

ILLINOIS ENVIRONMENTAL PROTECTION AGENCYSTATE OF ILLINOIS Pollution Control Board

March 22, 2011

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Re: Provisional Variance From Special Condition 3B of NPDES Permit IL0002224

Dear Mr. Marik:

The Illinois Environmental Protection Agency (Illinois EPA) has completed its technical review of the attached provisional variance request, dated March 21, 2012 (supplemented on March 22, 2012), and submitted by Exelon Generation Company, LLC for its Dresden Nuclear Generation Station ("Exelon Dresden" or "Facility"). (Exhibit A) Exelon Dresden has requested a provisional variance because intake temperatures at approximately 60° Fahrenheit ("F) or above present an undue hardship for Exelon Dresden to meet the effluent thermal limits of 60° F contained in Special Condition 3B of NPDES Permit IL0002224. (Exhibit B)

Based on its review, the Illinois EPA GRANTS Exelon Dresden a provisional variance from the thermal limits in Special Condition 3B of NPDES Permit IL0002224, subject to the specific conditions set forth below.

Background

Dresden is a nuclear-fueled steam electric generating facility located at the confluence of the Des Plaines and Kankakee Rivers near Morris, Illinois, at River Mile 272.3. The two boiling water reactors have a maximum generating capacity of 1892 megawatts electric. Circulating water used to cool and condense the steam from the generating process is discharged to a 1275 acre cooling pond. The Facility discharges cooling pond blowdown water into the Illinois River pursuant to NPDES Permit No. IL0002224, which was issued by the Illinois EPA on November 3, 2011.

The Facility normally operates in a closed cycle configuration from October 1st through June 14th of each year (about 8-1/2 months). In this mode, the cooling water flows through the Dresden pond and over a spillway into the cold canal. The cold canal directs

the cooling water approximately two miles back to the Facility. Flow regulating gates direct the majority of the cooling water to the intake structure through a return canal. Approximately, five percent, or 50,000 gpm, of the cooling water flows to the Illinois River via Outfall 002 (blowdown). Makeup water is obtained from the Kankakee River through a l/4-mile intake canal. The volume of makeup flow is equal to the blowdown flow and water lost to evaporation.

Special Condition No. 3B of Dresden's NPDES Permit requires that water temperature at representative locations in the main river shall not exceed 60° F (in December through March) during more than one (1) percent of the hours (excursion hours) in the 12-month period ending with any month (87.6 hours annually) and that, at no time shall the water temperature at such locations exceed the maximum limits by more than 3° F (63° F). The monthly maximum temperature limit contained in the Dresden Permit increases to 90° F beginning April 1 (thru November).

As a consequence of the record breaking warm weather and absence of cooling during the evening hours, high ambient river temperatures even at current flow rates, the capacity of the Illinois River to dissipate heat has been drastically reduced beyond its normal capabilities. The river is not cooling off during the evening hours as is typical this time of year. Without nighttime cooling, the river retains the heat introduced to it during the daytime hours, both upstream and downstream.

The available temperature data shows that the river temperature at the intake has been exceeding the monthly maximum temperature standards. For example, the upstream river temperature of the Kankakee River was measured at 66.4° F via a grab sample at approximately 3:00 PM on March 19, 2012. That temperature exceeds both the 60° F non-excursion hour monthly maximum standard for March and the 63° F excursion hour monthly limit. As a result of these record breaking conditions, Exelon Dresden began using excursion hours on Wednesday, March 15, 2012 at 5:00 PM.

When the ambient river temperatures exceed the non-excursion hour limits, the Facility has no option other than to use excursion hours, and once its allotment of excursion hours is depleted, the Facility must significantly derate or cease operating altogether to maintain compliance with the NPDES Permit. The currently permitted 87.6 excursion hours have been exhausted.

At no time has the difference between ambient river temperature and the temperature at the edge of the mixing zone exceeded 5° F. In fact, based on modeling, the difference between ambient river temperatures and the temperature at the edge of the mixing zone has not exceeded 0.5° F.

As a rule, Exelon Dresden has been able to operate well within its permitted thermal limits due to the fact that the ambient temperatures of the river (measured upstream of the discharge) generally remain below the non-excursion hour limit. It is only during periods when the ambient river temperatures are very close to or exceed the non-excursion hour

limits or during periods of extreme low flows that the Facility is forced to use a significant number of its excursion hour allowance.

Due to the river temperatures being unseasonably warm, Exelon Dresden expedited seasonal cooling tower maintenance to support additional cooling of the Facility's discharges and currently has all available cooling towers (11 towers out of 42 towers) in service. Exelon Dresden is currently expediting the return to service of the additional towers to support further cooling of plant discharges.

In addition to returning available cooling towers to service, Exelon Dresden also secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of its NPDES permit for March. The current configuration, closed cycle with no blowdown, instills additional thermal challenges on the plant equipment since there will be no fresh makeup water and the circulating water temperature will increase. Auxiliary systems (equipment heat exchangers) that support the nuclear generation process are currently experiencing higher than normal thermal load which challenges plant equipment and thermal cooling capabilities.

