

**DRBC**

**Summary of Comments and Responses Relating to Docket D-1969-210 CP-13  
For the Exelon Generation, LLC Limerick Generating Station**

A summary of comments submitted during the public comment period – from June 28, 2012 through October 27, 2012 – and the Commission’s responses follows.

**I. Procedural Matters**

**1. COMMENT:**

Some commenters expressed their concern that there was not more widespread notification given for the Public Hearing held on August 28, 2012.

**RESPONSE:**

The Commission received Exelon’s application for renewal of Commission approval for withdrawals and discharges to serve the Limerick Generating Station (“LGS”) on September 17, 2007. Commission staff on April 14, 2008 issued a Notice of Application Received (“NAR”) for the project and circulated this to the list of interested parties (“IPL”) that had previously been created for the project. The IPL includes parties who are either self-identified or identified by the Commission, state or applicants as having a potential interest in an application. The Commission adds names to the IPL for a project as the names are submitted or identified by third parties; the IPL is never “closed.” Accordingly, names were added to the IPL between publication of the NAR in 2007 and issuance of Commission’s notice of public hearing on the LGS draft docket in June and July of 2012.

Concurrent with issuance of the NAR in 2007, information about the LGS application was posted on the Project Application Status Page of the Commission’s website, where it was annually updated by the addition of hearing dates. Hearings on the project were held each December from 2008 through 2012 – on December 10, 2008, December 9, 2009, December 8, 2010, December 11, 2011, and December 5, 2012 – to continue the existing docket, Docket No. D-69-2012 CP (Revision 12), pending approval of the consolidated and revised docket, No. D-69-2010 CP-13. Each Commission meeting and public hearing at which the existing docket was extended was the subject of a public notice that identified the docket extension as a hearing item. The status of the Commission’s review was discussed at each of the hearings.

During the period during which Exelon’s application remained under review, the status of the review also was discussed at public meetings held semi-annually during which data from the LGS Water Supply Modification Demonstration Project and Wadesville Mine Pool (WMP) Withdrawal and Streamflow Augmentation Demonstration Project (collectively, “Demonstration Project”) were presented.

The Commission’s notice of public hearing on the revised docket was published on the Commission’s website on June 28, 2012 and in the Pennsylvania Bulletin on July 14, 2012. Also

on June 28, 2012, those on the IPL received web links to both the hearing notice and draft docket or were mailed hard copies of each. A press release about the hearing was issued on July 31, 2012 to the Commission's entire media list (some 440 individuals as of Mar. 2013), the Commission's press release listserv (237 subscribers as of Mar. 2013) and its RSS feed (1010 visits in July 2012 and 970 in August 2012).

Web publication of the hearing notice 60 days in advance of the public hearing, provision of a 120-day comment period, selection of a hearing location in Pottstown, PA rather than at the Commission's office building in West Trenton, use of a hearing date separate from any of the Commission's five regular meeting and public hearing dates in 2012 and issuance of a press release all were measures beyond the Commission's standard procedures. These accommodations were made in response to the level of public interest expressed to the Commission, including requests by elected officials and the non-governmental organization known as ACE to allow sufficient opportunity for public review and comment on the draft docket. During the comment period, articles on the draft docket and the pending DRBC action were published in local newspapers and the *Philadelphia Inquirer*.

## **2. COMMENT**

Many commenters expressed concern that they would be allowed only three (3) minutes to speak at the public hearing.

### **RESPONSE:**

In order to accommodate all those who desire to speak on a matter and to effectively allocate limited time, the Commission Chair or hearing officer customarily imposes a time limit on speakers at both public meetings and hearings. When a large number of speakers is expected, as it was for the August 2012 hearing on the LGS docket, a time limit may be announced in advance through the hearing notice. Potential commenters are thus able to plan their remarks to highlight key points in oral testimony while submitting more detailed comments in writing. There is no word or page limit on written submissions.

In anticipation of the potential for a large number of speakers on the LGS draft docket, the Commission's public notice advised that each speaker initially would be accorded three minutes, but that after everyone who desired to speak was heard, the hearing officer would accept requests from those who wished to supplement their earlier remarks. These procedures were reiterated by the hearing officer at the outset of the hearing on August 28. The hearing was convened at 6:01 p.m. and was scheduled to conclude at 9:00 p.m. After fifteen individuals had offered comments, including several who spoke twice, the hearing officer left the hearing open for an additional 30 minutes, during which no one requested an opportunity to speak. The hearing was adjourned at 7:30 p.m.

The Commission conducted an informational meeting from 4:30 p.m. until 5:30 p.m. on August 28 at the hearing location immediately prior to the hearing. During this session, Commission staff discussed the draft docket and answered audience questions.

**3. COMMENT:**

Several commenters requested that the Commission require public notice and input for all future water uses requested at the LGS.

**RESPONSE:**

The docket approves peak daily and maximum monthly withdrawals from the Schuylkill River of 58.2 million gallons per day (mgd) and 1.7422 billion gallons per month (bgm), respectively, and establishes the conditions under which these authorized withdrawals may be made. The docket further describes conditions for use of diversions and auxiliary intakes as follows when use of the Schuylkill is restricted: flow augmentation releases to the Schuylkill River from the Wadesville Mine Pool and associated withdrawals by LGS; flow augmentation releases to the Schuylkill from the Tamaqua area Still and Owl Creek Reservoirs and associated withdrawals by LGS; withdrawals from the Perkiomen Creek under prescribed flow conditions; and diversions from the main stem Delaware River via the Point Pleasant Pumping Station, the Bradshaw Reservoir and transmission main, the Bedminster Water Processing Facility, the East Branch Perkiomen Creek and the Perkiomen Creek, and associated withdrawals from the Perkiomen by LGS. Withdrawals of up to 6.1 million gallons per minute (combined) of potable, non-potable and emergency-use water from four on-site groundwater wells are also authorized. In addition, compensation releases from Exelon's storage at Merrill Creek Reservoir when required by the Commission in accordance with flow targets established for the Delaware River at Trenton are approved in lieu of curtailment of withdrawals by LGS.

Before the docket holder may withdraw or utilize flow augmentation releases from a new source or increase the approved peak or monthly water withdrawals from sources identified in the docket, a docket revision is required, which will be subject to a duly noticed public hearing and opportunity for written comment prior to any determination by the Commission on such request.

**4. COMMENT:**

Some commenters indicated that that they believe the DRBC does not welcome full public participation and has not shown evidence of thoroughly informing the public about the LGS. The same group also indicated that the DRBC has not responded to its concerns in the past.

**RESPONSE:**

The response to this Comment 4 incorporates by reference the response to Comment 1.

In addition to the measures described in the response to Comment 1, the DRBC has consistently and on a regular basis shared data and reports on the LGS Water Supply Modification Demonstration Project and Wadesville Mine Pool (WMP) Withdrawal and Streamflow Augmentation Demonstration Project since inception of the first of these projects in June of 2003. Annual reports and data from the projects, required to be submitted to DRBC as

conditions of Docket D-69-210 CP (Final) (Revision 12), are posted on the Commission's website at <http://www.state.nj.us/drbc/programs/project/wadesville/archives.html>. In accordance with DECISION Condition II.e. of Docket D-1969-210 CP (Revision 12), approved in December of 2004, Exelon participated from July 2005 through January 2013 in semi-annual open meetings with the DRBC, to discuss the progress of the Demonstration Project and respond to questions and concerns. All those listed on the IPL received direct email notice of these meetings and a meeting notice for each meeting was posted on the Commission's website, generally at least 30 days in advance of the event.

In addition to these outreach efforts, during the years that the Demonstration Project has been implemented, members of the Commission staff have met with concerned citizens (in one instance travelling to their home) and responded to their written and oral questions in good faith and to the best of the staff's ability. The Commission recognizes that members of the public disagree with some of the staff's responses.

**5. COMMENT:**

The ACE organization stated that DRBC rejected ACE's suggestion that the Commission apply for a \$1.15 million watershed program grant to fund a public interest expert without any ties to Exelon to evaluate effects of the LGS on water resources of the basin.

**RESPONSE:**

Notably, no member of the Commission staff involved in the review of Exelon's application (or any other member of the DRBC staff, to the knowledge of current DRBC employees) has ever worked for Exelon.

ACE suggested that the Commission apply to the United States Environmental Protection Agency (EPA) for a grant under the program through which EPA awarded funds to the Schuylkill Action Network (SAN) in 2004. The EPA program was no longer available at the time ACE's request was made. (SAN has had to search for other funding since 2004.)

Commission staff have performed un-biased analyses of the data supplied by Exelon in accordance with its docket approvals, along with data obtained from the Pennsylvania Department of Environmental Protection and from gaging stations operated by the United States Geological Survey. Commission practice, like that of most federal and state regulatory agencies, is to require the docket (or permit) holder to pay for and perform the monitoring required by regulatory approvals. Exelon has used a firm with a credentialed professional staff to perform such monitoring. In order to maintain their licenses, such professionals must adhere to strict guidelines established by federal and state authorities as by well as by the Commission.

