BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In The Matter Of:	)	
	)	
EXELON GENERATION LLC	)	
Petitioner,	)	
v.	)	PCB No. 2015-204
	)	(Thermal Demonstration – Water)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	

NOTICE OF FILING

John Therriault, Assistant Clerk,
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601

General Counsel
Office of Legal Counsel
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271

Brad Halloran, Hearing Officer
Illinois Pollution Control Board
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100 W. Randolph
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Alan P. Bielawski
William G. Dickett
Katharine F. Newman
Sidley Austin LLP
One South Dearborn
Suite 900
Chicago, IL 60603

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board an APPEARANCE and RECOMMENDATION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By: Stephanie Flowers

Stephanie Flowers
Assistant Counsel
Division of Legal Counsel

DATED: 7-27-2015

1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217) 782-5544

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In The Matter Of:	)	
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EXELON GENERATION LLC	)	
Petitioner,	)	
v.	)	PCB No. 2015-204
	)	(Thermal Demonstration – Water)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

APPEARANCE

The undersigned hereby enters her appearance as attorney in the above-titled proceeding on behalf of the Illinois Environmental Protection Agency.

By: Stephanie Flowers
Stephanie Flowers
Assistant Counsel

DATED: 7-27-15

Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217) 782-5544
Stephanie.Flowers@Illinois.gov

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In The Matter Of:	)	
	)	
EXELON GENERATION LLC	)	
Petitioner,	)	
v.	)	PCB No. 2015-204
	)	(Thermal Demonstration – Water)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

RECOMMENDATION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

NOW COMES the Illinois Environmental Protection Agency ("Agency"), by and through one of its attorneys, Stephanie Flowers, and in response to the Petition to Approve Alternative Thermal Effluent Limitations ("Petition") filed with the Illinois Pollution Control Board ("Board") on June 12, 2015 by Exelon Generation LLC ("Exelon" or "Petitioner"), pursuant to 35 Ill. Adm. Code 106.1100 et seq. ("Part 106, Subpart K"), submits the following recommendation.

INTRODUCTION

On June 12, 2014, Exelon filed the Petition asking the Board to approve alternative thermal effluent limitations for its discharge to the Illinois River from the Exelon Dresden Nuclear Generating Station ("Dresden Station").

Section 316(a) of the Federal Clean Water Act, 33 U.S.C. 1326, allows for an owner or operator to demonstrate that the effluent limitations for the facility's heated effluent are more stringent than necessary to "assure the projection and propagation of a balanced, indigenous

population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made". The Board incorporated this Federal Clean Water Act provision into 35 Ill. Adm. Code 304.141(c) which allows the Board to determine that alternative requirements may apply to thermal discharge. The Petition was filed pursuant to the Board's procedures for requesting alternative thermal relief under Part 106, Subpart K to demonstrate that the effluent limitations for the facility's heated effluent are more stringent than necessary and to request alternative thermal limitations.

BACKGROUND

Dresden Station discharges to the Illinois River at a point where 2,100.0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Illinois River is classified as a General Use Water. The Illinois River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources ("IDNR") Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, however, it is rated a "B" stream using IDNR's integrity rating system at this location. The Illinois River, Waterbody Segment, D-10, is listed on the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as mercury and polychlorinated biphenyls. Aquatic life, primary contact recreational, and secondary contact uses are fully supported. This segment of the Illinois River is subject to enhanced dissolved oxygen standards.

Dresden Station operates mainly in two modes: (1) closed cycle mode (October 1 – June 14) and (2) indirect open cycle mode (June 15 – September 30). When the facility is operated in closed cycle mode, there is a blowdown flow from the cooling pond to the Illinois River, which has a mixing zone and does not require relief to meet the thermal water quality standards. When

the facility is operated in the indirect open cycle mode, the facility cannot always meet the water quality standards at the edge of the mixing zone and therefore requests alternative thermal limitations. The current thermal limitations for Dresden Station are set forth as Special Condition 3 in the NPDES Permit No. IL 0002224 ("Permit") issued to Dresden Station by the Agency, effective from December 1, 2011 to November 30, 2016 (see Attachment #1). Current alternative thermal limits were approved by the Board in PCB 79-134 ("1981 Board Order") (see Attachment #2) and are stated in the Permit at Special condition 3C:

> The permittee may discharge cooling pond blowdown using an indirect open cycle cooling mode from June 15 through September 30 in accordance with the following limitation in lieu of 35 Ill. Adm. Code 302.211(d) and 302.211(e) as written above in 3A and 3B respectively. During the period June 15 through September 30, the temperature of the plant discharge shall not exceed 32.2°C (90°F) more than 10% of the time in the period and never will exceed 33.9°C (93°F).

PETITIONER'S REQUESTED RELIEF

During the period of June 15 through September 30, when water temperatures at the Dresden Station intake exceed 90°F, Exelon has requested that the temperature at the Dresden Station discharge be allowed to exceed 33.9°C (93°F) up to a maximum excursion of 35°C (95°F) for a duration not to exceed 24 hours per episode and for a total of no more than 10 percent of the hours available during this time period (259 hours).

As understood by the Agency, the request would only change the second sentence of Special Condition 3C of the Permit to read as follows:

> During the period June 15 through September 30, the temperature of the plant discharge shall not exceed 32.2 °C (90 °F) more than 10% of the time in the period and will never exceed 35°C (95 °F), provided that discharges above 33.9°C (93°F) are allowed only when the plant intake temperature is above 32.2 °C (90 °F), and any single episode of such discharges does not exceed 24 hours in duration.

AGENCY'S RECOMMENDATION

(1) The Agency, pursuant to Section 106.1145 of Part 106, Subpart K, recommends the Board grant the relief requested by the Petitioner.

(2) The Agency agrees the Petitioner has demonstrated that the current effluent limitations are more stringent than necessary and that the proposed alternative thermal limits would not adversely affect the balanced, indigenous population of fish, shellfish, and wildlife currently inhabiting the receiving water.

