCAT program. The review concluded that protected resources may be in the vicinity of the proposed action. The Department evaluated this information and conclude that adverse effects are unlikely. The consultation was terminated on May 18, 2021.

### **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 this assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards. 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. This activity will benefit the community by allowing future operation of the power plant and continued employment of the existing work force. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.

### **Antidegradation Assessment – Allowed Mixing for Thermal Discharges NPDES Permit No. IL0076996**

The facility has a DAF of 1.395 MGD. During occasional periods when the ambient air temperature is unseasonably high, particularly in the transition months of December when the water quality standards decrease from 90 °F to 60 °F and March when the water quality standards have not yet increase to 90 °F, PSGC may have difficulty consistently meet the thermal water quality standard at Outfall 001. PSGC may also have difficulty consistently meeting the temperature limit at Outfall 001 during the month of February and August. The subject facility is proposing to take advantage of the mixing that is currently available in order to increase the end-of-pipe thermal limits for the following months:

February – 61 °F  
March – 62 °F  
August – 92 °F  
December – 65 °F

The remaining months will be limited at the water quality standard at the end of the pipe. The thermal water quality standards will be met outside of allowed mixing.

The Kaskaskia River provides make-up water primary for the non-contact cooling systems of the two electric generating units. This water is pumped through the condensers of each unit and then through cooling towers prior to recirculation back through the condensers. After a number of cycles through this path, some of this water is blown down to a basin located on the plant site. This cooling tower blowdown is then pumped from the blowdown basin 14.2 miles where it is discharged to the Kaskaskia River.

Water withdrawal from the Kaskaskia River has been minimized by a factor of approximately 40 through the use of a non-contact recirculating cooling water system. In addition, PSGC collects storm water runoff across the campus for reuse in plant systems to minimize water withdrawal from the Kaskaskia River.

The information in this antidegradation assessment came from the September 2018 antidegradation assessment report titled "Thermal Mixing Zone Request for Outfall 001" and supplemental information titled "Request for A Thermal Mixing Zone for Outfall 001" received on April 16, 2021.

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

The subject facility discharges to the Kaskaskia River via Outfall 001 at a point where 94.0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Kaskaskia River is classified as a General Use Water. The Kaskaskia 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 in that document. The Kaskaskia River, Waterbody Segment, O-03, is listed on

the draft 2018 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use with potential causes given as alteration in stream-side or littoral vegetative cover (non-pollutant), dissolved oxygen, flow alteration-changes in depth and flow velocity, loss of instream cover (non-pollutant), low flow alterations (non-pollutant), and sedimentation/siltation, fish consumption use with potential cause given as mercury, and public and food processing water supply with potential cause given as atrazine. Aesthetic quality use is fully supported. This segment of the Kaskaskia River is not subject to enhanced dissolved oxygen standards.

On November 2, 2001, IDNR biologists conducted a mussel survey at the Kaskaskia Regional Port District fleeting sites at Kaskaskia River mile 10.0, and 18.0 in Randolph County and mile 35.0 in St. Clair County. The exploratory survey resulted in the collection of 27 live mussels representing six species (three-ridge, rock-pocketbook, white heelsplitter, giant floater, mapleleaf, and fragile papershell) and a freshly dead individual of a seventh species (pink papershell).

During the summers of 2002-2006, IDNR sampled the Kaskaskia River mainstem and some tributaries. The results determined that "the Kaskaskia River mainstem sites were depauperate in terms of mussel diversity...Mussel species richness in the Kaskaskia River basin appears to be related more to habitat and substrate quality, and to a lesser degree the diversity of glochidial fish hosts, that it is to the sheer amount of living space".

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

The facility is proposing to increase the existing thermal loading to the receiving stream in the months February, March, August, and December.

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

The additional thermal loading will dissipate as it mixes with the receiving stream and moves downstream.

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

Raising the permitted temperature limits for Outfall 001 will allow PSGC to continuously discharge water through Outfall 001 thereby facilitating continuous operation of the generating units. Inability to discharge water during plant operation could require reducing power plant output and/or temporary cessations of operations.

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

The PSGC facility has changed the physical location for cooling tower blow down water withdrawal which has resulted in lower blow down temperatures.

PSGC considered adding cooler water from the raw water pond to the cooling tower basin prior to discharge. However, the total suspended solids content of this water, coming from the Kaskaskia River, frequently exceeds the Outfall 001 NPDES effluent limits. This would require treating the water prior to adding it to the cooling tower basin; an effort that is not without environmental impact as well as cost. For example, there would be additional energy usage and potentially chemical usage simply to address physical and chemical constituents that are already present in the Kaskaskia River. Additionally, the ambient temperature of the Kaskaskia River water may not be that much cooler during the key months of December and March when PSGC is experiencing the majority of the issues, if ambient air temperature is not cool enough to drop the water temperature sufficiently to lower the cooling tower blowdown basin water temperature. Additionally, the PSGC facility has been designed and constructed to conserve water. Storm water is collected and used to augment cooling water make-up. Cooling towers were installed and are operated in a manner to maximize water recycling in lieu of a once-through cooling system.