## **II. Water Allocation**

### **6. COMMENT:**

Several commenters assert that the Commission is granting Exelon the unrestricted use of water, or exercising “eminent domain” over water on Exelon’s behalf through a docket approval.

### **RESPONSE:**

“Eminent domain” refers to the power to take private property for public use by a state, municipality, or private person or by a corporation authorized to exercise functions of a public character, following the payment of just compensation to the owner of that property. The Commission’s docket approval does not take private property for a public use, nor does it authorize Exelon to do so.

In accordance with the Delaware River Basin Compact, Commission approval is required to withdraw water from surface and groundwater sources in the basin when such withdrawals would exceed certain thresholds set forth in the Commission’s *Rules of Practice and Procedure*. The Commission does not grant unrestricted rights to any water user. To the contrary, the Commission’s docket approvals contain conditions – which may be extensive, as in the case of the LGS – to ensure that withdrawals do not conflict with the Commission’s comprehensive plan. The comprehensive plan includes all of the Commission’s regulations and policies as well as other projects – including other withdrawals and discharges – that have been incorporated into the plan following a duly noticed public hearing. As a practical matter, DRBC dockets limit water usage to the minimum needed for the project purpose while insuring protection of the basin’s shared water resources.

Docket No. D-1969-210 CP-13 issued to the LGS on May 8, 2013, is 46 pages long, exclusive of attachments, and contains detailed provisions applicable to Exelon’s use of each of the approved water sources. A 30-page Operation & Monitoring (O&M) Plan is incorporated by reference and attached to the docket. The O&M Plan establishes specific procedures that the docket holder must follow to ensure compliance with the terms and conditions of the Commission’s approval.

Section A.3.E. of the docket provides that “[d]uring an emergency, if normal constraints on withdrawals cannot be met, the docket holder may use surface water from the sources, designated herein as necessary, to address the emergency until it has been stabilized, in accordance with the O&M Plan and/or emergency shutdown procedures established by the NRC.” The Commission included this provision in recognition of the fact that in an emergency situation, the imposition of an additional layer of coordination and decision-making that could delay critical measures for minimizing harm to basin waters and the public would be contrary to the public interest. The docket holder is required to follow the docket conditions and O&M Plan and to notify and consult with the Executive Director as soon as possible but no later than 24 hours after an emergency situation is recognized. The Commission retains its rights to take appropriate action if the docket holder’s actions under this emergency provision were in the Commission’s judgment unwarranted or had an unacceptable impact on water resources of the basin. Notification of other entities is also required.

In no sense does the docket authorize the unrestricted use of water resources of the Delaware Basin.

**7. COMMENT:**

Some commenters expressed their concerns that the draft docket weakens low flow restrictions.

**RESPONSE:**

The Commission disagrees with the comment. Docket D-169-210 CP-13 maintains the withdrawal restrictions and low flow safeguards that were included in previous dockets, including restrictions that become effective when the unaugmented flow of the Schuylkill River is either 530 cubic feet per second (cfs) with one LGS unit in operation or 560 cfs with two LGS units in operation. A restriction on LGS's use of the Schuylkill River when the ambient river temperatures is 59° F or higher was removed; however, as the Findings section of the docket makes clear, the purpose of this restriction was to protect against impacts on ambient dissolved oxygen levels caused by increased biological activity unrelated to river flows. The provision was removed because the results of monitoring data collected over a wide variety of flow and temperature conditions during the demonstration period showed no direct correlation between temperature and ambient dissolved oxygen levels.

**8. COMMENT:**

Commenters were concerned that groundwater could be at risk around LGS. They indicated that 73.2 million gallons per year are withdrawn from four (4) on-site groundwater wells and expressed concern that unlimited water withdrawals during an emergency could dry up residential wells.

**RESPONSE:**

Section A.4a. and Condition II.dd. in the DECISION Section of the docket establish the restrictions on use of the four ground water wells. While these restrictions are waived temporarily for purposes of an emergency response action at the plant, such a short-term action is not expected to affect local groundwater wells. As noted above, the Commission has concluded that in an emergency situation, restrictions on water withdrawals by the LGS should be temporarily lifted to allow prompt implementation of all measures necessary to minimize harm to basin waters and the public. A prompt response is likely to limit the amount of time that emergency operations are required. After any such incident, a review will be conducted to determine whether the response was appropriate and what mitigation, if any, may be necessary.

**9. COMMENT:**

Several commenters requested that the Commission not allow 2 million gallons more per day (mgd) of water to be withdrawn for use by the LGS, citing reduced in-stream low flows and

potential adverse impacts on public drinking water supplies as a consequence of this increase. Concern also was expressed that the 2 million gallon increase would not be enough to sustain LGS until its license expires in 2029.

**RESPONSE:**

Contrary to the commenters' assumption, Docket D-1969-210 CP-13 does not approve an increase in the maximum monthly water withdrawal by LGS. Rather, consistent with current Commission practice, the water withdrawal limits contained in the docket are expressed as monthly averages, whereas previous LGS dockets contained limits expressed as 30-day averages.

Generally, Commission dockets provide a total monthly water withdrawal allocation expressed in millions of gallons per month (mgm). Docket D-1969-210 CP-13, however, provides both a daily and monthly water withdrawal allocation. The docket holder is required to comply with both limits. In fact, no increase in the maximum monthly withdrawal is approved by Docket D-1969-210 CP-13. The docket approves an increase from 56.2 mgd to 58.2 mgd in the *peak daily* water withdrawal. This change responds to a demonstrated need for LGS to have access to a sufficient supply of cooling water during hot days in the summer months, while requiring the docket holder to stay within the same monthly limitation. When the unaugmented flow in the Schuylkill River is 530 cubic feet per second (cfs) with one unit in operation or 560 cfs with two units in operation, the docket holder is required to augment river flows by an amount equivalent to its consumptive use or to rely on natural or augmented Perkiomen Creek flows (depending on natural flow conditions in the Perkiomen Creek) for this purpose.

Typically, the Commission considers placing additional withdrawal restrictions on surface water withdrawal operations when natural surface flows approach the estimated seven-day low flow with a recurrence interval of ten years ("the  $Q_{7-10}$ "). The  $Q_{7-10}$  for the Schuylkill River at Pottstown, PA is 313 cfs. The requirements in the docket are set at almost twice this level to ensure that sufficient water remains in-stream to meet ecological flow requirements and public water supply needs.

Should the LGS choose to seek an increase in its water allocation or to change the applicable flow restrictions in the future, a docket amendment would be required, which can only be approved by vote of the Commission at a public meeting following a duly noticed public hearing.

**10. COMMENT:**

One group commented that it is unacceptable that only one quarter of the water withdrawn from the Schuylkill River is returned to the river and implies that there should be no discrepancy between the amount withdrawn and the amount returned.

**RESPONSE:**

Water resource management and aquatic resource professionals generally view cooling towers as preferable to once-through cooling because the use of towers requires substantially

smaller withdrawals and in turn results in much smaller potential impacts on stream flows and fisheries. The use of cooling towers by LGS dramatically reduces the overall daily and monthly withdrawal rates that would be required if the facility used once-through cooling. To illustrate this, consider the example of Exelon's Peach Bottom Generating Station located on the Susquehanna River, a facility that relies on once-through cooling and has a rated megawatt output that is close to that of the LGS facility. Peach Bottom withdraws up to 2.1 *billion* gallons per day, whereas LGS takes a fraction of this quantity – only up to 58.2 *million* gallons per day.

Although cooling towers require a significantly lower withdrawal rate, they do result in a higher consumptive use of water. Water that is not returned to the waterway, and which in the case of the LGS is largely emitted from the towers in the form of water vapor, is deemed to be “consumptively used”. The amount of water withdrawn over any given period depends on the amount of energy production and to some degree on ambient temperatures. Docket D-1969-210 CP-13 approves a maximum withdrawal from the Schuylkill River and Perkiomen Creek of up to 58.2 mgd for combined consumptive and non-consumptive uses subject to a variety of terms and conditions. Monthly withdrawals are limited to 1.7422 bg. Withdrawals for consumptive use are limited to 44 mgd and for non-consumptive use, to 14.2 mgd. Accordingly, when the facility is withdrawing the maximum allowable quantity (58.2 mgd), approximately 25% is returned to the river. (Exelon's Peach Bottom Generating Station is estimated to consumptively use only 1% – 0.021 billion gallons per day of its maximum allowable withdrawal of 2.1 bgd.