The Petitioner conducted a Type II Predictive Demonstration that utilized a hydrothermal model to study the dynamics of the thermal plume under selected Dresden Station operations (discharge temperatures) and environmental conditions (ambient flow and temperature) that could occur between June 15 and September 30 when indirect open cycle cooling is authorized. The predictive assessment used the MIKE3 model to characterize and predict hydrothermal conditions in the lower Des Plaines and Kankakee Rivers and the Illinois River from their confluence downstream to the Dresden Island Lock and Dam located approximately 1,000 meters downstream of the Dresden Station discharge. The modeled thermal plume dimensions and distribution in the Illinois River were then compared to available biothermal metric data related to survival, avoidance, spawning, and growth of fish that were selected as Representative Important Species ("RIS") for the receiving water. All RIS species for the predictive demonstration are fish because site specific studies on phytoplankton, zooplankton, and macroinvertebrates were conducted prior to the 1981 Board Order approving the existing alternative thermal limits and those studies indicated no appreciable harm to these or other biotic

communities. The hydrothermal assessment evaluated the predicted effects of Dresden Station thermal plume temperatures on the aquatic community represented by 12 selected RIS under the following scenarios of river flow and ambient water temperature conditions:

1. Typical Scenario—50th percentile river flow and 60th percentile ambient river temperature;
2. Typical High Temperature Scenario—5th percentile river flow and 95th percentile ambient river temperature; and
3. Extreme High Temperature Scenario—equivalent to the proposed alternative thermal limits. Based on modeled conditions for the unusual heat wave event of July 2012 when ambient temperatures exceeded 32.2°C (90°F), the 97th or higher percentile for ambient temperature. Flows were in the lower 1-4th percentile for the Des Plaines River and 15-20th percentile for the Kankakee River.

The hydrothermal model was used to estimate the percent of the cross-sectional area at fixed transects below specified water temperatures for each of the four months evaluated (June-September) and the percent of the bottom area upstream and downstream of the Dresden Station discharge below specified water temperatures. The area encompassed by selected temperatures was compared to the biothermal metrics for each of the RIS. Zone of passage ("ZOP") was evaluated against a 75 percent benchmark to determine if temperatures in at least 75 percent of the plume cross section are less than the biothermal metric thresholds for RIS. Although spawning temperatures were reviewed as a biothermal response for each RIS, most spawning by the RIS in the vicinity of Dresden Station appears to occur prior to June 15 during the period of closed cycle cooling operation and is, therefore, not affected by indirect open cycle cooling operation. The only RIS reported to spawn after June across their geographic range are channel catfish and bluegill which may continue to spawn into July or August in some regions. However, ambient temperatures in the Des Plaines, Kankakee and Illinois Rivers typically exceed the reported upper temperatures range for spawning by these species before the end of

June, particularly during warmer years. Ichthyoplankton drift sampling in the Kankakee River in the vicinity of the Dresden Station cooling water intake indicate that 85-88 percent of the annual production of early life stages of fish in the vicinity of Dresden Station occur prior to June 15. Additionally, seasonal migrations associated with spawning are likely to occur well before June 15. Spring migrations and spawning by RIS and the species they represent occur prior to initiation of indirect open cycle cooling at Dresden Station and would therefore, not be affected by the proposed alternative thermal limits.

The remaining biothermal metrics (mortality, avoidance, and growth), however, were found to be within the temperature range that currently exists during high temperatures scenarios and therefore warranted further analysis. Different temperature scenarios have the potential to cause adverse impacts to RIS. The "Typical Scenario" provides insight into the ambient temperatures and Dresden Station discharge temperatures the study area commonly experiences during a typical summer. Under the Typical Scenario, no adverse effects are predicted for any of the RIS. Upstream ambient temperatures are below 28.3°C (83°F) and Dresden Station discharge temperatures are below 31.1°C (88°F) during July and throughout the indirect open cycle period from June through September. Under the Typical Scenario, the entire study area conforms with the 90°F summer temperature standard. Seventy-five percent of temperatures at the end of the mixing zone (gauged at IL-1000, upstream of the Dresden Island Lock and Dam) are predicted to be less than 84.2°F, which would not adversely affect growth of RIS or lead to avoidance in these species, and is actually within the optimum temperature range for most RIS. Although Dresden Station discharge temperatures do not exceed 90°F under the Typical Scenario and therefore do not require alternative thermal limits, this analysis provides an additional line of evidence that supports that Dresden Station is not having any appreciable harm on the aquatic

community of the receiving water under average ambient conditions.

The "Typical High Temperature Scenario" conditions occur approximately once every 20 years, which results in upstream ambient temperatures near the Dresden Station discharge reaching 31.1°C (88°F) in July but not exceeding 30°C (86°F) the remainder of the indirect open cycle period. Under these conditions, Dresden Station discharge temperatures approach 33.3°C (92°F) during July but do not exceed 32.8°C (91°F) in August or 32.2°C (90°F) in June. The Illinois River between the Dresden Station discharge and Dresden Island Lock and Dam becomes relatively well mixed under this scenario, with 75 percent of the transect at the end of the 26-acre mixing zone possessing temperatures below 90.6°F. Of the 12 RIS analyzed under this temperature regime, black crappie, freshwater drum, golden redhorse, and white sucker could potentially be adversely impacted by temperatures outside of the mixing zone. At temperatures in excess of 90°F, these RIS would likely avoid the thermal plume or would incur no growth if they continued to inhabit the area. Also, depending on the acclimation temperature, white sucker mortality could also occur if exposed to this temperature regime long-term. Chronic mortality data indicate that white sucker is the most thermally sensitive of the RIS selected for this analysis; at an acclimation temperature of 31.1°C (88°F) the predicted threshold for chronic thermal mortality is about 32.2°C (90°F). Although temperatures in this range could create stressful conditions for white suckers exposed for an extended period of time (days), ambient water temperatures and Dresden Station discharge temperatures vary diurnally in response to daily cycles in air temperature and offer diurnal relief. Additionally, cooler pockets of temperatures are often available near the benthos in riverine environments where organisms can avoid stressful temperatures. Under the Typical High Temperature Scenario, the majority of aquatic habitat immediately upstream of the Dresden Station discharge is predicted to be less

than 31.7°C (89°F) during July, therefore upstream areas could also temporarily be inhabited by white sucker or other heat intolerant organisms during stressful conditions. It should be noted that modeled conditions under the Typical High Temperature Scenario are reflective of discharge conditions that are currently authorized under the current alternative thermal limits. This scenario depicts the low flow and upper ambient temperature that has occurred approximately once every 20 years (95th percentile temperatures) near the Dresden Station study area which, based on long-term fisheries monitoring, has not had an observable impact on the balanced indigenous populations of aquatic life or other biotic categories.