The lack of blowdown will alter cooling pond water chemistry and will result in negative impacts on plant equipment. Lack of blowdown and cooling pond make up will increase temperatures, increase pH, concentrate impurities, and create an environment where algae thrive in our cooling pond. Increased temperatures and the presence of algae, causes an algae bloom and increases pH and total alkalinity in the cooling pond and plant cooling systems. These conditions promote scaling of Facility equipment, particularly in the main steam condensers and safety related heat exchangers. Scaling ultimately could result in the replacement of approximately 120,000 condenser tubes and safety related heat exchangers, with corresponding extended Facility shut downs for both units to perform these repairs.

Due to these risks, there are technical specifications that Exelon Dresden must meet pursuant to its operating license issued by the Nuclear Regulatory Commission. If pH values and cooling water environment are not maintained within proper specifications, the plant is required to shut down until cooling water parameters return to specified ranges. Unless relief is granted by way of this provisional variance request, it is likely that the Facility will be forced to shut down for correspondingly significant durations. Shutting down or significantly derating a base-loaded nuclear power plant such as Exelon Dresden could jeopardize the stability of the electrical grid (and availability/reliability of electricity in the region), particularly if other plants are required to shut down or derate due to the unusual weather conditions being experienced. With both units offline and not immediately able to return to service, Exelon Dresden would not be available to support the voltage requirements that could occur under changing grid conditions.

Relief Requested

Due to the unseasonable warm weather, Exelon Dresden requests a provisional variance from Special Condition 3B in NPDES Permit IL0002224. Special Condition 3B of the NPDES Permit limits the number of excursion hours to 1% (87.6 hours) of the hours in a 12-month period ending with any month. Special Condition 3B states that the water temperatures in the Illinois River (beyond the mixing zone) may not exceed the maximum limit of 63° F in March. Therefore, the permit does not authorize the Facility to cause or contribute to temperatures in the river beyond the mixing zone to exceed 63° F in March.

Specifically, Exelon Dresden requests that a provisional variance be issued to this Facility through the end of March allowing the Facility to exceed the maximum temperature limit stated in Special Condition 3B of NPDES Permit No. IL0002224 by no more than 5°F (63°F for March) or 2°F above ambient river temperature, whichever is greater. Exelon Dresden requests that this relief begin on March 21, 2012, and end on April 1, 2012.

Agency Determinations

The Agency has reviewed the requested provisional variance and has concluded the following:

- 1. Any environmental impact from the requested relief shall be closely monitored, and the Agency shall be immediately notified of any adverse impacts.
- 2. No reasonable alternatives appear available;
- 3. No public water supplies should be affected;
- 4. No federal regulations will preclude the granting of this request; and
- 5. Exelon Dresden will face an arbitrary and unreasonable hardship if the request is not granted.

Conditions

The Illinois EPA hereby GRANTS Exelon Dresden a provisional variance from Special Condition 3B of NPDES Permit IL0002224, subject to the following conditions:

A. The term of this provisional variance shall begin on March 21, 2012, and end no later than March 31, 2012. This provisional variance is granted based on the facts and circumstances described in the request dated March 21, 2012, especially including several consecutive days of abnormally high ambient water temperatures in the Kankakee River and the necessary maintenance of cooling

towers. If the facts and circumstances described in the request dated March 21, 2012 abate the term of this provisional variance will end.

- B. During the term of this Provisional Variance, the water temperature at the edge of the mixing zone shall not exceed the maximum temperature limit stated in Special Condition 3B of the Facility's NPDES Permit (63° F) by more than 5° F or 2° F above ambient river temperature, whichever is greater. Exelon Dresden must continuously monitor discharge and receiving water temperatures and visually inspect all discharge areas at least four times per day to assess any mortalities to fish and other aquatic life. This monitoring shall occur during the period of the provisional variance and shall continue for a minimum of four days after the provisional variance expires. Exelon Dresden shall provide the best operation of its available equipment to produce the best effluent possible at all times during the term of this provisional variance.
- C. Exelon Dresden shall document environmental conditions during the term of the provisional variance and submit the documentation to the Illinois EPA and the Illinois Department of Natural Resources ("Illinois DNR") within thirty (30) days after this provisional variance expires.
- D. Exelon Dresden shall immediately notify the Illinois EPA and Illinois DNR of any unusual conditions, including mortalities of fish or other aquatic life, immediately take action to remedy the problem, investigate and document the cause and seriousness of the unusual conditions while providing updates to the Illinois EPA and Illinois DNR as changes occur until normal conditions return; notify the Illinois EPA and Illinois DNR when normal conditions return and submit the documentation to the Illinois EPA and Illinois DNR within thirty (30) days after normal conditions return.
- E. Exelon Dresden shall develop and implement a response and recovery plan to address any adverse environmental impact due to thermal conditions that could result from the provisional variance, including loss and damage to aquatic life.
- F. Exelon Dresden shall notify Roger Callaway, Illinois EPA, by telephone at 217-782-9720 when the discharge specified in this provisional variance ends. Written confirmation shall be sent within five days after the discharge specified in this provisional variance ends to the following address:

Illinois Environmental Protection Agency Bureau of Water - Water Pollution Control Attention: Roger Callaway 1021 North Grand Avenue East, MC #19 Springfield, Illinois 62794-9276

G. Exelon Dresden shall sign a certificate of acceptance of this provisional variance and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this order.