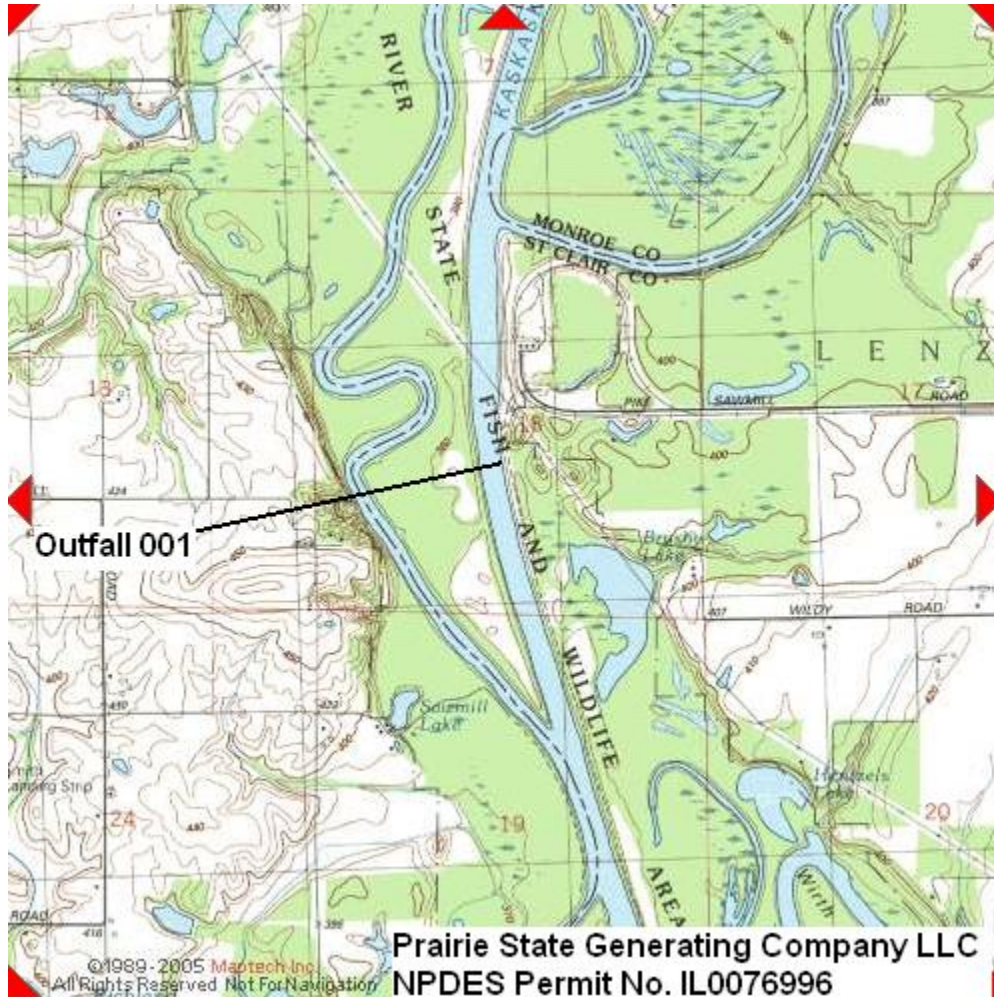
Construction of an additional cooling tower(s) is another alternative that could be considered; however, this would be a very expensive alternative to address this issue which occurs very infrequently when ambient air temperatures are higher than normal and mixing zones are allowed to be utilized under 35 Ill. Adm. Code 302.102. A mixing zone could have been requested when the initial NPDES permit application was submitted, however, PSGC believed the 14-mile long underground pipeline would offer some cooling effect on the discharge water but this has not proven the case.