The "Extreme High Temperature Scenario", modeled after the ambient conditions experienced in the heat wave of July 2012, equates to ambient stream temperatures that occur once every 33 years and was approximately equivalent to the 7Q10 low flow (the lowest 7-day average flow that occurs on average once every 10 years) for the combined flows of the Des Plaines and Kankakee River. Given that the ambient temperatures and Dresden Station discharge temperatures experienced during this heat event are at the upper bounds of the temperatures requested under the proposed alternative thermal limits, modeling of this event would be an accurate representation of how the proposed alternative thermal limits would affect receiving water temperatures and potentially aquatic life downstream of Dresden Station. During early July 2012, maximum daily air temperatures steadily increased from about 30°C (86°F) on July 1 to 37.8°C (100°F) on July 7 and overnight temperatures were in the low to high 70s°F, which were in the upper 4-5 percent of the record. The maximum recorded ambient water temperature during this 3-day period was 34.4°C (93.9°F) which occurred on the afternoon of July 7. Ambient water temperatures at the Dresden Station cooling water intake were above 33.9°C (93°F) for about 9 hours on July 7, and Dresden Station discharge temperatures peaked a

few hours later at about 34.9°C (94.9°F). The Dresden Station discharge temperatures exceeded 34.4°C (94°F) for about 3 hours and exceeded 33.9°C (93°F) for about 11 hours. The heat wave broke the evening of July 7-8 and river ambient and Dresden Station discharge temperatures responded relatively quickly, decreasing by about 3.1°C (5.5°F) over the next 36 hours. Modeling of the July 2012 heat event found that ambient temperatures upstream of Dresden Station exceeded 90°F for a three day period (July 5-8), and peaked at 93.9°F on July 8. Downstream of the Dresden Station discharge, all transects exceeded 90°F and the maximum temperature modeled at the end of the mixing zone was 93.2°F on July 7. However, during this same period the upstream transects in the Des Plaines and Kankakee Rivers also had ambient temperatures above 33.9°C (93°F) in 75 percent of the cross-sectional area. By July 9, temperatures at all downstream transects were below 90°F at all depths (surface, mid-column, and benthic). Of the 12 RIS analyzed under the Extreme High Temperature Scenario, modeling suggests that bluegill, freshwater drum, black crappie, golden redhorse, and white sucker would temporarily be exposed to temperatures outside of the mixing zone that exceed the upper zero growth and/or avoidance temperatures for these species. However, given the short-term nature of these exposures, temporary avoidance of the area or stunting of growth experienced by inhabiting RIS would be uneventful on a long-term scale and would not adversely affect the balanced indigenous population of aquatic life near the study area. Under natural ambient conditions in Illinois, fish exhibit a period of limited growth during winter periods and, in extremely warm years, a period of limited growth in summer periods as well. This is especially true for species that inhabit geographical areas near the upper or lower bound of their preferred temperature ranges. For example, the natural range of white sucker begins in the southern tip of Illinois and adjacent states and extends well into northern Canada. Thus, the Dresden Station

study area is near the southern extremities of this species range and, as evidenced by the heat event of July 2012, even ambient conditions of the study area have a potential to exceed upper thermal tolerances for this species and lead to avoidance and reduced summer growth. While the increased thermal loadings of Dresden Station during summer periods would increase avoidance of some RIS and further limit growth of species at the upper bounds of their thermal range, the thermal loadings may provide more favorable temperatures during winter periods where growth would otherwise be limited. Thus, any reductions in growth or habitat usage may be offset by the optimal thermal conditions created by the plume in cooler months.

Under the proposed alternative thermal limits, the Dresden Station discharge would only be authorized to exceed 90°F for 259 hours during indirect open cycling. Given the short-term nature of the thermal excursions above water quality standards, temporary reductions of growth or avoidance of the thermal plume would have no lasting effects on the aquatic community. However, any mortality associated with increased thermal loadings would have the potential to affect the balanced, indigenous aquatic life community near Dresden Station. The maximum thermal discharge authorized under the proposed alternative thermal limits is 95°F, and discharges would only be authorized to exceed 93°F when ambient upstream conditions exceed 90°F. Providing these excursions above 93°F do not exceed 24 hours in duration, as specified by the proposed alternative thermal limits, no acute mortality of any of the RIS is expected to occur under the modeled conditions of the Extreme High Temperature Scenario. This is supported by the published acute thermal mortality thresholds for each RIS, as well as documentation of the July 2012 heat event that resulted in upstream and downstream temperatures of the study area temporarily exceeding 93°F for several hours, yet with no observed fish kills or other adverse effects reported in the study area.

While acute mortality resulting from infrequent episodes of the thermal plume approaching 95°F is not expected, there is a greater potential for chronic mortality to occur. Most RIS for which chronic temperature tolerance data are available are able to tolerate water temperatures above 35°C (95°F) for extended periods of time (48-96 hours) at acclimation temperatures above 29.4°C (85°F), with the exception of white sucker. For white sucker, the upper thermal tolerance limit for chronic exposure for juveniles appears to be about 35°C (93°F) at an acclimation of 32.2°C (90°F); whereas the highest thermal tolerance chronic exposure for adults is 32.5°C (90.5°F) at an acclimation temperature of 26°C (78.8°F). However, under the extreme conditions observed during early July 2012, the maximum exposure duration was approximately 11 hours, considerably less than the exposure durations for the test data, and the ambient acclimation temperature of the Dresden Station intake was approximately 84°F prior to the heat event. Given that ambient temperatures near the study area steadily increased along with Dresden Station discharge temperatures, inhabitants near the Dresden Station plume were not subjected to a drastic change in temperature. Conditions in excess of white sucker thermal tolerances did not persist for more than 24 hours outside of the thermal plume and throughout this period ambient temperatures in 10-25 percent of the area immediately upstream of the Dresden Station discharge were less than 32.5°C (90.5°F), which would have provided refuge for white sucker avoiding the potentially stressful temperatures near the plume. Furthermore, white sucker are rarely collected in the Dresden Pool near the Dresden Station discharge, and this species is even less frequently collected downstream of the Dresden Island Lock and Dam, where riverine conditions further contrast that of the Kankakee River. White suckers prefer small, clear, cool creeks and small to medium sized rivers, therefore white sucker near Dresden Station are likely transients from the Kankakee River given it smaller size, cooler temperatures,

and increased habitat complexity, and would likely utilize the Kankakee River during these extreme conditions. Temperatures in the Dresden Station plume, even under extreme meteorological condition, are unlikely to adversely affect aquatic life in the study area providing that the alternative thermal limits are not exceeded.