The certification should take the following form:

	, hereby accept and agree to be bound by all as of the provisional variance granted by the
Agency in	1
Petitioner	Title
Authorized Agent	 Date

Exelon Dresden shall continue to monitor all parameters and comply with all other conditions specified in its NPDES Permit No. IL0002224.

The Illinois EPA grants this provisional variance in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS 5/35(b), 36(c), and 37(b) (2004). The decision to grant this provisional variance is not intended to address compliance with any other applicable laws or regulations.

Sincerely,

Julie Armitage

Acting Chief Legal Counsel

cc:

Marcia Willhite Roger Callaway Chad Kruse

Exelen.

Nuclear

Exelon Generation Company, LLC Dresden Nuclear Power Station 6500 North Dresden Road Morris, IL 60450-9765 www.exeloncorp.com

March 22, 2012

PMLTR 12-0021

Mr. Roger Callaway (CAS-19)
Wastewater Compliance Unit Manager
Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274

Subject:

Dresden Nuclear Generation Station

NPDES Permit No. IL0002224 Request for Provisional Variance

Dear Mr. Callaway:

Exelon Generation Company, L.L.C. ("Exelon) hereby requests that the Illinois Environmental Protection Agency ("IEPA" or "Agency") grant a provisional variance for Dresden Nuclear Power Station ("Dresden", "Station", or "Facility"), pursuant to Section 35(b) of the Environmental Protection Act ("Act") 415 ILCS 5/35. Exelon submits this Application for a provisional variance consistent with IEPA procedures at 35 Illinois Administrate Code 104.300. Dresden Station is located at the confluence of the Des Plaines and Kankakee Rivers near Morris, Illinois. The Station discharges cooling pond blow down water into the Illinois River pursuant to NPDES Permit No. IL0002224, which IEPA issued on November 3, 2011.

BACKGROUND

Dresden is a nuclear-fueled steam electric generating facility located at the confluence of the Des Plaines and Kankakee Rivers near Morris, Illinois, at River Mile 272.3. The two boiling water reactors have a maximum generating capacity of 1892 megawatts

electric. Circulating water used to cool and condense the steam from the generating process is discharged to a 1275 acre cooling pond.

The Station normally operates in a Closed Cycle configuration from October 1st through June 14th of each year (about 8-1/2 months). In this mode, the cooling water flows through the Dresden pond and over a Spillway into the cold canal. The cold canal directs the cooling water approximately two miles back to the Station. Flow Regulating Gates direct the majority of the cooling water to the intake structure through a return canal. Approximately, 5 percent, or 50,000 gpm, of the cooling water flows to the Illinois River via Outfall 002 (blowdown). Makeup water is obtained from the Kankakee River through a ¼-mile intake canal. The volume of makeup flow is equal to the blowdown flow and water lost to evaporation.

The available temperature data shows that the river temperature at the intake has been exceeding the monthly maximum temperature standards. For example, the upstream river temperature of the Kankakee River was measured at 66.4 degrees F via a grab sample at approximately 1500 on March 19, 2012. That temperature exceeds both the 60 degree F non-excursion hour monthly maximum standard for March and the 63 degree F excursion hour limit. As a result of these record breaking conditions, Dresden Station began using excursion hours on Wednesday, March 15, 2012 at 1700.

As a consequence of the record breaking warm weather and absence of cooling during the evening hours, in addition to high ambient river temperatures, the capacity of the Illinois River to dissipate heat has been drastically reduced beyond its normal capabilities. The river is not cooling off during the evening hours as is typical this time of year. Without nighttime cooling, the river retains the heat introduced to it during the daytime hours, both upstream and downstream.

At *no time* has the difference between ambient river temperature and the temperature at the edge of the mixing zone exceeded 5 degree F. In fact, based on modeling, the difference between ambient river temperatures and the temperature at the edge of the mixing zone has *not exceeded 0.5 degrees F*.

I. RELIEF REQUESTED

A provisional variance is being requested from the restriction in Special Condition 3B of the NPDES Permit that limits the number of excursion hours to 1% (87.6 hours) of the hours in a 12-month period ending with any month. Specifically, Special Condition 3B states that the water temperatures in the Illinois River (beyond the mixing zone) may not exceed the maximum limit of 63°F in March. Therefore, the permit does not authorize the station to cause or contribute to temperatures in the river beyond the mixing zone to exceed 63 degrees F in March.

Dresden Station secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards (63

degrees F) in Special Condition 3B of the NPDES permit for March. Exelon requests that a provisional variance be issued to Dresden Station through the end of March allowing the station to exceed the maximum temperature limit stated in Special Condition 3B of NPDES Permit No. IL0002224 by no more than 5°F (63°F for March) or 2°F above ambient river temperature, whichever is greater. This relief shall begin on March 21, 2012, and end on April 1, 2012.

II. NECESSITY FOR REQUEST

When the ambient river temperatures exceed the non-excursion hour limits, the Station has no option other than to use excursion hours, and once its allotment of excursion hours is depleted, the Station must significantly derate or cease operating altogether to maintain compliance with the NPDES Permit. The currently permitted 87.6 excursion hours have been exhausted.