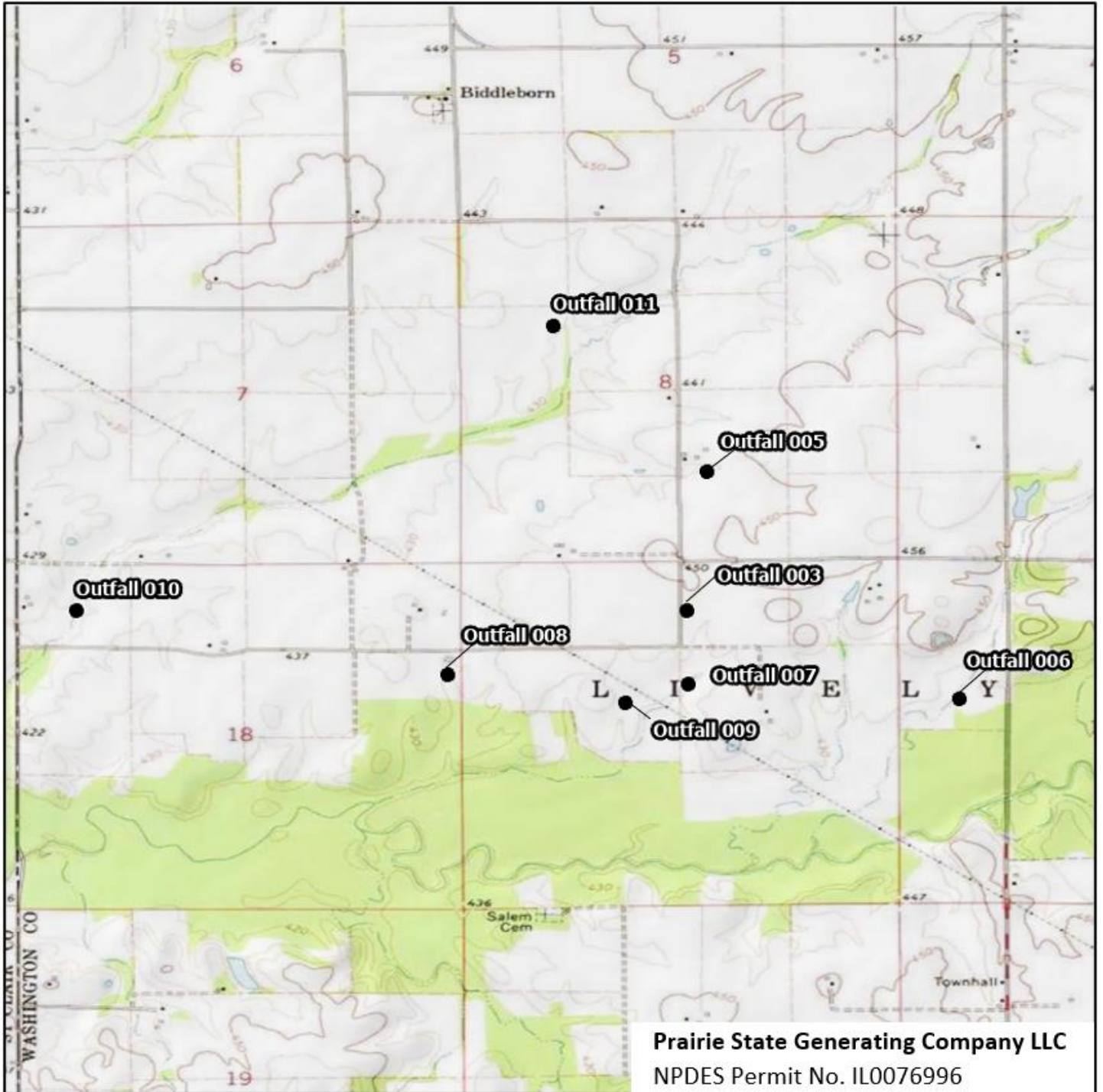
#### **Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.**

On June 25, 2018, the IDNR EcoCAT web-based tool was used (IDNR Project Number: 1812277) and indicated that there were no endangered/threatened species present in the vicinity of the discharge. The IDNR EcoCAT web-based tool terminated the consultation. On February 26, 2021, the IDNR EcoCAT web-based tool was used to resubmit the project (IDNR Project Number: 2110912) and indicated that there were no endangered/threatened species present in the vicinity of the discharge. The IDNR EcoCAT web-based tool terminated the 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 PSGC to continuously discharge water through Outfall 001 thereby facilitating continuous operation of the generating units and providing jobs and dependable electricity. Comments received during the NPDES permit public notice period will be evaluated before a final decision is made by the Agency.





Public Notice of Draft Permit

Public Notice Number KPM:20060801.docx 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 IL0076996 has been prepared under 40 CFR 124.6(d) for Prairie State Generating Company LLC, 3872 County Hwy. 12, Marissa, Illinois 62257 for discharge into the Kaskaskia River and the unnamed tributary to Mud Creek from the Prairie State Generating Company LLC, 3872 County Hwy. 12, Marissa, Illinois 62257 (Washington County). The applicant is engaged in operating a 1,600 mega watt pulverized coal power plant (SIC 4911). Plant operation results in an average discharge of 1.395 MGD of cooling tower blowdown from outfall 001, an emergency discharge of raw water impoundment emergency overflow from outfall 003, 0.009 MGD of treated sanitary from internal outfall A03, an intermittent discharge of recycle basin water from internal outfall B03, 0.432 MGD of coal/limestone basin water from internal outfall C03, 0.881 MGD of plant runoff basins 1A and 1B water from internal outfall D03, 0.383 MGD of west sedimentation pond water from internal outfall E03, 0.05 MGD of pumped mine water from internal outfall F03, an emergency discharge of coal/limestone basin emergency overflow from outfall 005, an emergency discharge of plant runoff basins 1A and 1B emergency overflow from outfall 006, an emergency discharge of cooling tower basin emergency overflow from internal outfall A06, an emergency discharge of recycle basin emergency overflow from internal outfall B06, an intermittent discharge of stormwater runoff pond water from outfall 007, an emergency discharge of west sedimentation pond emergency overflow from outfall 008, an intermittent discharge of stormwater runoff from outfall 009, an emergency discharge of southwest sedimentation pond emergency overflow from outfall 010, and an emergency discharge of northeast sedimentation pond emergency overflow from outfall 011.

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 permit, stating their name and address, the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to these issues in the hearing. Such requests must be received by the Agency not later than 30 days from the date of this publication.

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.