(3) The Petitioner conformed with the Board's Early Screening requirements at 35 Ill. Admin. Code 106.1115 through their submittal of a study plan to the Agency and IDNR on April 14, 2014. In response to the Early Screening study plan, the Agency and IDNR recommended changes to the study plan regarding the RIS list and freshwater mussel surveys. The Petitioner accepted these recommended changes and finalized their Detailed Plan of Study in fulfillment of 35 Ill. Adm. Code 106.1120. The Agency and IDNR found no other changes necessary.

(4) The Agency believes that the Petitioner has met the requirements for requesting alternative thermal relief under Part 106, Subpart K.

(5) On April 20, 2015, the IDNR's EcoCAT web-based tool was used and indicated that there were endangered/threatened species present in the vicinity of the Dresden Station discharge specifically (American Bittern (*Botaurus lentiginosus*), Common Moorhen (*Gallinula chloropus*), Greater Redhorse (*Moxostoma valenciennesi*), King Rail (*Rallus elegans*), Norther Harrier (*Circus cyaneus*), Pallid Shiner (*Hybopsis amnis*), and River Redhorse (*Moxostoma carinatus*) and indicated INAI sites (Goose Lake Prairies INAI Site, Illinois River – Dresden INAI Site, and Goose Lake Prairie Nature Preserve). IDNR evaluated the submittal and

determined that impacts to the protected resources are unlikely. IDNR terminated the consultation request on May 5, 2015.

(6) Other than the contact with IDNR indicated in (3) and (5) above, the Agency is not aware of any communication or comments from IDNR, the U.S. Fish and Wildlife Services, or USEPA.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: Stephanie Flowers

Stephanie Flowers
Assistant Counsel
Division of Legal Counsel

Dated: 7-27-15

Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-5544

 Attachment # 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 • (217) 782-2829
James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT QUINN, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

217/782-0610

November 3, 2011

Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, Illinois 60555-5701

Re: Exelon Generation Company, LLC
Dresden Generating Station
NPDES Permit No. IL0002224
Final Permit

Gentlemen:

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. Failure to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

The Agency received your letter dated June 24, 2011 regarding the draft NPDES permit. Based on the information provided the following changes were made to the permit.

1. The suggested language for outfall 002 was used.

2. Unit 2 Auxiliary Boiler Area Oil/Water Separator, 138 KV Switchyard Oil/Water Separator, and 345 KV Switchyard Oil/Water Separator were added back to outfall 002 has contributory wastestreams.

3. The 0.05 mg/l Total Residual Chlorine (TRC) limit for outfalls 002, 003, and 004 will remain in the permit. Special Condition 4 for TRC will also remain in the permit. The facility can meet this limit by de-chlorination. The 0.05 mg/l limit was listed as a Best Available Technology (BAT) effluent limitation in the public notice factsheet but is also the detection limit for TRC. It is also used as an effluent limitation to show compliance with the water quality standard for TRC, which is actually lower than the 0.05 mg/l limit.

4. The suggested language for internal outfall D02 was used.

5. Internal outfall E02 was removed from the permit. The wastestream of Northwest Material Access Runoff will remain as a contributory flow to outfall 002 and the requirement for the Stormwater Pollution Prevention Plan for this wastestream was included at outfall 002.

6. The load limit for daily maximum is based on the design maximum flow. The load limit for 30-day average is based on the design average flow. There will be no changes to the load limits for BOD and TSS at outfall 003.

7. The suggested language for outfall 004 was used.

8. Outfall 005 will remain in the permit. Intermittent discharge was added to this outfall.

9. Outfall 006 will remain in the permit.

10. The suggested language for special condition 3 was used.

11. The suggested language for special condition 10 was used.

The Agency also received a letter dated June 27, 2011 from USEPA regarding the draft NPDES permit. Based on the information provided the following changes were made to the final permit.

1. Additional language was added to special condition 18 requiring that for the next permit application for renewal, the facility must prepare and submit monitoring studies to support their original 316(a) demonstration, pursuant to 40 CFR 125.72(c).

2. Illinois Pollution Control Board Order 79-134 is applicable for the period June 15 through September 30. During the time period October 1 through June 14, a mixing zone is applicable.

   Special Condition 3 was modified to ensure that the water quality standards were met outside of the mixing zone from October 1 through June 14 and the alternate effluent standard as per IPCB 79-134 was applicable from June 15 through September 30.

The Agency has begun a program allowing the submittal of electronic Discharge Monitoring Reports (eDMRs) instead of paper Discharge Monitoring Reports (DMRs). If you are interested in eDMRs, more information can be found on the Agency website, http://epa.state.il.us/water/edmr/index.html. If your facility is not registered in the eDMR program, a supply of preprinted paper DMR Forms for your facility will be sent to you prior to the initiation of DMR reporting under the reissued permit. Additional information and instructions will accompany the preprinted DMRs upon their arrival.

The attached Permit is effective as of the date indicated on the first page of the Permit. Until the effective date of any re-issued Permit, the limitations and conditions of the previously-issued Permit remain in full effect. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

Should you have questions concerning the Permit, please contact Leslie Lowry at 217/782-0610.