As a rule, Dresden Station has been able to operate well within its permitted thermal limits due to the fact that the ambient temperatures of the River (measured upstream of the discharge) generally remain below the non-excursion hour limit. It is only during periods when the ambient river temperatures are very close to or exceed the non-excursion hour limits or during periods of extreme low flows that the Station is forced to use a significant number of its excursion hour allowance.

Due to the river temperatures being unseasonably warm, Dresden Station expedited seasonal cooling tower maintenance to support additional cooling of Dresden Station discharges and currently has all available cooling towers (11 towers out of 42 towers) in service. Dresden Station is currently expediting the return to service of the additional towers to support further cooling of plant discharges.

In addition to returning available cooling towers to service, Dresden Station also secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of the NPDES permit for March. The current configuration, closed cycle with no blowdown, instills additional thermal challenges on the plant equipment since there will be no fresh makeup water and the circulating water temperature will increase. Auxiliary systems (e.g., equipment heat exchangers) that support the nuclear generation process are currently experiencing higher than normal thermal load which challenges plant equipment and thermal cooling capabilities.

The lack of blowdown will alter cooling pond water chemistry and will result in negative impacts on plant equipment. Lack of blowdown and cooling pond make up will increase temperatures, increase pH, concentrate impurities, and create an environment where algae thrives in our cooling pond. Increased temperatures and the presence of algae, causes an algae bloom and increases pH and total alkalinity in the cooling pond and plant cooling systems. These conditions promote scaling of plant equipment, particularly in the main steam condensers and safety related heat exchangers. Scaling ultimately could result in the replacement of approximately 120,000 condenser tubes

and safety related heat exchangers, with corresponding extended plant shut downs for both units to perform these repairs.

Due to these risks, there are technical specifications that Dresden Station must meet pursuant to its operating license issued by the Nuclear Regulatory Commission. If pH values and cooling water environment is not maintained within proper specifications, the plant is required to shut down until cooling water parameters return to specified ranges. Unless relief is granted by way of this provisional variance request, it is likely that the Station will be forced to shut down for correspondingly significant durations. Shutting down or significantly derating a base-loaded nuclear power plant such as Dresden could jeopardize the stability of the electrical grid (and availability/reliability of electricity in the region), particularly if other plants are required to shut down or derate due to the unusual weather conditions being experienced. With both units offline and not immediately able to return to service, Dresden Station would not be available to support the voltage requirements that could occur under changing grid conditions.

III. ASSESSMENT OF ADVERSE ENVIRONMENTAL IMPACTS

The thermal impact of the proposed variance with respect to the near-field aquatic community is expected to be minimal. The aquatic community is already experiencing much higher than normal ambient temperatures, with no apparent impact to date. The additional thermal load the plant will place on the aquatic community is expected to be minimal, since there is approximately a 0.5 degrees difference between the ambient river temperatures and the edge of the mixing zone.

Because Dresden Station is not proposing to increase cooling water flows or increase the temperature of cooling water discharges, there will be no increase in impingement or entrainment as a result of the issuance of the requested Provisional Variance. Additionally, because the ambient river temperature increase has been gradual, resident fish species have either acclimated to the higher temperature or have found thermal refuge. In addition, the current flows afford a delta T of approximately 0.5°F between the upstream and downstream temperatures. Therefore, resident fish species will not be subject to any heat shock as a result of increasing the allotment of excursion hours for Dresden Station.

The Station normally discharges a blowdown flow of warmer cooling pond water to the Illinois River during the closed cycle operating mode. Thus, fish inhabiting the discharge canal will be acclimated to temperatures above ambient river temperature and should be sufficiently reactive to avoid areas that are out of their desired temperature range.

Despite Dresden's significant discharge volume, the thermal plume has been characterized as buoyant in all previous studies submitted to the IEPA. Therefore, benthic organisms are not likely to be adversely affected by the short-term relief requested. The overall impact of the Station's thermal plume on the Illinois River is expected to be minimal.

IV. ALTERNATIVES TO REQUESTED RELIEF

Exelon considered various alternatives to seeking regulatory relief related to the thermal variance currently requested. Exelon is currently operating in closed cycle per the terms of the NPDES permit, thereby limiting thermal impact to the Illinois River. Due to the river temperatures being unseasonably warm, Dresden Station expedited seasonal cooling tower maintenance to support additional cooling of Dresden Station discharges and currently has all available cooling towers (11 towers out of 42 towers) in service. Dresden Station is currently expediting the return to service of the additional towers to support further cooling of plant discharges. In addition to returning available cooling towers to service, Dresden Station also secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of the NPDES permit for March. The current configuration, closed cycle with no blowdown, instills additional thermal challenges on the plant equipment since there will be no fresh makeup water and the circulating water temperature will increase.

Exelon has also considered shutting down or significantly derating. Derating a base-loaded nuclear power plant such as Dresden, could jeopardize the stability of the electrical grid (and availability/reliability of electricity in the region), particularly if other plants are required to shut down or derate due to the unusual weather conditions being experienced.