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NPDES Permit No. IL0076996

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:

Facility Name and Address:

Prairie State Generating Company LLC  
3872 County Hwy. 12  
Marissa, Illinois 62257

Prairie State Generating Company LLC  
3872 County Hwy. 12  
Marissa, Illinois 62257  
(Washington County)

Discharge Number and Name:

Receiving Waters:

001 Cooling Tower Blowdown  
003 Raw Water Impoundment Emergency Overflow  
A03 Treated Sanitary  
B03 Recycle Basin  
C03 Coal/Limestone Basin  
D03 Plant Runoff Basins 1A and 1B  
E03 West Sedimentation Pond  
F03 Pumped Mine Water  
005 Coal/Limestone Basin Emergency Overflow  
006 Plant Runoff Basins 1A and 1B Emergency Overflow  
A06 Cooling Tower Basin Emergency Overflow  
B06 Recycle Basin Emergency Overflow  
007 Stormwater Runoff Pond  
008 West Sedimentation Pond Emergency Overflow  
009 Stormwater Runoff  
010 Southwest Sedimentation Basin Emergency Overflow  
011 Northeast Sedimentation Basin Emergency Overflow

Kaskaskia River  
Unnamed Tributary to Mud Creek  
  
  
  
  
  
  
  
Unnamed Tributary to Mud Creek  
Unnamed Tributary to Mud Creek  
  
  
  
  
Unnamed Tributary to Mud Creek  
Unnamed Tributary to Mud Creek  
Unnamed Tributary to Mud Creek  
Unnamed Tributary to Mud Creek  
Unnamed Tributary to Mud Creek

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.

Darin E. LeCrone, P.E.  
Manager, Permit Section  
Division of Water Pollution Control

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Outfall 001 – Cooling Tower Blowdown* (Average Flow = 1.395 MGD)						
Flow (MGD)	See Special Condition 1.				Daily	Continuous
pH	See Special Condition 2.				1/Week	Grab
Temperature	See Special Condition 3.				Daily	Continuous
Total Residual Chlorine	See Special Condition 4.			0.038	1/Week	Grab
Total Suspended Solids			15	30	1/Week	Grab
Chromium (Total)			0.2	0.2	1/Month	Grab
Zinc			1	1	1/Month	Grab
126 Priority Pollutants	See Special Condition 16.				1/Year	Grab
Manganese			1	2	1/Month	Grab
Chloride				500	1/Month	Grab
Mercury	See Special Condition 10.			12 ng/L**	1/Month	Grab
Ammonia (as N) Mar-May, Sep-Oct Jun-Aug Nov-Feb				7.6 10.1 6.9	1/Week	Grab
Fluoride			Monitor Only		1/Quarter	Grab
Lead			Monitor Only		1/Quarter	Grab
Silver			Monitor Only		1/Quarter	Grab
* - See Special Condition 19. ** - On a 12-month rolling average.						



Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<b>Outfall 003 – Raw Water Impoundment Emergency Overflow**</b> (Emergency Overflow)  The discharge consists of: <ol style="list-style-type: none"> <li>1. Treated Sanitary Water (A03)</li> <li>2. Recycle Basin (B03)</li> <li>3. Coal/Limestone Basin (C03)</li> <li>4. Plant Runoff Basins 1A and 1B (D03)</li> <li>5. West Sedimentation Pond (E03)</li> <li>6. Pumped Mine Water (F03)****</li> <li>7. Stormwater Runoff***</li> <li>8. Southwest Sedimentation Basin (G03)</li> <li>9. Northeast Sedimentation Basin (H03)</li> </ol>						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Suspended Solids			15	30	Daily*	Grab
Iron (Total)			2	4	Daily*	Grab
Oil/Grease			15	30	Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Condition 20. *** - See Special Condition 11. **** - From the Lively Grove Coal Mine NPDES Permit No. IL0077526.						
<b>Outfall A03 – Treated Sanitary*</b> (DAF = 0.0175 MGD)						
Flow (MGD)	See Special Condition 1.				Measure When Monitoring	Measure
pH	See Special Condition 2.				1/Month	Grab
BOD <sub>5</sub>	4.4	9.8	30	60	1/Month	Grab
Total Suspended Solids	4.4	9.8	30	60	1/Month	Grab
Fecal Coliform			Monitor Only		1/Month	Grab
* - See Special Condition 21.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<p><u>Outfall B03 – Recycle Basin**</u> (Intermittent Discharge)</p> <p>The discharge consists of:</p> <ol style="list-style-type: none"> <li>1. Raw Water Impoundment (003)</li> <li>2. Coal Combustion Waste Area Sump</li> <li>3. Miscellaneous Sump Water</li> <li>4. Cooling Tower Blowdown (001)</li> <li>5. Oil/Water Separator Effluent</li> <li>6. Polisher Regeneration Water</li> <li>7. Stormwater Runoff*</li> </ol>						
Flow (MGD)	See Special Condition 1.				Measure When Monitoring	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Residual Chlorine	See Special Condition 4.			0.2	1/Month	Grab
Total Suspended Solids			30	100	1/Month	Grab
Oil/Grease			15	20	1/Month	Grab
Chromium (Total)			0.2	0.2	1/Month	Grab
Zinc			1	1	1/Month	Grab
126 Priority Pollutants	See Special Condition 16.				1/Year	Grab
Boron			Monitor Only		1/Quarter	Grab
Iron (Total)			Monitor Only		1/Quarter	Grab
Ammonia			Monitor Only		1/Quarter	Grab
<p>* - See Special Condition 11. ** - See Special Condition 21.</p>						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<b>Outfall C03 – Coal/Limestone Basin**</b> (Average Flow = 0.432 MGD)  The discharge consists of: 1. Stormwater Runoff* 2. Coal Combustion Waste Loading Area Runoff						
Flow (MGD)	See Special Condition 1.				Measure When Monitoring	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Suspended Solids				50	1/Month	Grab
Boron			Monitor Only		1/Quarter	Grab
* - See Special Condition 11. ** - See Special Condition 21.						
<b>Outfall D03 – Plant Runoff Basin 1A and 1B**</b> (Average Flow = 0.881 MGD)  The discharge consists of: 1. Stormwater Runoff* 2. Cooling Tower Basin Emergency Overflow (A06) 3. Recycle Basin Emergency Overflow (B06)						
Flow (MGD)	See Special Condition 1.				Measure When Monitoring	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Suspended Solids			30	100	1/Month	Grab
Oil/Grease			15	20	1/Month	Grab
Boron			Monitor Only		1/Quarter	Grab
* - See Special Condition 11. ** - See Special Condition 21.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<u>Outfall E03 – West Sedimentation Pond*</u> (Average Flow = 0.383 MGD)						
The discharge consists of:						
1. Non-Contact Stormwater Runoff						
2. Groundwater Seepage						
Flow (MGD)	See Special Condition 1.				1/Month	Measure
pH	See Special Condition 2.				1/Month	Grab
Iron (Total)			Monitor Only		1/Month	Grab
* - See Special Conditions 11 and 21.						
<u>Outfall F03 – Pumped Mine Water*</u> (Average Flow = 0.05 MGD)						
Flow (MGD)	See Special Condition 1.				1/Month	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Suspended Solids			Monitor Only		1/Month	Grab
Iron (Total)			Monitor Only		1/Month	Grab
* - See Special Condition 21.						
<u>Outfall G03 – Southwest Sedimentation Basin*</u> (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1.				1/Month	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Suspended Solids			Monitor Only		1/Month	Grab
* - See Special Condition 21.						
<u>Outfall H03 – Northeast Sedimentation Basin*</u> (Intermittent Discharge)						
Flow (MGD)	See Special Condition 1.				1/Month	Measure
pH	See Special Condition 2.				1/Month	Grab
Total Suspended Solids			Monitor Only		1/Month	Grab
* - See Special Condition 21.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<b>Outfall 005 – Coal /Limestone Basin Emergency Overflow**</b> (Emergency Overflow)  The discharge consists of: 1. Stormwater Runoff*** 2. Coal Combustion Waste Loading Area Runoff						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Suspended Solids			15	30	Daily*	Grab
Boron			Monitor Only		Daily*	Grab
Manganese			Monitor Only		Daily*	Grab
Sulfate			Monitor Only		Daily*	Grab
Chloride			Monitor Only		Daily*	Grab
Mercury	See Special Condition 10.		Monitor Only		Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Condition 20. *** - See Special Condition 11.						
<b>Outfall 006 – Plant Runoff Basins 1A and 1B Emergency Overflow**</b> (Emergency Overflow)  The discharge consists of: 1. Stormwater Runoff*** 2. Cooling Tower Basin Emergency Overflow (A06) 3. Recycle Basin Emergency Overflow (B06)						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Temperature			Monitor Only		Daily*	Grab
Total Residual Chlorine	See Special Condition 4.		Monitor Only		Daily*	Grab
Total Suspended Solids			Monitor Only		Daily*	Grab
Oil/Grease			Monitor Only		Daily*	Grab
Mercury	See Special Condition 10.			12 ng/L****	Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Condition 20. *** - See Special Condition 11. **** On a 12-month rolling average.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<u>Outfall A06</u> – Cooling Tower Basin Emergency Overflow** (Emergency Overflow)						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Residual Chlorine	See Special Condition 4.			0.2	Daily*	Grab
Total Suspended Solids			12	24	Daily*	Grab
Chromium (Total)			0.2	0.2	Daily*	Grab
Zinc			1	1	Daily*	Grab
126 Priority Pollutants	See Special Condition 16.				Daily*	Grab
Fluoride			Monitor Only		Daily*	Grab
Chloride			Monitor Only		Daily*	Grab
Cadmium			Monitor Only		Daily*	Grab
Copper			Monitor Only		Daily*	Grab
Lead			Monitor Only		Daily*	Grab
Nickel			Monitor Only		Daily*	Grab
Silver			Monitor Only		Daily*	Grab
Ammonia			Monitor Only		Daily*	Grab
Mercury	See Special Condition 10.		Monitor Only		Daily*	Grab
* - When Discharging.						
** - This outfall is for emergency discharge only. See Special Condition 19 and 20.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<b>Outfall B06 – Recycle Basin Emergency Overflow**</b> (Emergency Overflow)  The discharge consists of: 1. Raw Water Impoundment (003) 2. Coal Combustion Waste Area Sump 3. Miscellaneous Sump Water 4. Cooling Tower Blowdown (001) 5. Oil/Water Separator Effluent 6. Polisher Regeneration Water 7. Stormwater Runoff***						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Residual Chlorine	See Special Condition 4.			0.2	Daily*	Grab
Total Suspended Solids			15	30	Daily*	Grab
Oil/Grease			15	20	Daily*	Grab
Chromium (Total)			0.2	0.2	Daily*	Grab
Zinc			1	1	Daily*	Grab
126 Priority Pollutants	See Special Condition 16.				Daily*	Grab
Iron (Total)			Monitor Only		Daily*	Grab
Ammonia			Monitor Only		Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Condition 20. *** - See Special Condition 11.						
<b>Outfall 007 – Stormwater Runoff Pond*</b> (Intermittent Discharge)						
* - See Special Condition 11 and 17.						