Sincerely,

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

SAK:LRL:11041402.bah

Attachment: Final Permit

cc: Records Unit
Compliance Assurance Section
Des Plaines Region
Billing
USEPA

NPDES Permit No. IL0002224

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: November 30, 2016

Issue Date: November 3, 2011
Effective Date: December 1, 2011

Name and Address of Permittee:

Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, Illinois 60555-5701

Facility Name and Address:

Dresden Generating Station
6500 North Dresden Road
Morris, Illinois 60450
(Grundy County)

Discharge Number and Name:		Receiving Waters:
001	Unit 1 House Service Water	Illinois River
A01	Unit 1 Intake Screen Backwash	
002	Cooling Pond Blowdown	Illinois River
A02	Unit 2/3 Intake Screen Backwash	
B02	Wastewater Treatment System Effluent	
C02	Rad Waste Treatment System Effluent	
D02	Demineralizer Regenerate Waste and Filter Backwash	
003	Sewage Treatment Plant Effluent	Kankakee River
004	Cooling Pond Siphon Discharge	Kankakee River
005	South East Area Runoff	Kankakee River
006	North East Area Runoff	Kankakee 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

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

SAK: LRL:11041402.bah

NPDES Permit No. IL0002224

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:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/L 30 DAY AVERAGE	CONCENTRATION LIMITS mg/L DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall 001 – Unit 1 House Service Water (Average Flow = 4.32 MGD)						
The discharge consists of: 1. Unit 1 Fire Pump & Equipment Cooling Water 2. Unit 1 Intake Screen Backwash (A01) 3. Stormwater Runoff*						
Flow (MGD)	See Special Condition 1.				Daily**	Continuous
pH	See Special Condition 2.				1/Month**	Grab
Temperature	See Special Condition 3.				1/Month**	Grab
Total Residual Chlorine	See Special Condition 4.			0.05	1/Month**	Grab
Total Suspended Solids			15	30	1/Month**	Grab
Oil/Grease			15	20	1/Month**	Grab

* - See Special Condition 10 and 12.
** - When Discharging

Outfall A01 – Unit 1 Intake Screen Backwash*
(Intermittent Discharge)

* - There shall be no discharge of collected debris.

Outfall 002 – Cooling Pond Blowdown
(Average Flow = 472 MGD)

The discharge consists of:
1. Unit 2 & 3 Condenser Cooling Water
2. Demineralizer Regenerant Waste and Filter Backwash (D02)
3. Rad Waste Treatment System Effluent (C02)
4. Wastewater Treatment System Effluent (B02)
5. Units 2 & 3 Intake Screen Backwash (A02)
6. Northwest Material Access Runoff*
7. Units 2 & 3 House Service Water
8. Unit 2 Auxiliary Boiler Area Oil/Water Separator*
9. 138 KV Switchyard Oil/Water Separator*
10. 345 KV Switchyard Oil/Water Separator*

Flow (MGD)	See Special Condition 1.		Daily	Continuous	
pH	See Special Condition 2.		1/Month	Grab	
Temperature	See Special Condition 3.		Daily	Continuous	
Total Residual Chlorine	See Special Condition 4 & 21.	0.05	1/Month	Grab	

* - See Special Condition 10.

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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:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/L 30 DAY AVERAGE	CONCENTRATION LIMITS mg/L DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall A02 – Unit 2/3 Intake Screen Backwash* (Intermittent Discharge)						

* - There shall be no discharge of collected debris.

Outfall B02 – Wastewater Treatment System Effluent
(DAF = 0.068 MGD)

The discharge consists of:
1. Unit 1 and 2/3 Oil/Water Separators
2. Building Floor Drains
3. Building Roof Drains
4. Stormwater Runoff*

Flow (MGD)	See Special Condition 1.				Daily	Continuous
Total Suspended Solids			15	30	1/Month	24-Hour Composite
Oil/Grease			10	20	1/Month	Grab

* - See Special Condition 9.

Outfall C02 – Rad Waste Treatment System Effluent
(DAF = 0.073 MGD)

The discharge consists of:
1. Contaminated Equipment Drains
2. Contaminated Floor Drains
3. Chemistry Laboratory Drains
4. Decontamination System Drains
5. Condensate Polisher Sonic Cleaning Waste
6. Units 2 and 3 Auxiliary Boiler Blowdown

Flow (MGD)	See Special Condition 1.				1/Month	Continuous
Total Suspended Solids			15	30	1/Month	Grab
Oil/Grease			15	20	1/Month	Grab

Outfall D02 – Demineralizer Regenerate Waste and Filter Backwash
(Average Flow = 0.0082 MGD)

Flow (MGD)	See Special Condition 1.				1/Month	Measure
Total Suspended Solids			15	30	1/Month	8-Hour Composite

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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:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/L 30 DAY AVERAGE	CONCENTRATION LIMITS mg/L DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall 003 – Sewage Treatment Plant Effluent (DAF = 0.031 MGD)						
Flow (MGD)	See Special Condition 1.				1/Month	Continuous
pH	See Special Condition 2.				1/Month	Grab
BOD_5	7.76	37.53	30	60	1/Month	24-Hour Composite
Total Suspended Solids	7.76	37.53	30	60	1/Month	24-Hour Composite
Fecal Coliform	See Special Condition 17.			400/100 ml	1/Month	Grab
Total Residual Chlorine	See Special Condition 4.			0.05	1/Day*	Grab
* - When chlorinating.						
Outfall 004 – Cooling Pond Siphon Discharge* (Average Flow = 32.316 MGD)						
Flow (MGD)	See Special Condition 1.				1/Day When Discharging	Measure
pH	See Special Condition 2.				1/Discharge Event	Grab
Temperature	See Special Condition 11.				1/Day When Discharging	Grab
Total Residual Chlorine	See Special Condition 4 & 21.			0.05	1/Discharge Event	Grab
* - See Special Conditions 15 and 20.						
Outfall 005 – South East Area Runoff* (Intermittent Discharge)						
* - See Special Conditions 10 and 12.						
Outfall 006 – North East Area Runoff* (Intermittent Discharge)						
* - See Special Conditions 10 and 12.						

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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. (For outfalls 001 and 002) This facility meets the criteria for establishment of a formal mixing zone for thermal discharges pursuant to 35 IAC 302.102. Water quality standards for temperature listed in the table below must be met at every point outside of the mixing zone from the dates October 1 through June 14.

	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

A. The maximum temperature rise above natural temperatures shall not exceed 2.8° C (5° F).

B. Water temperature at representative locations in the main river shall not exceed the maximum limits in the table above during more than one (1) percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the table above by more than 3° F (1.7° C). Main river temperatures are temperatures of those portions of the river essentially similar to and following the same thermal regime as the temperatures of the main flow of the river.

C. The permittee may discharge cooling pond blowdown using an indirect open cycle cooling mode from June 15 through September 30 in accordance with the following limitation in lieu of 35 Ill. Adm. Code 302.211(d) and 302.211(e) as written above in 3A and 3B respectively. During the period June 15 through September 30, the temperature of the plant discharge shall not exceed 32.2° C (90° F) more than 10% of the time in the period and never will exceed 33.9° C (93° F).