Environmental impacts of the LGS were closely examined during planning and design of the facility, and it was determined that the LGS could be operated with minimal impacts on water resources. Sources in addition to the Schuylkill River were required to be established. These included natural flows from the Perkiomen Creek, subject to certain restrictions, as well as from the Delaware River. To protect Delaware River flows during periods of drought, the developer of the LGS was required to establish a source of make-up water for release to the Delaware when Delaware withdrawals are made during low flow periods. Such a source was secured in the privately owned and operated Merrill Creek Reservoir. Additional sources of consumptive water use today include the Tamaqua area reservoirs and the Wadesville Mine Pool (WMP). Because the Tamaqua reservoirs and the WMP would not otherwise be releasing water into the Schuylkill River, they are deemed acceptable sources for consumptive use during periods of low flow in the Schuylkill. At such times, their use provides increased flow to the Schuylkill River above the LGS, while the portion of the river below the facility sees no less water than in the absence of the LGS consumptive use withdrawal.

#### **11. COMMENT:**

One commenter wanted to know whether drawing groundwater from one sub-watershed to run a facility in another sub-watershed is precedent-setting.

#### **RESPONSE:**

Generally, the Commission's preference is for a facility's withdrawals and discharges to be located within the same sub-watershed. However, that is not always possible. The WMP discharge is located on the East Norwegian Creek approximately 2.9 river miles upstream of the

Schuylkill River. Prior to construction of the LGS (and through the present day), water pumped from the mine during dewatering was (and is) conveyed to the East Norwegian Creek. The WMP Demonstration Project showed no adverse impacts from this transfer.

**12. COMMENT:**

One commenter wanted to know who owns water.

**RESPONSE:**

The “ownership” or right of use of water is a complicated issue. In general, the waters of the Commonwealth are “the common property of the people” (PA Const. Art. I, sec. 27), and their use is subject to a combined system of judicial common law and regulation. In accordance with the Delaware River Basin Compact (*Compact*) and federal and state law, the waters of the Delaware Basin within the Commonwealth of Pennsylvania are regulated by the Delaware River Basin Commission and the Pennsylvania Department of Environmental Protection (PADEP). Projects to store water – whether for a single use or multiple uses – receive approvals from the Commission and PADEP that include restrictions on the quantity, purpose, rate and timing of releases to protect downstream water users and stream ecology. The Compact requires withdrawers to obtain Commission approval for withdrawals from and discharges to waters of the basin that exceed established thresholds. Once a project sponsor has obtained the necessary approvals, the sponsor can operate the project (whether it be a withdrawal, discharge, impoundment or other project) within the restrictions established by the approvals. The LGS relies on water from multiple sources and facilities, including three – the Tamaqua area reservoirs, the Delaware River via the Point Pleasant Pumping Station, and Merrill Creek Reservoir – for which the DRBC has issued separate docket approvals.

**13. COMMENT:**

One commenter stated that there is an implication that Delaware River water is more valuable than Schuylkill River water and wanted to know whether the Commission believes this to be true.

**RESPONSE:**

The Commission considers all water resources of the basin to be important and implements a variety of programs to protect them. Generally, the Commission prefers that project sponsors meet their water needs from sources that are physically proximate to the intended uses. Since the LGS facility is located on the Schuylkill River, the Schuylkill is the first source to which the sponsor and regulators looked to meet the facility’s needs. However, limitations on withdrawals from the Schuylkill River to protect downstream users and ecology required that alternative sources be used under some conditions. Three of the four alternate water sources – the WMP, Tamaqua area reservoirs and Perkiomen Creek – are located on tributaries of the Schuylkill River. The Perkiomen Creek also is used to convey water from a fourth source – the Delaware River – to a point where it can be withdrawn by the LGS. Each of the alternative sources and the terms and conditions for their use are described in Docket D-1969-210 CP-13. Exelon’s request for approval to use alternative sources is based on its need to

ensure that it has an adequate supply of water to continue to generate power under a variety of conditions.

**14. COMMENT:**

Some commenters indicated that water was being rationed for citizens, but not for LGS.

**RESPONSE:**

In times of below-normal rainfall, when both ground and surface water levels decrease to levels of concern, state and local governments and the DRBC sometimes call for voluntary restrictions or impose mandatory restrictions on residential, commercial and industrial water uses. Section 2.3.5.1C of the Commission's *Rules of Practice and Procedures* requires industrial and commercial withdrawers of surface and groundwater in quantities above 1 million gallons per day to prepare drought contingency plans. In addition to water use reductions, the users are asked to consider alternate water sources and to identify the potential impacts of water restrictions. In the Commission's view, the preparation of these plans *before* restrictions become necessary will provide for a less disruptive implementation of restrictions should they become necessary.

The development of alternative water sources for the LGS helps to ensure the continued delivery of electrical service at times when the demand for energy is potentially greatest, while minimizing impacts on basin waters. The drought management and contingency plan for the LGS is strengthened by the availability for consumptive use by the LGS of alternative sources that would not otherwise be releasing water to the Schuylkill River. The Delaware River is also protected from the potential impact of LGS withdrawals insofar as Exelon is required to maintain storage in the Merrill Creek Reservoir. This storage is available to be released to make up for consumptive use by LGS and other generators who own storage at Merrill Creek to maintain a flow target in the Delaware River at Trenton during periods of low flow.

**15. COMMENT:**

Commenters were concerned that the docket would permit LGS to literally dry up surface and ground water resources across state boundaries.

**RESPONSE:**

The docket contains numerous provisions designed to protect stream ecology and other water users during LGS operations. These include among others, daily and monthly withdrawal limits, instream flow restrictions, detailed provisions for the use of alternative water sources, and effluent limitations. Even under emergency conditions, the availability of multiple water sources will serve to minimize adverse effects on any single source and prevent the impacts feared by some commenters.

### **III. Temperature**

#### **16. COMMENT:**

Concerns were raised regarding the decision to grant Exelon's request to eliminate a condition in past dockets that prohibits the LGS from withdrawing water from the Schuylkill River to meet its consumptive water needs when ambient river temperatures downstream of the LGS are above 59° F.

#### **RESPONSE:**

The history of withdrawal restrictions on the LGS related to temperature is discussed in detail in Sections B (Background) and C (Findings) of Docket D-1969-210 CP-13. The restriction on withdrawals based on ambient stream temperature in the Schuylkill River was suspended in 1985 and reinstated in 1990. When in effect, the restriction prohibited LGS from making withdrawals from the Schuylkill to meet consumptive cooling water needs when ambient temperatures downstream were above 59° F, except during April, May and June, when stream flow measured at the Pottstown gaging station was in excess of 1,791 cfs (1,158 mgd).

The primary purpose of the temperature-based restriction was to minimize the potential for a decline in the dissolved oxygen (DO) level in the Schuylkill River downstream of the LGS, which was believed to be correlated with lower streamflow. In 2004, Exelon provided data and background information that supported the view that the temperature-based restriction was without scientific justification.

Docket D-69-210 CP (Final) (Revision 12) approving the Demonstration Project, issued on October 27, 2004, required Exelon to collect and report ambient river temperature, flow, DO and other information at locations upstream, at, and downstream of the LGS. Monitoring and reporting has continued uninterrupted since 2003, and all data have been posted on the Commission's website as the Commission received them. Since issuance of Docket D-1969-210 CP (Revision 12), the Commission has hosted semi-annual public meetings at which the Demonstration Project data were presented and discussed. All interested parties were contacted directly and invited to attend these meetings.

The Commission staff agree that use of the 24-hour average ambient stream temperature threshold of 59° F to restrict consumptive use withdrawals by LGS is not directly supported by the data. That is, DO concentrations in the Schuylkill River at multiple downstream monitoring points during the study period did not correlate with consumptive use withdrawals by the LGS in the absence of flow augmentation.

## **17. COMMENT:**

Some commenters were concerned that the docket does not require Exelon to monitor for temperature in the Schuylkill River; does not adequately restrict the discharge from LGS; and allows the discharge of up to 14.2 mgd of LGS cooling water characterized by temperatures of up to 110° F, which in the view of commenters potentially overheats the river. Others wanted to know why operations are not prohibited, restricted, or curtailed in situations when overheating occurs or why the Commission chose to waive a regulation prohibiting in-stream temperatures from increasing above 87° F. The commenters opined that the high discharge temperatures adversely affect aquatic life and wanted to know on what basis the Commission concluded otherwise. A group wanted to know if the DRBC has ever allowed a variance from the 87° F in-stream requirement.

## **RESPONSE:**

As a component of the LGS Demonstration Project, Exelon has performed monitoring of the Schuylkill River at locations above and below the LGS discharge since 2003. Hourly ambient temperature data were collected at the LGS intake and at the Pennsylvania American Water Company's (PAWC) Royersford Plant intake two (2) miles downstream of the LGS thermal discharge from Outfall 001.

In accordance with Condition II.v. of Docket D-1969-210 CP-13 and the O&M Plan (a draft of which was posted for comment simultaneously with the draft docket), the docket holder will continue to perform temperature monitoring in the Schuylkill River at both the LGS intake and the PAWC Royersford Plant or a suitable alternative location downstream.