Effluent Limitations and Monitoring

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

PARAMETER	LOAD LIMITS lbs/day DAF (DMF)		CONCENTRATION LIMITS mg/L		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
<b>Outfall 008 – West Sedimentation Pond Emergency Overflow**</b> (Emergency Overflow)  The discharge consists of: 1. Non-Contact Stormwater Runoff 2. Groundwater Seepage						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Iron (Total)			Monitor Only		Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Conditions 11, 20, and 24.						
<b>Outfall 009 – Stormwater Runoff*</b> (Intermittent Discharge)						
* - See Special Condition 11.						
<b>Outfall 010 – Southwest Sedimentation Basin Emergency Overflow**</b> (Emergency Overflow)						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Suspended Solids			15	30	Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Conditions 11 and 20.						
<b>Outfall 011 – Northeast Sedimentation Basin Emergency Overflow**</b> (Emergency Overflow)						
Flow (MGD)	See Special Condition 1.				Daily*	Measure
pH	See Special Condition 2.				Daily*	Grab
Total Suspended Solids			15	30	Daily*	Grab
* - When Discharging. ** - This outfall is for emergency discharge only. See Special Conditions 11 and 20.						



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 on the 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. This facility meets the criteria for establishment of allowed 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 the 1.7° C (3° F).

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
°F	60	61	62	90	90	90	90	92	90	90	90	65
°C	16	16	17	32	32	32	32	33	32	32	32	18

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 shall be reported on the DMR form.

SPECIAL CONDITION 4. All samples for Total Residual Chlorine shall be 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. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) electronic 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 is required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA unless a waiver has been granted by the Agency. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <https://www2.illinois.gov/epa/topics/water-quality/surface-water/netdmr/Pages/quick-answer-guide.aspx>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority.

Permittees that have been granted a waiver 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  
 Attention: Compliance Assurance Section, Mail Code # 19  
 1021 North Grand Avenue East  
 Post Office Box 19276  
 Springfield, Illinois 62794-9276

SPECIAL CONDITION 7. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 8. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

Special Conditions

SPECIAL CONDITION 9. This permit authorizes the use of water treatment additives that were requested as part of this renewal. The use of any new additives, or change in those previously approved by the Agency, or if the permittee increases the feed rate or quantity of the additives used beyond what has been approved by the Agency, the permittee shall request a modification of this permit in accordance with the Standard Conditions – Attachment H.

SPECIAL CONDITION 10. All samples for mercury must be analyzed by EPA Method 1631E using the digestion procedure described in Section 11.1.1.2 of 1631E, which dictates that samples must be heated at 50EC for 6 hours in a bromine chloride (BrCl) solution in closed vessels.

SPECIAL CONDITION 11STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. A storm water pollution prevention plan shall be maintained by the permittee for the storm water associated with industrial activity at this facility. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee shall modify the plan if substantive changes are made or occur affecting compliance with this condition.

1. Waters not classified as impaired pursuant to Section 303(d) of the Clean Water Act.

Unless otherwise specified by federal regulation, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

2. Waters classified as impaired pursuant to Section 303(d) of the Clean Water Act.

For any site which discharges directly to an impaired water identified in the Agency's 303(d) listing, and if any parameter in the subject discharge has been identified as the cause of impairment, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations, the storm water pollution prevention plan shall adhere to a more restrictive design criteria.

B. The operator or owner of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request.

Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph H of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within 30 days of any proposed construction or operational changes at the facility, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate. Any map or portion of map may be withheld for security reasons.
2. A site map showing:
  - i. The storm water conveyance and discharge structures;
  - ii. An outline of the storm water drainage areas for each storm water discharge point;
  - iii. Paved areas and buildings;

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- iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.
  - v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);
  - vi. Surface water locations and/or municipal storm drain locations
  - vii. Areas of existing and potential soil erosion;
  - viii. Vehicle service areas;
  - ix. Material loading, unloading, and access areas.
  - x. Areas under items iv and ix above may be withheld from the site for security reasons.
3. A narrative description of the following:
    - i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;
    - ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;
    - iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;
    - iv. Industrial storm water discharge treatment facilities;
    - v. Methods of onsite storage and disposal of significant materials.
  4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities. Also provide a list of any pollutant that is listed as impaired in the most recent 303(d) report.
  5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.
  6. A summary of existing sampling data describing pollutants in storm water discharges.
- F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:
1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.
  2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.
  3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.
  4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill cleanup equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.
  5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