V. <u>MITIGATIVE ACTIONS TO BE TAKEN DURING THE VARIANCE PERIOD</u>

During the period when the Station uses any additional excursion hours authorized by the requested provisional variance, Dresden Station will do the following: (1) continuously monitor the intake and discharge temperatures and assess water temperatures at the edge of the mixing zone using the NPDES Permit temperature monitoring curve or field measurements; (2) on a daily basis, inspect the intake and discharge areas to assess any mortalities to aquatic life, and report the results of these monitoring activities to the Agency within 30 days of the expiration of the provisional variance (or such other time as agreed upon by the Agency); and (3) notify the Agency of any significant adverse environmental conditions observed that might be caused by operations authorized by the provisional variance, including mortalities to fish or other aquatic life, investigate the cause of such conditions, provide the Agency updates regarding the situation, including when normal conditions return, and submit a report to the Agency regarding these matters within 30 days of the expiration of the provisional variance period (or such other time as agreed upon by the Agency).

VI. ADDITIONAL ENVIRONMENTAL MONITORING

The thermal impact of the proposed variance with respect to the near-field aquatic community is expected to be minimal because the aquatic community is presently experiencing higher than normal ambient temperatures for this time of year with no apparent impact to date. The thermal load placed on the biological community will be minimal, since there is approximately a 0.5 degrees difference between the ambient river temperatures and the edge of the mixing zone. Dresden Station does not plan to do any additional environmental monitoring because the upstream ambient river temperatures are what is causing Dresden Station to exceed its 60°F discharge temperature limit in March.

VII. SUMMARY

Exelon requests that a provisional variance be issued to Dresden Station through the end of March allowing the station to exceed the maximum temperature limit stated in Special Condition 3B of NPDES Permit No. IL0002224 by no more than 5°F (63°F for March) or 2°F above ambient river temperature, whichever is greater. This relief shall begin on March 21, 2012 and will end on April 1, 2012.

It is Exelon's position that not granting this provisional variance would impose an arbitrary and unreasonable hardship due to unseasonably warmer Kankakee River Intake temperatures, challenge to base load power generation and electrical grid stability, and additional thermal impacts to plant equipment.

There is no other provisional variance relief in effect at this time for Dresden Station.

Should you require any further information in order to expedite the processing of this request or have any questions, please contact Morgan Davis of my staff at 815-416-3287.

Sincerely.

Shane Marik

Dresden Station Plant Manager

CC:

D. Leggett

Z. Karpa

M. Davis

J. Bollini

J. Petro

R. Ruffin

J. Gould

File

S. Neal



Exelon Generation Company, LLC Dresden Nuclear Power Station 6500 North Dresden Road Morris, IL 60450-9765

www.exeloncorp.com

Nuclear

March 21, 2012

PMLTR 12-0020

Mr. Roger Callaway (CAS-19)
Wastewater Compliance Unit Manager
Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274

Subject:

Dresden Nuclear Generation Station

NPDES Permit No. IL0002224 Request for Provisional Variance

Dear Mr. Callaway:

Exelon Generation Company, L.L.C. ("Exelon) hereby requests that the Illinois Environmental Protection Agency ("IEPA" or "Agency") grant a provisional variance for Dresden Nuclear Power Station ("Dresden", "Station", or "Facility"), pursuant to Section 35(b) of the Environmental Protection Act ("Act") 415 ILCS 5/35. Exelon submits this Application for a provisional variance consistent with IEPA procedures at 35 Illinois Administrate Code 104.300. Dresden Station is located at the confluence of the Des Plaines and Kankakee Rivers near Morris, Illinois. The Station discharges wastewater pursuant to NPDES Permit No. IL0002224, which IEPA issued on November 3, 2011.

BACKGROUND

Dresden is a nuclear-fueled steam electric generating facility located at the confluence of the Des Plaines and Kankakee Rivers near Morris, Illinois, at River Mile 272.3. The two boiling water reactors have a maximum generating capacity of 1892 megawatts electric. Circulating water used to cool and condense the steam from the generating process is discharged to a 1275 acre cooling pond.

The Station normally operates in a Closed Cycle configuration from October 1st through June 14th of each year (about 8-1/2 months). In this mode, the cooling water flows through the Dresden pond and over a Spillway into the cold canal. The cold canal directs the cooling water approximately two miles back to the Station. Flow Regulating Gates direct the majority of the cooling water to the intake structure through a return canal. Approximately, 5 percent, or 50,000 gpm, of the cooling water flows to the Illinois River via Outfall 002 (blowdown). Makeup water is obtained from the Kankakee River through a ¼-mile intake canal. The volume of makeup flow is equal to the blowdown flow and water lost to evaporation.

I. RELIEF REQUESTED

A provisional variance is being requested from the restriction in Special Condition 3B of the NPDES Permit that limits the number of excursion hours to 1% (87.6 hours) of the hours in a 12-month period ending with any month. Specifically, Special Condition 3B states that the water temperatures in the Illinois River (beyond the mixing zone) may not exceed the maximum limit of 63°F in March.