D. There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions. The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.

E. The Dresden Station shall be operated closed cycle during the period October 1 through June 14. The station may be operated in accordance with the Unit 2/3 Variable Blowdown Plan (governed by the original July 6, 1977 Thermal Compliance Plan calculations) from June 1 through June 14, as deemed necessary by station management.

F. Compliance with the thermal limitations shall be determined by maintaining a continuous temperature and flow record for cooling pond blowdown to the Illinois River. If the variable blowdown plan will be used from June 1 to June 15, data acquisition and records for the parameters necessary to implement the plan shall be maintained.

G. Additional water temperature monitoring shall be continued as follows:

1. A continuous water temperature record of water temperature at the Dresden Lock and Dam and the Dresden Station intake shall be maintained during the period of June 15 through September 30.

2. Water temperature recorded at these locations shall be tabulated and submitted to the Agency, Industrial Unit, Division of Water Pollution Control by December 31, of each year.

3. Permittee's failure to submit the temperature monitoring data from these locations due to equipment malfunction shall not be deemed a permit violation provided the permittee employs reasonable efforts to repair the malfunction. If the malfunction lasts more than 24 hours, a manual measurement shall be made at least once per day.

H. The station may bypass the cooling pond, that is operate open cycle, only during periods when both generating units have been taken out of service.

I. The monthly maximum value measured at the Dresden Lock and Dam and the percentage of time the discharge exceeds the temperatures listed in the table above from October 1 through June 14 shall be reported on the DMR form.

J. The monthly maximum value measured at the outfall and the percentage of time the discharge exceeds 32.2° C (90° F) from June 15 through September 30 shall be reported on the DMR form.

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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) 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 15th 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 7. 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 8. 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 9. 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 10

STORM 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.

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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;

      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:

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.

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vii. Storm Water Reduction - Install vegetation on roofs of buildings within adjacent to the exposure area to detain and evapotranspirate 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.

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.

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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. The permittee may claim portions of the plan as exempt from public disclosure as confidential business information or as otherwise required by law, including any portion of the plan related to facility security.

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).

REPORTING

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 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

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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 11. (For outfall 004) This facility meets the allowed mixing criteria for thermal discharges pursuant to 35 IAC 302.102. No reasonable potential exists for the discharge to exceed thermal water quality standards. This determination is based on a temperature range of 60° F to 77° F and a flow of 50 cfs. The permittee shall monitor the flow and temperature of the discharge prior to entry into the receiving water body. Monitoring results shall be reported on the monthly Discharge Monitoring Report. This permit may be modified to include formal temperature limitations should the results of the monitoring show that there is reasonable potential to exceed a thermal water quality standard. Modification of this permit shall follow public notice and opportunity for comment.

There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions. The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.

SPECIAL CONDITION 12. The North East Area Runoff discharges to the Unit 1 intake canal. When the Unit 1 service water system is in use, the discharge will be drawn into the intake and eventually discharged at outfall 001. During those times when the Unit 1 service water system is out of service, this discharge will remain in the intake canal and eventually flow into the Kankakee River through outfalls 005 and 006.

SPECIAL CONDITION 13. There shall be no discharge of polychlorinated biphenyl compounds.

SPECIAL CONDITION 14. The "Upset" defense provisions listed under 40 CFR 122.41(n) are hereby incorporated by reference.

SPECIAL CONDITION 15. The responsibility for outfall 004, Cooling Pond Discharge, will be transferred to the Will County Emergency Management Agency upon issuance of a separate NPDES permit for operation of the Dresden Station siphon Ice Melt system. Upon issuance of a permit to Will County EMA, Exelon Generation Company shall submit a request to terminate the monitoring and reporting requirements associated with outfall 004, in writing to the Agency.

SPECIAL CONDITION 16. There shall be no discharge of complexed metal bearing wastestreams and associated rinses from chemical metal cleaning unless this permit has been modified to include the new discharge.

SPECIAL CONDITION 17. For outfall 003, the daily maximum Fecal Coliform count shall not exceed 400/100 ml. Fecal Coliform limits for Outfall 003 are effective May through October. Sampling of Fecal Coliform concentrations are only required during this time period.

SPECIAL CONDITION 18. Exelon Generation Company, LLC formerly known as Commonwealth Edison Company has complied with 35 Ill. Adm. Code 302.211(f) and Section 316(a) of the Clean Water Act in demonstrating that the thermal discharge from its Dresden Nuclear Power Station has not caused and cannot be reasonably expected to cause significant ecological damage to receiving waters as approved by the Illinois Pollution Control Board in PCB Order 73-359 dated January 17, 1974 and PCB Order 79-134 dated July 9, 1981. Pursuant to 35 Ill. Adm. Code 302.211(g), no additional monitoring or modification is now being required for reissuance of this NPDES Permit

Pursuant to 40 CFR 125.72(c), the permittee shall submit an updated 316(a) demonstration based on current facility operating conditions. This updated demonstration may include new studies or other information necessary to support the seasonal alternative effluent limitations granted under the original demonstration. This information shall be submitted with the next permit renewal application.

SPECIAL CONDITION 19. Pursuant to Section 316(b) of the Clean Water Act, a past determination for the Dresden Nuclear Power Station was not made. Data was submitted at that time by Exelon Generation Company, LLC formerly known as Commonwealth Edison Company pursuant to Section 316(b) of the CWA for the Dresden Nuclear Power Station. This data was reviewed by the Illinois Environmental Protection Agency and the review determination was: That where as additional intake monitoring is not being required at this time, further monitoring is not precluded if determined necessary at the time of any modification or reissuance of NPDES Permit No. IL0002224.

In order for the Agency to evaluate the potential impacts of cooling water intake structure operations pursuant to 40 CFR 125.90(b), the permittee shall prepare and submit information to the Agency outlining current intake structure conditions 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 as necessary. The information submitted should be in accordance with the previously submitted information collection proposal received by Agency on May 23, 2005.

The information shall also include a summary of historical 316(b) related intake impingement and/or entrainment studies, if any, as well as current impingement mortality and/or entrainment characterization data; and shall be submitted to the Agency within six (6) months of the permit's effective date.