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- i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff. To the maximum extent practicable storm water discharged from any area where material handling equipment or activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water should not enter vegetated areas or surface waters or infiltrate into the soil unless adequate treatment is provided.
  - ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges.
  - iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges.
  - iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.
  - v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination. Minimize the quantity of storm water entering areas where material handling equipment of activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water using green infrastructure techniques where practicable in the areas outside the exposure area, and otherwise divert storm water away from exposure area.
  - vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.
  - vii. Storm Water Reduction - Install vegetation on roofs of buildings within adjacent to the exposure area to detain and evapotranspire runoff where precipitation falling on the roof is not exposed to contaminants, to minimize storm water runoff; capture storm water in devices that minimize the amount of storm water runoff and use this water as appropriate based on quality.
6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion. The plan shall describe measures to limit erosion.
  7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.
  8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.
- G. Non-Storm Water Discharge - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharge. The certification shall include a description of any test for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible.
- H. Quarterly Visual Observation of Discharges - The requirements and procedures for quarterly visual observations are applicable to all outfalls covered by this condition.
1. You must perform and document a quarterly visual observation of a storm water discharge associated with industrial activity from each outfall. The visual observation must be made during daylight hours. If no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, you are excused from the visual observations requirement for that quarter, provided you document in your records that no runoff occurred. You must sign and certify the document.
  2. Your visual observation must be made on samples collected as soon as practical, but not to exceed 1 hour or when the runoff or snow melt begins discharging from your facility. All samples must be collected from a storm event discharge that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 inch rainfall) storm event. The observation must document: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. If visual observations indicate any unnatural color, odor, turbidity, floatable material, oil sheen or other indicators of storm water pollution, the permittee shall obtain a sample and monitor for the parameter or the list of pollutants in Part E.4.

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3. You must maintain your visual observation reports onsite with the SWPPP. The report must include the observation date and time, inspection personnel, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
  4. You may exercise a waiver of the visual observation requirement at a facility that is inactive or unstaffed, as long as there are no industrial materials or activities exposed to storm water. If you exercise this waiver, you must maintain a certification with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water.
  5. Representative Outfalls - If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, you may conduct visual observations of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).
  6. The visual observation documentation shall be made available to the Agency and general public upon written request.
- I. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.
  - J. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated there under, and Best Management Programs under 40 CFR 125.100.
  - K. The plan is considered a report that shall be available to the public at any reasonable time upon request.
  - L. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.
  - M. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirement imposed by the operator of the municipal system

Construction Authorization

Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention Plan developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

- N. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee there upon waives all rights there under.
- O. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.
- P. Plans and specifications of all treatment equipment being included as part of the stormwater management practice shall be included in the SWPPP.
- Q. Construction activities which result from treatment equipment installation, including clearing, grading and excavation activities which result in the disturbance of one acre or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding the required permit(s).

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- R. The facility shall submit an electronic copy of the annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part I of this condition. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s). The annual inspection report is considered a public document that shall be available at any

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reasonable time upon request.

- S. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.
- T. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.
- U. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

Annual inspection reports shall be mailed to the following address:

Illinois Environmental Protection Agency  
Bureau of Water  
Compliance Assurance Section  
Annual Inspection Report  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

- V. The permittee shall notify any regulated small municipal separate storm sewer owner (MS4 Community) that they maintain coverage under an individual NPDES permit. The permittee shall submit any SWPPP or any annual inspection to the MS4 community upon request by the MS4 community.

SPECIAL CONDITION 12. There shall be no discharge of wastewater pollutants from fly ash transport water.

SPECIAL CONDITION 13. There shall be no discharge of polychlorinated biphenyl compounds (PCB's).

SPECIAL CONDITION 14. There shall be no discharge of complexed metal bearing wastestreams and associated rinses from chemical metal cleaning unless this permit has been modified, subject to public notice and opportunity for hearing, to allow the new discharge.

SPECIAL CONDITION 15. There shall be no discharge of collected debris from the raw water intake. Back washing/air purging of the submerged cylindrical wedge-wire screen is not considered a discharge under this condition.

SPECIAL CONDITION 16. The permittee shall sample the discharge from outfalls 001, B03, A06, and B06 once per year for the 126 Priority Pollutants listed in 40 CFR 423 Appendix A. Sampling shall be conducted when the cooling water additives are present in the discharge.

- a. If all parameters analyzed produce a result of "non-detect" during two consecutive sampling events, monitoring for the 126 Priority Pollutants may be discontinued, upon written notification to the Agency.
- b. If both outfalls 001 and A06 are discharging at the same time, and the effluents are substantially identical, the permittee may sample one of the outfalls for the Priority Pollutants and report the quantitative data as representative of both. A note should be included in the comment section of the DMR indicating which outfall the sample was collected at.
- c. If both outfalls B03 and B06 are discharging at the same time, and the effluents are substantially identical, the permittee may sample one of the outfalls for the Priority Pollutants and report the quantitative data as representative of both. A note should be included in the comment section of the DMR indicating which outfall the sample was collected at.

SPECIAL CONDITION 17. For the purpose of this permit, the discharge from outfall 007 is limited to stormwater only, free from process and other wastewater discharges.

SPECIAL CONDITION 18. 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. Code 302.

SPECIAL CONDITION 19. For the purpose of this permit, the discharge from outfalls 001 and A06 are limited to non-contact cooling water only, free from process and other wastewater discharges.

SPECIAL CONDITION 20. Discharge from outfalls 003, 005, 006, A06, B06, 008, 010, and 011 shall only occur in the event of a 10 year/24 hour (or greater) storm event or a power or mechanical breakdown. In the event a discharge does occur, storm event data (date, duration, total rainfall, last measurable rainfall event) or a detailed account of the nature and cause of the power or mechanical breakdown, shall be submitted to the Agency with the Discharge Monitoring Report containing the required monitoring data for the

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discharge event.

SPECIAL CONDITION 21. Monitoring at internal outfalls A03, B03, C03, D03, E03, F03, G03, and H03 is only required when discharging to the Raw Water Impoundment. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to mixing with any other wastestreams and prior to entry into the Raw Water Impoundment.