Dresden Station secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of the NPDES permit for March. Exelon requests that a provisional variance be issued to Dresden Station through the end of March allowing the station to exceed the maximum temperature limit stated in Special Condition 3B of NPDES Permit No. IL0002224 by no more than 5°F (63°F for March) **or** 2°F above ambient river temperature, whichever is greater, for up to an additional 250 hours. This relief shall begin on the date that the currently permitted 87.6 excursion hours are exhausted or on the date that Dresden Station's discharge first causes or contributes to an exceedance of the applicable permitted excursion hour temperature limit of 63°F in March. Dresden Station will notify the Agency when discharges from Outfall 002 are restored. The provisional variance period will end on April 1, 2012.

II. NECESSITY FOR REQUEST

When the ambient river temperatures exceed the non-excursion hour limits, the Station has no option other than to use excursion hours, and once its allotment of excursion hours is depleted, the Station must significantly derate or cease operating altogether to maintain compliance with the NPDES Permit.

Special Condition 3B of NPDES Permit limits the temperature at the edge of the mixing zone to 60°F in March, except when the Station is using excursion hours, during which time the temperatures at the edge of the mixing zone may be no more than 3°F warmer than these limits. As a rule, the Dresden Station has been able to operate well within these limits due to the fact that the ambient temperatures of the River (measured upstream of the discharge) generally remain below the non-excursion hour limit. It is only during periods when the ambient river temperatures are very close to or exceed the non-excursion hour limits or during periods of extreme low flows that the Station is forced to use a significant number of its excursion hour allowance.

Due to the river temperatures being unseasonably warm, Dresden Station expedited seasonal cooling tower maintenance to support additional cooling of Dresden Station discharges and currently has all available cooling towers (11 towers out of 42 towers) in service. Dresden Station is currently expediting the return to service of the additional towers to support further cooling of plant discharges. In addition to returning available cooling towers to service, Dresden Station also secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of the NPDES permit for March. The current configuration, closed cycle with no blowdown, instills additional thermal challenges on the plant equipment since there will be no fresh makeup water and the circulating water temperature will increase.

The resonance time for the Dresden Cooling Lake is three days. It is important to note that adding cooling facilities (such as supplemental cooling towers) will not allow the Station to achieve compliance with a limit that already is exceeded even before <u>any</u> heat is added as a result of Station operations.

The station does not currently have temperature probes installed upriver of its intake because the Permit does not require upstream monitoring in the winter months, and, due to concerns with icing, the probes are typically removed in winter to avoid breakage. However, Dresden Station has expedited the installation of their thermal monitoring probes to support monitoring river temperatures during this unseasonably high temperature period. The available temperature data shows that the river temperature at the intake has been exceeding the monthly maximum temperature standards. For example, the upstream river temperature of the Kankakee River was measured at 66.4 degrees F via a grab sample at approximately 1500 on March 19, 2012. That temperature exceeds both the 60 degree F non-excursion hour monthly maximum standard for March and the 63 degree F excursion hour limit. As a result of

these record breaking conditions, Dresden Station began using excursion hours on Wednesday, March 15, 2012 at 1700.

As a consequence of the record breaking warm weather and absence of cooling during the evening hours, high ambient river temperatures even at current flow rates, the capacity of the Illinois River to dissipate heat has been drastically reduced beyond its normal capabilities. The river is not cooling off during the evening hours as is typical this time of year. Without nighttime cooling, the river retains the heat introduced to it during the daytime hours, both upstream and downstream.

At *no time* has the difference between ambient river temperature and the temperature at the edge of the mixing zone exceeded 5 degree F. In fact, based on modeling, the difference between ambient river temperatures and the temperature at the edge of the mixing zone has *not exceeded 0.5 degrees F*.

Unless relief is granted by way of this provisional variance request, it is likely that the Station will be forced to shut down for correspondingly significant durations. Shutting down or significantly derating a base-loaded nuclear power plant such as Dresden could jeopardize the stability of the electrical grid (and availability/reliability of electricity in the region), particularly if other plants are required to shut down or derate due to the unusual weather conditions being experienced. With both units offline and not immediately able to return to service, Dresden Station would not be available to support the voltage requirements that could occur under changing grid conditions.

Additionally, the Station will not be able to operate in the closed cycle configuration indefinitely. If a precipitation event were to occur, the cooling lake level will gradually increase, whereas the station is required to maintain the level within certain design parameters. The increased lake level may increase flood potential due to the event of a dike breach. Most significantly, the lack of blowdown will result in lake water chemistry impacts which have the potential to impact plant equipment.

III. ASSESSMENT OF ADVERSE ENVIRONMENTAL IMPACTS

The thermal impact of the proposed variance with respect to the near-field aquatic community is expected to be minimal. The aquatic community is already experiencing much higher than normal ambient temperatures, with no apparent impact to date. The additional thermal load the plant will place on the aquatic community is expected to be minimal, since there is approximately a 0.5 degrees difference between the ambient river temperatures and the edge of the mixing zone.

Because Dresden Station is not proposing to increase cooling water flows or increase the temperature of cooling water discharges, there will be no increase in impingement or entrainment as a result of the issuance of the requested Provisional Variance. Additionally, because the ambient river temperature increase has been gradual, resident fish species have either acclimated to the higher temperature or have found

thermal refuge. In addition, the current flows afford a delta T of approximately 0.5°F between the upstream and downstream temperatures. Therefore, resident fish species will not be subject to any heat shock as a result of increasing the allotment of excursion hours for Dresden Station.