Docket D-1969-210 CP-13 also continues the heat dissipation area provision that was included in all the Commission's previous LGS docket approvals. The heat dissipation area consists of one-half the stream width (150 feet) from Outfall 001 to a point 3,500 feet downstream of this outfall. An analysis performed in 1984 considered annual average, monthly average and extreme combinations of Schuylkill River flow rate, LGS blowdown flow rate, and river/blowdown temperature differences. The analysis predicted ambient river temperature 50 feet downstream of the diffuser (outfall) after mixing with one-third of the river flow. The extreme condition assumed a blowdown temperature equal to the highest 1% of blowdown temperature observations for October and the Q<sub>7-10</sub> flow (consecutive 7-day low flow with a 10-year recurrence interval) in the receiving stream. The 1984 analysis predicted temperature rises well below the Commission's 5° F limitation for all scenarios except the extreme condition, for which the predicted temperature rise was approximately 5.3° F.

The Commission generally requires a heat dissipation area, also known as a thermal mixing zone, for all projects that include thermal discharges, since such discharges can rarely meet ambient stream temperatures at the point of discharge. The ambient water temperature is allowed to exceed the regulatory standard within a thermal mixing zone, but must conform to the standard at the boundary of the mixing zone. Section 4.30.6 F. of the Commission's Water Quality Regulations (WQR) establishes the conditions and requirements for heat dissipation areas.

Although the thermal mixing zone is continued in Docket D-1969-210 CP-13, Condition II.t. of the DECISION section of the docket requires the docket holder within 6 months of the effective date of the docket to submit a CORMIX modeling analysis evaluating the thermal discharge from Outfall 001 during periods when the ambient conditions of the Schuylkill River are below, at and above 87° F. The analysis must include a summary of the percent of time that ambient data from the LGS intake location and the PAWC Royersford intake location suggest that the Commission's ambient temperature criterion of 87° F is exceeded. The CORMIX analysis will be utilized by the Commission to determine a revised heat dissipation area for Outfall 001 that is in accordance with the dimensions required by Section 4.30.6 F.5. of the WQR. Until such time as the Commission makes a determination regarding a revised heat dissipation area for Outfall 001, the existing heat dissipation area will remain in effect.

#### **IV. Monitoring Requirements and Results**

##### **18. COMMENT:**

Some commenters protested that the sampling and monitoring information submitted by Exelon are biased and unacceptable since Exelon has a vested interest in the results. They also asserted that the Commission and PADEP are not objective because they approved and thus support the Demonstration Project. Commenters want to see monitoring performed by an entity independent of the PADEP, DRBC and Exelon.

##### **RESPONSE:**

Docket applications are judged on their merits. The Commission requires docket holders to perform influent, effluent and ambient water sampling and monitoring related to their applications and docket requirements. These activities may be performed either by the docket holder or by a private contractor engaged by the docket holder. All sampling and analysis is required to conform to protocols specified in the docket or approved monitoring plan that have been established to ensure the reliability of the data for the intended purposes. This approach is consistent with major permitting programs conducted by federal and state government agencies. The Commission performs annual ambient water quality sampling and monitoring at locations throughout the basin and utilizes data obtained by the USGS and state water quality networks to supplement such data collection. That docket holders should be responsible for the cost of sampling, monitoring and reporting associated with their project approvals is entirely appropriate in the view of the Commissioners.

Detailed sampling and monitoring requirements, including a requirement that certified laboratory techniques be employed, are included in the O&M Plan that comprises Attachment 2 of Docket D-1969-210 CP-13. Any changes to the O&M Plan requirements must be approved by the Executive Director. The Executive Director may require additional sampling and monitoring consistent with the terms and conditions of the docket if the Executive Director determines on the basis of reports submitted by the docket holder or other information available to the Commission that such additional sampling and monitoring are necessary.

Commission staff have reviewed the reports furnished by Exelon under its previous dockets. In each instance, these materials have conformed to the practices specified in the

Commission's approvals and in each instance the data have corroborated the findings reported by the docket holder or its expert consultants.

**19. COMMENT:**

Several commenters requested that the Commission require unannounced, independent testing of flow, temperature, and all discharges. Many of these commenters asked whether independent testing was ever performed on the WMP or LGS Outfall No. 001 discharges.

**RESPONSE:**

Conditions II.b. & c. of the DECISION section of Docket D-1969-210 CP-13 establish that DRBC personnel may inspect the LGS facility, including its discharge, at any time to ensure that the discharge complies with the Commission's Water Quality Regulations and all docket conditions.

**20. COMMENT:**

One commenter observed that the published draft of Docket D-1969-210-CP 13 included a pump rate for the WMP of 10,000 gallons per minute (gpm); PADEP's National Pollutant Discharge Elimination System (NPDES) permit for the WMP includes a pump rate of 15,000 gpm; and a PowerPoint presentation by the docket holder in 2008 included a pump rate for the WMP of 24,300 gpm. The commenter concluded these discrepancies indicated lax oversight of the project.

**RESPONSE:**

The WMP discharge associated with Reading Anthracite's mining operations is regulated by a NPDES permit issued by PADEP's Bureau of Mining. The pump rate of 15,000 gpm included in the NPDES permit applies to mining operations, whereas the pump rate of 10,000 gpm imposed by the docket applies to releases for the purpose of flow augmentation to meet LGS cooling water needs during periods of low streamflow in the Schuylkill River. The statement attributed by the commenter to an Exelon representative to the effect that WMP water was pumped at a rate of 24,300 gpm likely stems from a misunderstanding of the distinction between pump *capacity* and pump *rate*. Since 2007, one of two WMP pumps has been shut down, resulting in a lower combined pump capacity for the facility. Regardless of the pump capacity, however, when Exelon is pumping from the WMP to meet its consumptive water needs at LGS, it is restricted to the pump rate of 10,000 gpm set forth in the docket.

**21. COMMENT:**

One group commented that the DRBC should increase ambient monitoring requirements rather than reduce them.

**RESPONSE:**

Detailed sampling and monitoring requirements are established by the O&M Plan approved as Attachment 2 of the docket. During the Demonstration Project, a tremendous volume of data was collected over the course of multiple years and representing diverse ambient conditions. In light of the substantial information and experience acquired during the Demonstration Project, the Commission deems the operating conditions for the LGS to be well characterized and some reduction in the intensity of the sampling and monitoring effort appropriate at this time. The requirements may be revisited as appropriate should data indicate that conditions not previously characterized are emerging.

**22. COMMENT:**

Commenters questioned why DRBC would rely on modeling studies rather than actual data, especially when the modeling work was performed by Exelon.

**RESPONSE:**

This comment appears to relate to Condition II.t. in the DECISION section of the docket and a discussion of the heat dissipation area in the FINDINGS section. Condition II.t. requires the docket holder to collect additional data, perform a CORMIX model analysis of the LGS discharge, and submit the results.

Like most water management agencies and permitting programs, the Commission relies on models to support its water quality determinations and docket conditions. The ambient water quality models required to be used by applicants and docket holders are generally standard models that have been modified to fit the specific characteristics of the waterway or the purposes of a particular study. In instances in which the Commission relies on models submitted by applicants, it reviews the protocols, modifications and applications prior to making an independent determination that either corroborates the applicant/docket holder's reported results or raises questions about them. The process may be an iterative one that continues until the Commission is satisfied that the model results are sufficiently reliable.

**23. COMMENT:**

Exelon's dissolved oxygen (DO) testing led to DRBC's removal of the 59° F temperature restriction. DO testing can be highly deceptive and can hide harm.

**REPOSENSE:**

The response to Comment No. 16 is incorporated by reference. The DO testing on which the Commission relied was performed over the course of many years – from 2003 through 2012 – and included a broad spectrum of ambient river flow and temperature conditions. The testing was required to conform to standard accepted practices and protocols. The temporal range, the volume of data collected, and the range of flow conditions (wet, dry and in-between),

provided a robust data set upon which the Commission staff could confidently rely in determining that the temperature-based restriction was not supported by observed conditions.

## **V. Drinking Water and LGS Intakes**

### **24. COMMENT:**

Several commenters expressed concerns that water suppliers below the untreated WMP discharge (Pottstown) and the treated LGS discharges (Pennsylvania American Water Company (PAWC) and Aqua Pennsylvania (Aqua)) may be experiencing problems with iron, manganese, and TDS attributable to either the WMP discharge, LGS discharge or both. In addition, they were concerned that water suppliers and their customers are potentially burdened with increased treatment costs associated with removal of these pollutants. Commenters also raised concerns regarding treatment of potentially radioactive and otherwise contaminated water from the LGS.