SPECIAL CONDITION 22. The permittee is limited to the following Kaskaskia River water withdrawal conditions in addition to the conditions specified under IDNR Permit No. DS2002134:

- A. When the daily mean river flow measured at the USGS Stream Gage No. 05595000 on the Kaskaskia River near New Athens, IL is 120 cfs or less, the permittee will record the gage reading, the total amount of water withdrawn and the amount of water discharged at Outfall 001. This information shall be recorded for each day that the daily mean river flow conditions of 120 cfs or less exist, and shall be reported as an attachment to the monthly Discharge Monitoring Report.
- B. The permittee shall not withdraw river water such that the river flow drops below the 7Q10 flow value as established by the Illinois State Water Survey for any single day. This will be calculated based on the daily mean river flow at the New Athens, IL USGS Stream Gage where the 7Q10 flow is 92 cfs. The allowable daily water withdrawal rate is to be determined by the following formula:

Allowed maximum daily water withdrawal amount = Daily flow value at USGS Stream Gage No. 05595000 – 92 cfs + daily flow value of water discharged back to the river on the previous day.

SPECIAL CONDITION 23. Cooling Water Intake Structure Monitoring

Prairie State Generating Company, LLC design of the cooling water intake structure affords Best Technology Available (BTA) in accordance with Section 316(b) of the CWA.

A. Biological Monitoring:

1. The permittee shall conduct velocity monitoring in accordance with (B) of this Special Condition. To demonstrate compliance with impingement and entrainment monitoring requirements for the cooling water intake structure, the facility shall maintain a maximum through screen design intake velocity of 0.5 fps daily average as outlined in (B) below. All monitoring periods shall be identified and an explanation included in the annual report required under (D) of this Special Condition.
2. The permittee shall collect quarterly samples over a 24 hour period to determine entrainment rates during the primary period of reproduction, larval recruitment and peak abundance for each species identified in Source Water Baseline Biological Characterization provided as part of the application for this permit. For the purpose of this permit, the primary period for reproduction, larval recruitment and peak abundance will be the months of March through June.
3. In the event that the intake structure does not operate, no monitoring is required. This shall be identified in the annual report required under (D) of this Special Condition.

B. Velocity Monitoring:

1. Head loss across the intake screen shall be utilized to determine average daily through screen velocity. A maximum through screen intake velocity shall be determined on a daily basis. The daily average through screen velocity shall be used to show compliance with A(1) above.
2. The permittee shall operate the backwash system once per day, when operating the intake structure.
3. In the event that the intake structure does not operate, no monitoring is required. This shall be identified in the annual report required under (D) of this Special Condition.

C. Remote Monitoring:

1. Remote monitoring shall be utilized as part of an operation and maintenance program to ensure that the cooling water intake structure screens are functioning as designed. The remote monitoring shall consist of monitoring the flow of water from the pump house to the raw water pond on a continuous basis. Remote monitoring can also include alarm systems on the head loss measuring device for the screen and pressure monitoring of the air sparging system used to clean the screens.
2. In the event that the intake structure does not operate, no monitoring is required. This shall be identified in the annual report required under (D) of this Special Condition.

D. Reporting:

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The permittee shall prepare a report on an annual basis and submit the report by February 28<sup>th</sup> of the following year, for all cooling water intake structure monitoring required under this condition, occurring during the previous calendar year to the address identified in Special Condition 6. The report is due the first year after the start-up phase of the facility has been completed. The facility shall notify the Agency in writing after the start-up phase has been completed. The report should contain the following information.

1. Through screen velocity monitoring shall be tabulated on a daily basis for each month. A daily average velocity shall be provided. The daily maximum velocity value and the time lapse that occurred for each event resulting in the daily maximum value shall be provided.
2. The permittee shall identify the results of the remote monitoring. Flow monitoring shall be tabulated on a daily basis for each month for the flow of water from the pump house to the raw water pond. A daily average flow for each month shall be provided. Additional remote monitoring shall be noted as deemed necessary.
3. The results of biological monitoring for entrainment sampling shall be tabulated by species for each sampling event.
4. The permittee shall include the dates when the intake structure was not operational.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

SPECIAL CONDITION 24. For the purpose of this permit, the discharge from outfall 008 is limited to non-contact stormwater runoff and groundwater seepage, free from process and other wastewater discharges.

SPECIAL CONDITION 25. The Permittee shall monitor Outfall 001 for the following parameters on a semiannual basis. The Permit may be modified with public notice to establish effluent limitations if appropriate, based on the 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 on the DMRs to IEPA. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

<u>STORET CODE</u>	<u>PARAMETER</u>	<u>MINIMUM REPORTING LIMIT</u>
01002	Arsenic	0.05 mg/l
01027	Cadmium	0.001 mg/l
01034	Chromium (Total)	0.05 mg/l
01042	Copper	0.005 mg/l
00718	Cyanide (grab) (weak acid dissociable)	5.0 ug/l
00720	Cyanide (grab not to exceed 24 hours) (Total)	5.0 ug/l
00951	Fluoride	0.1 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
32730	Phenols (grab)	0.005 mg/l
01147	Selenium	0.005 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 solids, suspended, or dissolved, elemental or combined, including all oxidation states.