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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 pursuant to Section 316(b) of the Clean Water Act.

SPECIAL CONDITION 20. The permittee shall minimize make-up water requirements to the cooling pond system during cooling pond water diversion to the Kankakee River in order to minimize fish impingement losses. This should be accomplished by eliminating to the extent feasible normal closed cycle blowdown flows of 50,000 gpm to the Illinois River except during a discharge from the Rad Waste Treatment System and/or other water conservation measures. Such measures and operations taken by the station to minimize make-up water requirements during diversion shall be documented and reported with monthly discharge monitoring reports.

A. Operating requirements:

1. The siphon will be operated for only two runs during the winter, each run lasting no more than 14 days.

2. Thermal monitoring at established transects and narrative observations will be recorded during operations in accordance with the siphon Operations Plan dated November, 1993 and a report of findings made available to this Agency in June of each year.

3. The maximum amount of heat that will be placed in the Kankakee River shall be <0.5 billion BTUs per hour.

4. A fish barrier net must be in place around the siphon inlet before the siphon is operated, and must remain intact throughout the run.

SPECIAL CONDITION 21. For a period of 2 years following the effective date of this Permit during times when the condenser cooling water is chlorinated intermittently, Total Residual Chlorine may not be discharged from each unit's main cooling condensers for more than 2 hours per day. The discharge limit during this period is 0.2 mg/l, measured as an instantaneous maximum.

A Total Residual Chlorine limit of 0.05 mg/l (Daily Maximum) for outfalls 002 and 004 shall become effective 2 years from the effective date of this Permit.

The Permittee shall construct a dechlorination system or some alternative means of compliance in accordance with the following schedule:

1.	Status Report	6 months from the effective date
2.	Commence Construction	12 months from the effective date
3.	Status Report	18 months from the effective date
4.	Complete Construction	22 months from the effective date
5.	Obtain Operation Level	24 months from the effective date

Compliance dates set out in this Permit may be superseded or supplemented by compliance dates in judicial orders, or Pollution Control Board orders. This Permit may be modified, with Public Notice, to include such revised compliance dates.

The Permittee shall operate the dechlorination system or an alternative means of compliance in a manner to ensure continuous compliance with the Total Residual Chlorine limit, not to the extent that will result in violations of other permitted effluent characteristic, or water quality standards.

REPORTING

The Permittee shall submit a report no later than fourteen (14) days following the completion dates indicated above for each numbered item in the compliance schedule, indicating, a) the date the item was completed, or b) that the item was not completed, the reason for non-completion, and the anticipated completion date.

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
  (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
  (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**
  (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
  (c) Records of monitoring information shall include:
    (1) The date, exact place, and time of sampling or measurements;
    (2) The individual(s) who performed the sampling or measurements;
    (3) The date(s) analyses were performed;
    (4) The individual(s) who performed the analyses;
    (5) The analytical techniques or methods used; and
    (6) The results of such analyses.
  (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.
  (a) **Application.** All permit applications shall be signed as follows:
    (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
    (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
  (b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    (1) The authorization is made in writing by a person described in paragraph (a); and
    (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
    (3) The written authorization is submitted to the Agency.
  (c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
  (d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

  I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements.**
  (a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.
  Notice is required when:
    (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
    (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
    (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
  (b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
  (c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.
  (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
  (e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.
    (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Any upset which exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

13) **Bypass.**

(a) Definitions.

(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).

(c) Notice.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).

(d) Prohibition of bypass.

(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:

(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(iii) The permittee submitted notices as required under paragraph (13)(c).

(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset.**

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).

(4) The permittee complied with any remedial measures required under paragraph (4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:

(a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

(b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:

(1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
(2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
(3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
(1) One hundred micrograms per liter (100 ug/l);
(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
(4) The level established by the Agency in this permit.
(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
(a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
(a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
(b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
(c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

9) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slumies, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

(Rev. 7-9-2010 bah)

 Attachment #2

ILLINOIS POLLUTION CONTROL BOARD
July 9, 1981

IN THE MATTER OF:	)	
	)	
410(c) PETITION FOR DRESDEN NUCLEAR GENERATING STATION	)	PCB 79-134

MS. SUSAN D. PROCTOR OF ISHAM, LINCOLN AND BEALE APPEARED ON BEHALF OF PETITIONER.
MS. MARY V. REHMAN APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by J.D. Dumelle):

This case is before the Board pursuant to Rule 410(c) of Chapter 3: Water Pollution. In its petition of June 29, 1979 and its amended petition of December 30, 1980 Commonwealth Edison requests that the Board allow the following thermal standard to apply to Edison's Dresden nuclear power plant:

> During the period June 15 through September 30, the temperature of the plant discharges shall not exceed 32.2°C (90°F) more than 10% of the time in the period and never will exceed 33.9°C (93°F).

Such operation would result in periodic violations of Rule 203(i)(3) and (4) of Chapter 3 which allows an excursion above 32.2° (90°F) as measured at the boundary of a 26-acre mixing zone for 1% of the hours in any 12 month period. The proposed amendment does not include a mixing zone, but allows the 32.2°C (90°F) standard to be exceeded approximate 3% of the hours during any 12 month period.

Hearing was held on May 5, 1981. Several witnesses testified on behalf of Edison, but no witnesses testified on behalf of the Illinois Environmental Protection Agency (Agency) nor was any evidence introduced. No members of the public were present.

On May 26, 1981 the Agency filed a recommendation that the proposed alternate thermal standard be allowed for one year subject to certain conditions. These conditions would require various studies to be performed such that the Agency could better determine whether a permanent alternate standard is warranted. The Agency also stated that the U.S. Environmental Protection Agency (USEPA), which must also accept any alternative standard pursuant to Section 316(a) of the Clean Water Act (CWA) would not object to the Agency's recommended procedure.

On June 5, 1981 Edison responded to the Agency's recommendation by strongly maintaining that the proposed standard should be made permanent rather than temporary.

Dresden Station is a nuclear powered steam electric generating facility that utilizes three boiling water reactors. Condenser cooling water for all three units is withdrawn from the Kankakee and Des Plaines Rivers and ultimately discharged to the Illinois River, which is formed by the confluence of the Kankakee and Des Plaines Rivers.