### **RESPONSE:**

Pottstown Water Department, PAWC, Aqua Pennsylvania and the Philadelphia Water Department (PWD) are included on the Commission's Interested Parties List for the LGS and receive notifications of Commission activities concerning the project, including receipt of Exelon's docket application in 2003 and the publication of a draft docket for comment in 2012. PWD has regularly attended the public meetings held throughout the term of the Demonstration Project. All of these water suppliers are required to prepare and circulate to their customers annual reports on the quality of the drinking water they provide, including how it compares to Safe Drinking Water Act (SDWA) standards. The Commission staff have reviewed reports issued by the named suppliers that confirm that the quality of the water they distribute meets or is better than SDWA standards. None of the allegedly affected water suppliers have submitted comments indicating that they have experienced additional treatment costs or water quality problems associated with discharges from the WMP or LGS. In fact, PWD and the Water Resources Association of the Delaware River Basin (which includes water purveyors among its members) have submitted comments in support of the proposed docket.

The WMP discharge is regulated by a National Pollutant Discharge Elimination System (NPDES) permit issued by PADEP to Reading Anthracite, and the discharge from the LGS is regulated by both a PADEP NPDES permit and a DRBC docket. To the Commission's knowledge Reading Anthracite has not reported any violations of its NPDES permit for the WMP. The Commission is aware of no reported violations of either the NPDES permit or the DRBC docket.

The Nuclear Regulatory Commission (NRC) is responsible for the licensing of the LGS facility, for regulating on-site LGS activities related to the license and for ensuring that timely and appropriate reporting, response, and mitigation is taken regarding any potential and actual radioactive releases from the LGS facility. The mixing of the LGS effluent with blowdown flow keeps radionuclide concentrations at the Schuylkill River outfall below the NRC's Standards for Protection Against Radiation (codified at 10 CFR Part 20). In accordance with its license and

NRC requirements, Exelon Generation prepares and submits to the NRC an Annual Radiological Environmental Operating Report that assesses calculated offsite dose data resulting from radioactive liquid effluents from the LGS. No adverse radiological impacts on the environment have been reported. Further questions regarding this matter should be addressed to the NRC.

**25. COMMENT:**

One group commented that rather than filtering out iron and manganese from the surface water, Pottstown Water Department has chosen to treat the water with a toxic chemical known as potassium permanganate. The same group also stated that according to the World Health Organization higher levels of iron may cause significant damage to water treatment plants.

**RESPONSE:**

Entities that withdraw and supply water to the public or to water purveyors have the responsibility to determine and deploy the treatment method(s) necessary to provide water that meets federal Safe Drinking Water Act requirements. Potassium permanganate is used by water treatment systems as a coagulant. Used correctly, it is both effective and an acceptable chemical for this purpose.

**26. COMMENT:**

Commenters alleged that Philadelphia has “the highest radiation levels of drinking water in the nation” and that reports to the NRC of these radioactive concentrations have not resulted in any action.

**RESPONSE:**

The commenter is misinformed. The U.S. Environmental Protection Agency (EPA) requires all water utilities to produce and distribute drinking water quality reports (called “Consumer Confidence Reports”) on an annual basis. The Philadelphia Water Department (PWD) reports that its water has consistently tested better than the EPA standards for the protection of public health. PWD’s 2012 Consumer Confidence Report (on 2011 drinking water quality) indicates that Philadelphia’s drinking water is in full compliance with the federal Safe Drinking Water Act, with no drinking water violations related to radionuclides or any other parameter. A copy of the report is available on the PWD website.

Following an earthquake and tsunami that struck the eastern coast of Japan in March of 2011, generators that powered emergency cooling systems at the Fukushima 1 Nuclear Power Plant failed. Reactors at the Japanese plant experienced full meltdown, producing substantial quantities of the radioisotope iodine-131 (“I-131”). Shortly afterward, newspapers in the Philadelphia region reported the presence of I-131 in Philadelphia water.

When certain atoms disintegrate, they release a type of energy called ionizing radiation. This energy can travel as either electromagnetic waves (i.e., gamma or X-rays) or as particles (i.e., alpha, beta or neutrons). The atoms that emit radiation are called radionuclides. Examples

include radioactive iodine, cesium, and plutonium. The federal drinking water standard for I-131 is 3 picocuries per liter (pCi/L), and is based on a long term average, not a single day sample.

PWD conducted a Phase I watershed sampling program, an immediate assessment of I-131 and gross beta radiation in surface water and drinking water, from April 12, 2011 through May 5, 2011. Further testing was then performed through April 11, 2012. Results for drinking water samples indicated average I-131 levels well below 1 pCi/L. Although I-131 and similar elements in water may come from other sources, they are frequently linked to individuals who have received medical treatments; radionuclides not absorbed by the body are eliminated in human waste and flushed into the sewer system.

**27. COMMENT:**

Several commenters requested that the docket include a condition that requires that an impingement and entrainment study be performed once the EPA's Clean Water Act section 316(b) standards are finalized, to determine "best technology available" (BTA) in accordance with that provision.

**RESPONSE:**

Section 316(b) of the Clean Water Act requires that the location, design, construction and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. Under a modified settlement agreement in two cases consolidated in the Federal District Court for the Southern District of New York, EPA is working to finalize by June 27, 2013 standards for cooling water intake structures at existing facilities in accordance with this provision. Notably, cooling towers such as those installed at the LGS facility are currently viewed as BTA under Section 316(b). Under the Clean Water Act, the U.S. EPA and PADEP are jointly responsible for implementing Section 316(b) in Pennsylvania. Section 1.5 of the Delaware River Basin Compact provides that "It is the purpose of the signatory parties to preserve and utilize the functions, powers and duties of existing offices and agencies of government ... and to utilize and employ such offices and agencies for the purposes of this compact to the fullest extent it finds feasible and advantageous." Consistent with this clause of the Compact and to avoid unnecessary duplication, the Commission defers to the EPA and PADEP in implementing Section 316(b).

**VI. Total Dissolved Solids (TDS)**

**28. COMMENT:**

Several commenters requested that the Commission's basin-wide TDS effluent standard of 1,000 mg/l be applied to both the WMP and LGS Outfall No. 001 discharges. One commenter requested that the DRBC revisit its TDS regulations and protect an in-stream concentration of 350 mg/l instead of the Safe Drinking Water Act standard of 500 mg/l in streams where fish propagation is prevalent, as recent studies suggest that spawning may be affected when TDS

concentration levels are higher than 350 mg/l. One group asserted that TDS concentrations in the LGS discharge are as high as 2,419 mg/l. This group further asserted that Exelon asked DRBC to double the TDS limit established by PADEP's NPDES permit for the LGS and asked for an analysis of the cost such an increase would impose on downstream facilities to treat the high TDS.

**RESPONSE:**

Sections 3.10.3 B. and 3.10.4 D.2. of the Commission's Water Quality Regulations establish applicable limits on TDS. The former section provides that in-stream concentrations of TDS must not exceed either 133 percent of background or the U.S. public health drinking water standard of 500 mg/l (whichever is less). The latter section limits TDS concentrations in effluent to "1,000 mg/l, or a concentration established by the Commission which is compatible with designated water uses and stream quality objectives, and recognizes the need for reserve capacity to serve future dischargers." In accordance with these provisions, an applicant may request a variance from the Commission's TDS standards by filing a TDS Determination Questionnaire, using the form on the Commission's website.

As a matter of policy and practice, the Commission does not impose the basin-wide TDS effluent standard of 1,000 mg/l on an existing discharge without first imposing a docket condition to require monitoring, unless construction at the facility is proposed or the Commission has obtained data from monitoring previously conducted in accordance with a state agency requirement. Neither PADEP nor the DRBC has previously required TDS monitoring in an approval for LGS Outfall No. 001. Accordingly, the FINDINGS Section of Docket D-1969-210 CP-13 and the accompanying O&M Plan require the docket holder to monitor for TDS above and below LGS Outfall No. 001 and to submit within 30 months of the approval date of the docket a report that includes data for at least 48 TDS samples at each location. If the data demonstrates that the LGS discharge cannot satisfy the Commission's TDS requirements under  $Q_{7-10}$  flow conditions (lowest 7-day average flow with a recurrence interval of 10 years), the docket provides that a TDS determination will be made and the Commission staff will establish monthly average and daily maximum TDS effluent limits for LGS Outfall No. 001 upon renewal of the LGS NPDES Permit/DRBC Docket. The application for a TDS determination by the Commission entails completion of a questionnaire that includes, among other things, information on the potential treatment and costs associated with compliance with the TDS standards, and information relating to ambient impacts. Any TDS determination rendered by the Commission regarding the LGS discharge will be made at a public meeting, upon a request by the docket holder/applicant, and following a duly noticed public hearing.

In accordance with a longstanding Administrative Agreement between the Commission and the PADEP to reduce duplication of effort, the Commission does not review or issue dockets for mine drainage discharges. Accordingly, the Commission does not directly regulate the WMP discharge. However, Docket D-1969-210 CP-13 does conditionally approve use of the WMP to augment Schuylkill River flows that would otherwise be depleted by LGS's consumptive use during periods of naturally occurring low flow in the Schuylkill River. In order to ensure the Commission's in-stream criteria for TDS are not exceeded, the docket requires that use of the WMP be discontinued for augmentation purposes within 72 hours of exceedence of a

conductivity threshold at the Landingville USGS gage. This requirement is effective upon a determination by the Executive Director confirming the relationship between TDS and conductivity at Landingville and provided that the technological capability is established for real-time assessment and reporting of conductivity data at Landingville via the USGS website.