The Station normally discharges a blowdown flow of warmer cooling pond water to the Illinois River during the closed cycle operating mode. Thus, fish inhabiting the discharge canal will be acclimated to temperatures above ambient river temperature and should be sufficiently reactive to avoid areas that are out of their desired temperature range.

Despite Dresden's significant discharge volume, the thermal plume has been characterized as buoyant in all previous studies submitted to the IEPA. Therefore, benthic organisms are not likely to be adversely affected by the short-term relief requested. The overall impact of the Station's thermal plume on the Illinois River is expected to be minimal.

IV. ALTERNATIVES TO REQUESTED RELIEF

Exelon considered various alternatives to seeking regulatory relief related to the thermal variance currently requested. Exelon is currently operating in closed cycle per the terms of the NPDES permit, thereby limiting thermal impact to the Illinois River. Due to the river temperatures being unseasonably warm, Dresden Station expedited seasonal cooling tower maintenance to support additional cooling of Dresden Station discharges and currently has all available cooling towers (11 towers out of 42 towers) in service. Dresden Station is currently expediting the return to service of the additional towers to support further cooling of plant discharges. In addition to returning available cooling towers to service, Dresden Station also secured Outfall 002 on March 21, 2012 in response to plant intake temperatures from the Kankakee River exceeding the monthly maximum standards in Special Condition 3B of the NPDES permit for March. The current configuration, closed cycle with no blowdown, instills additional thermal challenges on the plant equipment since there will be no fresh makeup water and the circulating water temperature will increase.

Exelon has also considered shutting down or significantly derating. Derating a base-loaded nuclear power plant such as Dresden, could jeopardize the stability of the electrical grid (and availability/reliability of electricity in the region), particularly if other plants are required to shut down or derate due to the unusual weather conditions being experienced.

V. MITIGATIVE ACTIONS TO BE TAKEN DURING THE VARIANCE PERIOD

During the period when the Station uses any additional excursion hours authorized by the requested provisional variance, Dresden Station will do the following: (1) continuously monitor the intake and discharge temperatures and assess water temperatures at the edge of the mixing zone using the NPDES Permit temperature monitoring curve or field measurements; (2) on a daily basis, inspect the intake and discharge areas to assess any mortalities to aquatic life, and report the results of these monitoring activities to the Agency within 30 days of the expiration of the provisional variance (or such other time as agreed upon by the Agency); and (3) notify the Agency of any significant adverse environmental conditions observed that might be caused by operations authorized by the provisional variance, including mortalities to fish or other aquatic life, investigate the cause of such conditions, provide the Agency updates regarding the situation, including when normal conditions return, and submit a report to the Agency regarding these matters within 30 days of the expiration of the provisional variance period (or such other time as agreed upon by the Agency).

VI. ADDITIONAL ENVIRONMENTAL MONITORING

The thermal impact of the proposed variance with respect to the near-field aquatic community is expected to be minimal because the aquatic community is presently experiencing higher than normal ambient temperatures for this time of year with no apparent impact to date. The thermal load placed on the biological community will be minimal, since there is approximately a 0.5 degrees difference between the ambient river temperatures and the edge of the mixing zone. Dresden Station does not plan to do any additional environmental monitoring because the upstream ambient river temperatures are what is causing Dresden Station to exceed its 60°F discharge temperature limit in March.

VII. SUMMARY

Exelon requests that a provisional variance be issued to Dresden Station through the end of March allowing the station to exceed the maximum temperature limit stated in Special Condition 3B of NPDES Permit No. IL0002224 by no more than 5°F (63°F for March) or 2°F above ambient river temperature, whichever is greater, for up to an additional 250 hours. This relief shall begin on the date that the currently permitted 87.6 excursion hours are exhausted or on the date that Dresden Station's discharge first causes or contributes to an exceedance of the applicable permitted excursion hour temperature limit of 63°F in March. Dresden Station will notify the Agency when discharges from Outfall 002 are restored and either of these events have occurred, thereby triggering the provisional variance. The provisional variance period will end on April 1, 2012.

It is Exelon's position that not granting this provisional variance would impose an arbitrary and unreasonable hardship due to unseasonably warmer Kankakee River Intake temperatures, challenge to base load power generation and electrical grid stability, and additional thermal impacts to plant equipment.

There is no other provisional variance relief in effect at this time for Dresden Station.

Should you require any further information in order to expedite the processing of this request or have any questions, please contact Morgan Davis of my staff at 815-416-3287.

Sincerely,

Shane Marik Dresden Station Plant Manager

- CC: D. Leggett
 - M. Davis
 - J. Petro
 - J. Gould
 - S. Neal
 - Z. Karpa
 - J. Bollini
 - R. Ruffin

File



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

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:

Facility Name and Address:

Exelon Generation Company, LLC 4300 Winfield Road

Warrenville, Illinois 60555-5701

Dresden Generating Station 6500 North Dresden Road Morris, Illinois 60450

(Grundy County)

Discharge Number and Name:

Receiving Waters:

001 Unit 1 House Service Water

Unit 1 Intake Screen Backwash

002 Cooling Pond Blowdown

A01

Illinois River

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 (IÉPA) not later than 180 days prior to the expiration date.