Unit 1, which has a generating capacity of 207 megawatts electric power (MWe) began chemical cleaning decontamination on October 31, 1978 and is anticipated to be restarted no sooner than June of 1986. Units 2 and 3 each have a net generating capacity of 794 MWe and began operating on August 11, 1970 and October 30, 1971, respectively. Each uses a heat dissipation system consisting of a cooling pond, spray modules and cooling canals. The cooling systems can be used for three modes of operation: direct open cycle, indirect open cycle and closed cycle (see pp. 16-20 of "316(a)-410(c) Demonstration for the Dresden Nuclear Generating Station," hereinafter "Demonstration Document").

Until September 3, 1971, Unit 2 was operated in an indirect open cycle mode for cooling purposes. Before Unit 3 began commercial operation it was periodically operated in that mode until the cooling pond was opened on September 3, 1971. Under such operation water withdrawn from the Kankakee and Des Plaines Rivers is circulated through the condensers and discharged directly to the Illinois River (Dem. Doc. pp. 18-19).

From September 3, 1971 until October of 1974, Units 2 and 3 were operated in an indirect open cycle mode which routes the water through a two mile long spray canal containing floating spray modules and into a 1,275 acre cooling pond which retains the water for 2.8 days prior to discharge to the Illinois River (Dem. Doc. pp. 18-19).

After October of 1974, both units were primarily operated in a closed cycle mode. In this mode condenser water is recirculated after passage through the spray canals and cooling pond, with a small portion blowndown to the Illinois River (Dem. Doc. pp. 18-19).

Under the proposed standard Dresden Station would be operated in the indirect open cycle mode from June 15 through September 30 and under current NPDES permit conditions during the remainder of the year. As such it would violate 42CFR423.13(l) and (m) which requires an essentially closed-cycle cooling system by July 1, 1981. However, under Section 316 of the CWA a point source is entitled to an alternate standard if "shellfish, fish, and wildlife" are sufficiently protected. A similar showing can be made for exemption from Rule 410(c) of Chapter 3.

Edison believes that testimony and the Demonstration Document support a finding that the alternate stanard would result in overall environmental benefits. Consultants to the study testified that:

1. Indirect open cycle operation benefits water quality in the Illinois River by reducing BOD_5 most of the time, reducing ammonia levels, adding dissolved oxygen and by reducing coliform bacteria and toxic, heavy metals (Drs. Ewing and Brill at p. 1);

2. All of the possible operation modes would have a negligibly small impact on phytoplankton, periphyton and zooplankton populations (Verduin at pp. 1,2,6, 9-11);

3. Species composition of macroinvertebrates will remain essentially unchanged though there may be some slight increase in tubificids and possibly chironids (Lauer at pp. 1-2);

4. The expected thermal impact on fish would be considerably reduced under indirect open cycle versus the direct closed cycle mode of operation. No thermal mortality should result and behavioral avoidance of thermally sensitive species should lead those fish to the environmentally acceptable waters of the nearby Kankakee River. Finally, the thermal plume is expected to spread over the surface during summer low-flow periods such that cool, bottom waters should prevail (Dr. Gammon at pp. 6-8), and

5. The indirect open cycle mode would be beneficial to the fish community of the cooling pond, might make it acceptable as a fish nursery and thereby benefit the fish communities of the Kankakee, Des Plaines and Illinois Rivers.

Against this testimony is the Agency's opinion that more studies are necessary. No counter testimony was presented nor was any reason given for disputing the accuracy of the testimony, except that the lack of prior appreciable harm was based on information from September of 1971 until October of 1974 during which times Units 2 and 3 were operated in the indirect open cycle mode.

However, the testimony indicates that the conclusions reached were based not only on data from that time period, but also on data developed and analyzed between 1974 and the date of the completion of the Demonstration Document.

The Board finds that the evidence submitted indicates that the environmental impact of the proposed alternate standard on the Illinois River is at worst minimal and may, in fact, be beneficial. Therefore, the Board grants Edison's request for the alternate standard.

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*Testimony at hearing was largely presented in document form as exhibits. These will be referred to by the name of the authors and page numbers.

However, the Board further finds that an updated study of the actual impact of such operation is preferable to studies which are up to ten years old or projections based on modeling of a flow situation as complex as that affected by the Dresden Station. Therefore, and since Edison has agreed, the Board will follow the recommendation of the Agency to the extent of requiring that Edison conduct monitoring studies during the summer of 1981.

This opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

Pursuant to Rule 410(c) of Chapter 3: Water Pollution, it is hereby ordered that the Dresden Nuclear Generating Station shall be operated in accordance with the following limitation in lieu of Rules 203(i)(3) and (4) of Chapter 3:

During the period June 15 through September 30, the temperature of the plant discharges shall not exceed 32.2°C (90°F) more than 10% of the time in the period and never will exceed 33.9°C (93°F).

It is further ordered that:

1. At all times other than those indicated above the Dresden Station shall be operated in accordance with Rule 203(i)(3) and (4) of Chapter 3: Water Pollution.

2. Commonwealth Edison shall conduct monitoring studies in conformity with Edison's two documents submitted to the Agency on May 23, 1980 entitled "Proposed Hydrothermal Study Plan for Summer 1980" and "Proposed 1980 Environmental Program" as modified by Agency suggestions as set forth in its Recommendation submitted on May 26, 1981.

3. The Illinois Environmental Protection Agency shall modify Commonwealth Edison's NPDES permit for the Dresden Station in a manner consistent with this Opinion and Order.

IT IS SO ORDERED.

Mr. Anderson abstained.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 1st day of January, 1981 by a vote of 4-1.

Christan L. Moffett, Clerk
Illinois Pollution Control Board

CERTIFICATE OF SERVICE

I, STEPHANIE FLOWERS, an attorney, do certify that I filed electronically with the Office of the Clerk of the Illinois Pollution Control Board the attached APPEARANCE and RECOMMENDATION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and will cause the same to be served upon the following persons, by placing a true and correct copy in an envelope addressed to:

John Therriault, Assistant Clerk,
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601
(Electronic Filing)

General Counsel
Office of Legal Counsel
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271
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Brad Halloran, Hearing Officer
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and mailing it by First Class Mail from Springfield, Illinois on July 27, 2015 with sufficient postage affixed.

Stephanie Flowers
STEPHANIE FLOWERS

DATED: 7-27-15

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