The docket requires the docket holder to work with the USGS to install a real-time monitor for conductivity at the USGS Landingville (01468500) gaging station within 180 days of the docket's effective date. The Landingville gage is located on the Schuylkill River approximately 10.5 miles below the WMP source and approximately 47 miles upstream of the first public water supply intake (Pottstown Water Authority). The docket further requires the docket-holder to conduct in-stream sampling of the Schuylkill River at the Landingville USGS gage in order to establish the statistical relationship between TDS and conductivity. The terms and conditions for this program are set forth in DECISION section Conditions II.u. and II.nn.

As indicated in the response to Comment No. 24 above relating to drinking water intakes, no water suppliers downstream of the LGS or WMP have submitted comments indicating that they have experienced additional treatment costs or water quality problems associated with discharges from the WMP or LGS. Notably, the Water Resources Association of the Delaware River Basin (which includes water purveyors among its members) and the Philadelphia Water Department have submitted comments in support of the proposed docket.

## **VII. LGS Discharge**

### **29. COMMENT:**

A commenter asserted that DRBC is paid for LGS's discharges.

### **RESPONSE:**

The Commission imposes no fees on discharges to waters of the Delaware River Basin. The Commission in 1976 established a system of water supply charges (*see* Resolution No. 74-6, codified in the Administrative Manual- Part III: Basin Regulations – Water Supply Charges) that apply only to surface water withdrawals. In accordance most recently with Resolution No. 2009-2, the Commission charges fees to cover a portion of its cost for reviewing projects that are subject to the Commission's approval pursuant to section 3.8 of the Delaware River Basin Compact and implementing regulations. The review fee schedule established by Resolution No. 2009-2 applies to all projects that require such review and approval.

### **30. COMMENT**

Some commenters expressed concerns over the potential impacts of an accident at LGS that could result in a core meltdown.

**RESPONSE:**

The Nuclear Regulatory Commission (NRC) is responsible for licensing the LGS facility and for regulating LGS activities relating to its license. The NRC requires LGS to have in place plans and procedures for minimizing the potential for accidents and to ensure that the facility operators make appropriate notifications and respond to events in ways that minimize risks to public health and the environment. Radionuclide effluents are also under the jurisdiction of the NRC. The blending of LGS effluent with the blowdown flow ensures that radionuclide concentrations at the release point in the Schuylkill River remain below the limits established by NRC regulations, which are codified at 10 CFR Part 20. Exelon Generation prepares and submits to the NRC an Annual Radiological Environmental Operating Report for LGS that assesses calculated offsite dose data resulting from radioactive liquid effluents. No adverse radiological impacts have been reported by downstream water suppliers.

**31. COMMENT**

Several commenters requested that Exelon filter effluent from LGS Outfall No. 001 to protect the water and health of nearly 2 million people. Some expressed concerns relating to TDS and temperature in particular, especially during times of low flow in the Schuylkill River. Other commenters said that as Schuylkill River flows decrease, LGS discharges increase concentrations of pollutants in the Schuylkill River

**RESPONSE:**

Docket holders are responsible for providing the treatment technology necessary to meet effluent discharge limits established by the state NPDES permit, the DRBC docket and/or the NRC license, when applicable. Effluent limits in NPDES permits and DRBC dockets are based on treatment technology and designated uses of the waterbody; the more stringent requirement in each instance is controlling. Effluent limits are designed to ensure criteria are met under the  $Q_{7-10}$  flow condition, which is the lowest average flow over 7 consecutive days with a 10-year recurrence interval. Filtration is effective for treating certain pollutants but is not an effective treatment for TDS or temperature. Responses to comments regarding TDS and temperature are provided elsewhere in this document.

Although commenters are correct in asserting that higher stream flows result in lower pollutant concentrations and vice-versa, effluent limits established by permits and dockets are designed to protect the stream under the  $Q_{7-10}$  flow condition.

**VIII. Ecological Impacts**

**32. COMMENT:**

One commenter requested that annual fishery surveys below Black Rock Dam be required as a condition of the docket.

**RESPONSE:**

The monitoring program conducted during the Demonstration Project did not include fish surveys below Black Rock Dam, a low-head dam on the Schuylkill River between Phoenixville and Mont Clare. Commission biologists who have participated in the review of Demonstration Project data do not believe that annual fish surveys are warranted, and thus, the Commission has not imposed such monitoring at this time. Commission biologists will continue to review the ongoing monitoring programs and results and will determine whether future changes are warranted.

**33. COMMENT:**

One commenter supported the eel study at the Perkiomen Creek intake that will be used to determine whether eel and fish passage is occurring at the dam. The same commenter supported the continuation of a yearly survey of benthic macro-invertebrates as opposed to the docket holder's request that such a survey be required every other year. Another commenter wanted to know whether the aquatic life surveys performed across the watershed have shown changes over time and whether that data is available to the public.

**RESPONSE:**

The commenter's support of the eel study and requirement for a yearly survey of benthic macro-invertebrates is acknowledged. The benthic macro-invertebrate data collected and analyzed as part of the Demonstration Project have shown no significant adverse impacts to aquatic life. The eel study required by Condition II. bbb. of the DECISION section of the docket is a new monitoring requirement. Based on the results of an engineering feasibility report, the Executive Director may direct the docket holder to complete designs and specifications for the recommended alternative for fish and eel passage at the Perkiomen Pumphouse location and to proceed with implementing the recommended alternative.

Data collected during the Demonstration Project are available for public inspection upon request. The same will be true of data collected during the term of Docket D-1969-210 CP-13. Instructions for making a records request are posted on the Commission's website at <http://www.state.nj.us/drbc/about/public/foia/index.html>.

**34. COMMENT:**

One commenter supports the continuation of a minimum pass-by flow requirement of 560 cubic feet per second (cfs) at the Schuylkill River intake when the LGS is operating two units and a minimum pass-by flow requirement of 530 cfs when the LGS is operating one unit. The commenter also asks the DRBC to include a provision that allows the docket to be re-opened in the event that a new ecologically-based low flow policy is adopted by the Commission in the future.

**RESPONSE:**

When un-augmented Schuylkill River flows are 560 cubic feet per second (cfs) or less and LGS is operating two generating units and when flows are 530 cfs or less and LGS is operating one generating unit, Docket D-1969-210 CP-13 continues to allow LGS to withdraw from the Schuylkill River only for non-consumptive purposes. These restrictions are more stringent than the Commission's default pass-by requirement of flows equal to the Q<sub>7-10</sub>.

DECISION Condition II.m. of the docket allows the Executive Director to modify the docket if such modification is required to protect the water resources of the basin. Otherwise, the Commission will revisit the pass-by flow requirement and all other conditions of the docket when it evaluates the docket holder's application for docket renewal.

**IX. Wadesville Mine Pool (WMP) Discharge**

**35. COMMENT:**

Several commenters questioned how the DRBC could continue to allow untreated discharges from the WMP, which began in 2003, on grounds that "dilution is not the solution to pollution". The same commenters requested that the Commission stop the pumping of WMP water into the Schuylkill River, or in the alternative, require the docket holder to filter the water before discharging it to the river. One commenter requested that the Commission remove the Landingville Gage requirements from the docket.

**RESPONSE:**

Discharge from Reading Anthracite's WMP is regulated by a NPDES permit issued by PADEP's Bureau of Mining. These discharges occurred prior to the Demonstration Project as a result of dewatering operations that are required to facilitate mining operations and they would continue in connection with mining operations, even in the absence of Exelon's use of the WMP for flow augmentation. In accordance with a longstanding Administrative Agreement between PADEP and the Commission, in order to avoid duplication of effort, the Commission does not review or approve mine drainage projects, which are regulated by the PADEP Bureau of Mining.

In 2002, Exelon applied to the Commission to utilize the WMP as an alternative source of water to meet the LGS's consumptive use needs when withdrawals from the Schuylkill River were restricted by ambient temperature or low flow conditions. Before the Commission approved the WMP demonstration project through Docket D-1969-210 (Final) (Revision 11) on June 26, 2003, the Commission and PADEP carefully reviewed the information submitted by the applicant and determined that the project could be conducted without significantly impacting the water quality or designated uses of the Schuylkill River. After a duly noticed public hearing and written comment period, the Commission approved Docket No. D-69-2012 CP (Revision 12) on October 27, 2004. Revision 12 established additional terms and conditions under which the combined Water Supply Modification Demonstration Project and Wadesville Mine Pool Withdrawal and Streamflow Augmentation Demonstration Project (collectively "Demonstration

Project”) would be conducted. The terms of approval included requirements for a detailed sampling, monitoring and reporting program and authorized the Executive Director to stop or modify the Demonstration Project if the results of the sampling and monitoring program demonstrated that adverse impacts were occurring or were likely to occur. This authorization was possible because LGS’s consumptive use needs could be met with approved water sources other than the WMP during periods when LGS was restricted from using the Schuylkill River. Another factor weighing in favor of the Demonstration Project was that while most mine water is acidic, the WMP water is alkaline and can act to buffer the acidity in the Schuylkill River that results from acid mine drainage sources upstream of the WMP.