Manager, Permit Section

Division of Water Pollution Control

SAK: LRL:11041402.bah

Effluent Limitations and Monitoring

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

	LOAD LIMITS lbs/day <u>DAF (DMF)</u>			ITRATION S mg/L		
PARAMETER <u>Outfall 001</u> – Unit 1 House (Average Flow = 4.32 MGE		DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
	p & Equipment Cool creen Backwash (A0 noff*					
Flow (MGD)	See Special Cond	lition 1.			Daily**	Continuous
pН	See Special Cond	lition 2.			1/Month**	Grab

15

15

1/Month**

1/Month**

1/Month**

1/Month**

0.05

30

20

Grab

Grab

Grab

Grab

Total Residual Chlorine

Total Suspended Solids

Temperature

Oil/Grease

<u>Outfall A01</u> – Unit 1 Intake Screen Backwash* (Intermittent Discharge)

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)

See Special Condition 3.

See Special Condition 4.

- 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
рН	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.

^{* -} See Special Condition 10 and 12.

^{** -} When Discharging

^{* -} There shall be no discharge of collected debris.

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:

at all times as follows:						
	LOAD LIMITS <u>DAF (DN</u>	MF)	CONCEN LIMITS			
PARAMETER Outfall A02 – Unit 2/3 Intake S (Intermittent Discharge)	30 DAY AVERAGE creen Backwash*	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
* - There shall be no discharge	of collected debris.					
Outfall B02 – Wastewater Trea (DAF = 0.068 MGD)	tment System Efflu	ent				
The discharge consists of: 1. Unit 1 and 2/3 Oil/W 2. Building Floor Drain 3. Building Roof Drain 4. Stormwater Runoff*	s s					
Flow (MGD) S	ee Special Condition	on 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 Treat (DAF = 0.073 MGD)	ment System Efflue	nt				
The discharge consists of: 1. Contaminated Equip 2. Contaminated Floor 3. Chemistry Laborato 4. Decontamination Sy 5. Condensate Polishe 6. Units 2 and 3 Auxilia	Drains ry Drains rstem Drains r Sonic Cleaning W					
Flow (MGD) Se	ee Special Conditio	n 1.			1/Month	Continuous
Total Suspended Solids			15	30	1/Month	Grab
Oil/Grease			15	20	1/Month	Grab
Outfall D02 – Demineralizer Re (Average Flow = 0.0082 MGD)	generate Waste and	d Filter Backwash				
Flow (MGD) Se	ee Special Condition	n 1.			1/Month	Measure
Total Suspended Solids			15	30	1/Month	8-Hour Composite

Effluent Limitations and Monitoring

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

	LOAD LIMITS lbs/day DAF (DMF)		LIMITS	TRATION S mg/L			
PARAMETER Outfall 003 - Sewage Trea (DAF = 0.031 MGD)	30 DAY AVERAGE Itment Plant Effluent	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE	
Flow (MGD)	See Special Condit	tion 1.			1/Month	Continuous	
рН	See Special Condit	tion 2.			1/Month	Grab	
BOD₅	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 Condit	ion 17.		400/100 ml	1/Month	Grab	
Total Residual Chlorine	See Special Condit	ion 4.		0.05	1/Day*	Grab	
* - When chlorinating.	•						
Outfall 004 – Cooling Pond (Average Flow = 32.316 Mg			·				
Flow (MGD)	See Special Condit	ion 1.			1/Day When Discharging	Measure	
рН	See Special Conditi	ion 2.			1/Discharge Event	Grab	
Temperature	See Special Conditi	ion 11.			1/Day When Discharging	Grab	
Total Residual Chlorine	See Special Conditi	ion 4 & 21.		0.05	1/Discharge Event	Grab	
* Con Consist Conditions	15 and 00						

^{* -} See Special Conditions 15 and 20.

Outfall 005 – South East Area Runoff* (Intermittent Discharge)

<u>Outfall 006</u> – North East Area Runoff* (Intermittent Discharge)

^{* -} See Special Conditions 10 and 12.

^{* -} See Special Conditions 10 and 12.

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.

<u>SPECIAL CONDITION 3</u>. (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.

	<u>Jan.</u>	<u>Feb.</u>	Mar.	<u>April</u>	May	<u>June</u>	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 III. 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.

Special Conditions

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.

<u>SPECIAL CONDITION 5</u>. 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.

<u>SPECIAL CONDITION 6</u>. 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.

Special Conditions

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:
 - 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.
 - 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;

Special Conditions

- 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.
 - 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 gnt 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.

Special Conditions

- 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.

Special Conditions

- 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

Special Conditions

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.

<u>SPECIAL CONDITION 12</u>. 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.

<u>SPECIAL CONDITION 16</u>. 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 III. 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 III. 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.

Special Conditions

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.
- 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:

Status Report
 Commence Construction
 Status Report
 Status Report
 Complete Construction
 Complete Construction
 Obtain Operation Level
 6 months from the effective date
 12 months from the effective date
 22 months from the effective date
 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.