The Commission staff relied on information obtained during the WMP Demonstration Project, and data from other sources in developing the determinations and conditions approved in Docket D-1969-210 CP-13. The results of the Demonstration Project confirmed that no adverse impacts would result from use of the WMP. Thus, the Commission does not agree with the commenter’s view that the WMP discharge requires filtration. Ambient water sampling, biological monitoring and other docket requirements ensure that the waterway will continue to be protected. In the event monitoring at some future point demonstrates the need, then in accordance with condition II.qq., the Executive Director or the Commission, may “modify or suspend WMP water discharges and/or reservoir releases if evidence indicates that either is causing violations of water quality standards and/or causing unacceptable impacts to the aquatic biota of the receiving waters.”

In response to the comment recommending elimination of the Landingville Gage requirement, the Commission staff respectfully disagree. The gage is needed to ensure that discharges from the WMP to serve the LGS do not contribute to violations of the in-stream standard for total dissolved solids (TDS) of 500 mg/l.

### **36. COMMENT:**

Several commenters stated that the WMP discharge has iron levels twenty (20) times higher than the safe drinking water standard, manganese eighty (80) times higher, and total dissolved solids (TDS) two to three times higher and have requested that the Commission deny approval of this source for flow augmentation by LGS. More than one commenter asked why the Pottstown Water Treatment Plant, which operates the first public water supply intake downstream of the WMP, should be burdened with treating for these parameters when in fairness the docket holder should be doing so. Others asked what the mine water generally is made up of.

### **RESPONSE:**

Effluent limits on discharges are not always needed to ensure that in-stream water quality standards are met. Effluent limits often take into consideration the streamflow volume and designated uses of the receiving stream and frequently allow for mixing of the effluent with the stream. In accordance with a longstanding Administrative Agreement between the Commission and the PADEP to reduce duplication of effort, the Commission does not review or issue dockets for mine drainage discharges. Accordingly, the Commission does not directly regulate the WMP discharge. The PADEP’s Mining Division issued NPDES Permits Nos. PA0593508 and

PA0123293 on April 4, 2008 and December 21, 2007, respectively, for the discharges from the WMP. The effluent limits for iron and manganese placed by PADEP on permit holder Reading Anthracite are being met.

Water suppliers Schuylkill River intakes downstream of the WMP and /or the LGS have not reported problems relating to iron or manganese or that have resulted in extraordinary treatment or costs.

**37. COMMENT:**

One commenter asked whether hydro-fracturing wastewater produced by the natural gas industry can end up in mine water.

**RESPONSE:**

Under a moratorium imposed by the Commission pending the adoption of Commission regulations for natural gas development activities, the extraction of natural gas using high volume hydraulic fracturing techniques is not currently permitted in the basin. Wastewater treatment facilities located in the Delaware Basin must have Commission and state approval before accepting natural gas drilling wastewaters for treatment and/or discharge. To date no such approvals have been granted by the Commission.

**38. COMMENT:**

Several commenters strongly supported issuance of the docket, noting especially the beneficial reuse of the WMP water. Other commenters observed that Exelon has been very transparent with data collected over the course of the Demonstration Project and that extensive research was done to select a mine from which the mine pool discharge would benefit rather than damage water quality. Another commenter noted that volunteers from the Schuylkill Headwaters Association assisted with fish shocking and macro-invertebrate data collection and at no time saw negative impacts to East Norwegian Creek or the Schuylkill River as a result of the WMP discharge.

**RESPONSE:**

The Commission established a highly transparent process for the Demonstration Project. Docket No. D-69-210 CP (Final) (Revision 12) approving the Demonstration Project in 2004 required the collection and reporting of ambient river temperature, flow, DO and other information at locations upstream, at, and downstream of LGS promptly upon their submission. Each year during the Demonstration Project, the Commission hosted two public meetings at which the data collected for the project were presented and discussed. All individuals and entities on the Commission's Interested Parties List for the LGS were directly informed well in advance of these meetings and invited to attend. The Demonstration Project produced data for a wide range of ambient conditions, which provided vital information that has informed the Commission's decision-making. Results from numerous ecological studies conducted during the

Demonstration Project appear to support one commenter's statement that no negative impacts attributable to augmentation releases from the WMP have been reported to date.

**39. COMMENT:**

One group was concerned that the docket can be used by Exelon in the future as a "General Permit" creating devastating threats to water across the state. The same group was concerned that pumping the WMP during flood conditions may result in increased flood damage downstream.

**RESPONSE:**

Docket D-1969-210 CP-13 approves a specific project for a specific and limited term. It is by no means a "general permit". The Commission customarily issues water withdrawal dockets for terms of up to ten years. Docket D-1969-210 CP-13 has a term of only five years in order to align the term of the docket with the five-year term of the NPDES permit approval issued by the PADEP. Notably, the docket includes several conditions that authorize the Executive Director to modify or suspend conditions of the approval if in the Executive Director's judgment such an action is necessary to protect the water resources of the basin. See, for example, conditions II.m, II.o, II.qq, & II.zzz of the DECISION section of the docket.

**40. COMMENT:**

One commenter wanted to know what is required of a coal mine operator to discharge mine water into the Schuylkill River. The same commenter wanted to know whether the conditions applicable to an independent coal miner's discharge of mine water would be any different than Exelon's.

**RESPONSE:**

A coal mine operator must obtain a NPDES permit from the PADEP before discharging mine drainage water to a Pennsylvania stream. In accordance with a longstanding Administrative Agreement between the Commission and the PADEP to reduce duplication of effort, the Commission does not review or issue dockets for mine drainage discharges.

**41. COMMENT:**

One commenter wanted to know whether the docket provides that low stream flow in the Schuylkill River will be accompanied by an increased discharge from the WMP, and if so, what effect this will have on the river.

**RESPONSE:**

Docket D-1969-210 CP-13 bars Exelon from using the natural (unaugmented) flow of the Schuylkill River to meet its consumptive water needs at LGS when the natural streamflow in the river measured at USGS Gage No. 01472000 (Pottstown) is at or below 530 cfs with one generating unit in operation or 560 cfs with two units in operation. At such times, Exelon cannot withdraw from the Schuylkill to meet its consumptive use needs without augmenting flows, either with discharges from the WMP or with releases from the Tamaqua area reservoirs or both. Notably, the flow augmentation requirement is more protective (i.e. the requirement is triggered at a higher flow condition) than the default  $Q_{7-10}$  flow condition that provides the basis for calculation of most effluent limitations imposed by the Commission and PADEP for wastewater treatment plant discharges. (The  $Q_{7-10}$  flow of the Schuylkill River at Pottstown (approximately River Mile 51.5) is 313 cfs.)

The WMP and Tamaqua reservoirs used to augment the natural flows in the Schuylkill River are located 78.08 River Miles and 85.03 River Miles upstream of the LGS withdrawal, respectively. Streamflow in these reaches will be increased during periods of augmentation.

**42. COMMENT:**

One commenter pointed out that there is only one other known mine in the headwaters of the Schuylkill River that is alkaline in pH instead of acidic.

**RESPONSE:**

The Commission has received a similar comment in the past, but no specific information has been provided to verify the location of another mine with an alkaline pool. Any request by the docket holder to use additional sources of water, whether from surface water or mines, would require a docket amendment, which must be approved by the Commission at a public meeting following a duly noticed public hearing.

**X. NPDES Permit Issued by PADEP**

The Commission received a number of comments specific to the NPDES Permit issued by PADEP pursuant to the federal Clean Water Act and state law. The Commission has referred these comments to the permitting authority. Topics included, among others: assertions relating to sufficiency of permit limits to ensure Safe Drinking Water Act standards are achieved; absence of TDS limits; need for filtration of WMP discharges; adequacy of state's responses to public's queries and comments regarding LGS; notification of public regarding radioactive spill into the Schuylkill River in March 2012; lack of effluent limits on cooling tower discharge; potential for discharges of sulfuric acid; Exelon's use of chlorine; adequacy of monitoring requirements and notification requirements imposed by PADEP for alleged toxic discharges; and PADEP's interpretation of radiation standards. All comments submitted to the Commission on the draft docket are public records and are available for inspection by appointment in accordance with instructions posted on the Commission's website.

## **XI. Nuclear Regulatory Commission License**

The Commission received a number of comments specific to matters regulated by the NRC (Division of License Renewal, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, [www.nrc.gov](http://www.nrc.gov)). Topics included, among others: adequacy of LGS water stored on site for cooling reactor core under threat of meltdown; discharges or spills associated with transportation and storage of fuel rods; radioactive spills; risk posed by age and condition of LGS equipment; public notice of radioactive spills; adequacy of radiation monitoring at LGS. All comments submitted to the Commission on the draft docket are public records that are available for inspection by appointment in accordance with instructions posted on the Commission's website.

## **XII. Delegation of Authority to the Executive Director**

### **43. COMMENT:**

Several commenters requested that the Commission require an independent mediator, not the DRBC Executive Director, to hear and adjudicate all water-related claims against the LGS and Exelon Generation.

### **RESPONSE:**

The Commissioners have delegated to the Executive Director the authority to review and make determinations concerning certain docket conditions. The Executive Director relies on the impartial analyses provided by technical staff of the Commission and the signatory parties in exercising this authority. The Commissioners are the Governors of the four basin states (elected officials directly accountable to the public), and on behalf of the federal government, the North Atlantic Division Commander of the U.S. Army Corps of Engineers, who is a Regular Army officer appointed by the President and confirmed by the Senate. Decisions by the Executive Director, like those of the Commissioners, are subject to appeal under the Commission's Rules of Practice and Procedure. DECISION Condition II.n. of the docket provides that the "docket holder or any other person aggrieved by a reviewable action or decision taken by the Executive Director or Commission pursuant to this docket may seek an administrative hearing...and after exhausting all administrative remedies may seek judicial review...." In the view of the Commissioners, the Commission's institutional structure and regulations governing appeals safeguard the public interest and ensure due process for those aggrieved by Commission decisions.

### **44. COMMENT:**

Several commenters stated that the Executive Director should not have the authority to determine the validity of complaints relating to violations and well disturbances allegedly resulting from activities of the docket holder. These commenters also objected to a system that in their understanding obliges members of the public to pay for investigations by a hydro-

geologist to support findings of interference. Instead, they recommend that victims be provided funding from the water charging revenue the Commission collects for surface water withdrawals by Exelon to hire their own experts.

**RESPONSE:**

The Commission's dockets approving water withdrawals, and in particular withdrawals of groundwater, customarily authorize the Executive Director to determine the validity of complaints relating to violations and well disturbances allegedly resulting from the docket holder's activities. In the view of the Commission, delegation of authority to the Executive Director to determine the validity of interference complaints facilitates expeditious resolution of such issues when they arise. Anyone aggrieved by a determination of the Executive Director may appeal to the Commission in accordance with the Rules of Practice and Procedure.

The commenters apparently are misinterpreting condition II.o. of the approved docket relating to surface and groundwater interference complaints. The condition requires the docket holder to notify the Executive Director when it receives a complaint of interference and further requires the docket holder, *not the aggrieved party*, to investigate the complaint. The docket holder is also required to "...provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition." Moreover, the docket holder, *not the injured party*, is responsible for repairing, replacing or otherwise mitigating its interference with another user's supply. Specifically, the condition provides, "Any well or surface water supply which is substantially adversely affected, or rendered dry or otherwise unusable as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated *at the expense of the docket holder*" (emphasis added). Finally, in response to a complaint the docket holder, *not the injured party*, bears responsibility for submitting to the Executive Director as soon as practicable "[a] report of investigation and/or mitigation plan prepared by a hydrologist." Although complainants are free to hire their own experts, the condition imposes this obligation squarely on the docket holder.

**45. COMMENT**

Some commenters stated that the Executive Director should not have the authority to approve alternative water sources for LGS without a public hearing.

**RESPONSE:**

Docket D-1969-210 CP-13 does not give the Executive Director the authority to approve water sources. The LGS may use only those sources identified in the docket to the extent authorized by the docket. Although the applicant requested that the Executive Director be given the discretion to approve additional mine water sources for consumptive use by the LGS if the applicant identifies such sources during the term of the docket, the final docket approval does not include such a provision. Requests for new water sources or increases in allocations can only be approved by the Commissioners at a public meeting following a duly noticed public hearing.

When the draft docket was released for public notice, the Commission was in the early stages of reviewing a separate application from the Tamaqua Area Water Authority (TAWA) and Tamaqua Borough (TB) to provide additional water to the LGS facility. Accordingly, DECISION Condition II. jj. of the *draft* docket authorized the Executive Director to approve an increase from 36 mgd to 43.3 mgd in the amount of augmentation water that could be supplied from Still Creek Reservoir, “contingent upon the separate Commission review and approval of the application by TAWA for the reservoir and water supply system and a consequent finding of ‘no significant impact to the water resources of the basin.’” The TAWA/TB docket was approved by the Commission at its public meeting on December 5, 2012, after a duly noticed public hearing. The final docket includes Commission approval for TAWA to provide 43.3 mgd of augmentation water for LGS, upon approval by the Commission of Docket No. D-1969-210-CP-13 for the LGS. Because the TAWA/TB docket was approved before Docket No. D-1969-210 CP-13 for LGS, condition II.jj. of the LGS docket approves the use of additional augmentation water from the TAWA for consumptive water needs at LGS. A delegation of authority to the Executive Director for this purpose was not necessary and was not included.

**46. COMMENT**

Some commenters stated that the Executive Director has shown bias towards Exelon in prior decisions.

**RESPONSE:**

It is not clear what decisions the commenters are referring to. Docket decisions regarding the LGS have been decisions of the Commission, not the Executive Director. Actions of the Commission regarding the LGS are and have been based on technical reviews and consultations among Commission staff and staff of the signatory parties. The Commissioners’ decisions have followed a public process involving public notice, an opportunity for written comment and public hearings.

**47. COMMENT:**

Commenters requested that the Commission make all reports submitted to the Commission by Exelon available for public inspection so that the public can make an unbiased accounting of such reports.

**RESPONSE:**

In accordance with Article 8, “Public Access to Records and Information,” of the Commission’s Rules of Practice and Procedure, the Commission makes the fullest possible disclosure of records to the public, subject to limited restrictions. Reports and other documents filed with the Commission by Exelon are public records available for inspection. Many of these reports, including all interim and annual reports submitted by Exelon in connection with the Demonstration Project, are posted on the Commission’s website at <http://www.state.nj.us/drbc/programs/project/wadesville/archives.html>. Instructions for requesting access to or copies of Commission documents are also posted on the Commission’s

website at <http://www.state.nj.us/drbc/about/public/foia/index.html>. The Commission provides copies of records for the cost of reproduction and, if sent by mail, the cost of postage. Commission files or materials may be reviewed at the Commission offices, free of charge. However appointments are required to ensure that the Commission understands the nature of the request and has the appropriate files or materials available in advance for review.

### **XIII. Payments by Exelon to the DRBC**

#### **48. COMMENT:**

One group commented that the more water LGS withdraws and discharges, the more money DRBC collects in fees. The same group commented that augmentation releases from the WMP also result in fees for the Commission.

#### **RESPONSE:**

The Commission imposes no fees on discharges to waters of the Delaware River Basin. The Commission in 1976 established a system of water supply charges (*see* Resolution No. 74-6, codified in the Administrative Manual- Part III: Basin Regulations – Water Supply Charges) that apply only to surface water withdrawals. Currently, these consist of a consumptive use charge of \$80 per million gallons (\$0.08 per 1000 gallons of water) and a non-consumptive use charge of \$0.80 per million. (Prior to 2010 the Commission’s basic charges were \$60 per million gallons (\$0.06 per 1000 gallons) for consumptive use and \$0.60 per million for non-consumptive use.) Surface water charging revenue is used to repay the federal government for storage the Commission owns in two water supply reservoirs - Blue Marsh and Beltzville – constructed and operated by the U.S. Army Corps of Engineers, and to cover the Commission’s share of operation and maintenance expenses for the two reservoirs. The Commission’s storage in the Blue Marsh and Beltzville reservoirs is used to augment flows in the main stem Delaware River during periods of low flow, buffering the impact of potential shortages on withdrawers. Water supply charging revenues also support the Commission’s activities related to water supply management throughout the Basin.

#### **49. COMMENT:**

The organization called ACE commented that in 2007 Exelon under-reported its water usage by 7,879 million gallons and underpaid its water supply charges by as much as \$338,641. ACE also alleged that the DRBC has received hundreds of millions of dollars from Exelon without disclosing the amount; that DRBC has refused to spend these revenues on independent studies; and that DRBC is complicit in Exelon’s under-reporting of surface water withdrawals. ACE is requesting an independent investigation.

## **RESPONSE:**

The Commission has an audited financial statement prepared each year by a reputable accounting firm. The Commission changes accounting firms periodically to ensure that its auditors remain objective. ACE's allegations that the Commission has "covered up" payments by Exelon or that water supply charging revenues have biased the Commission's decision-making on Exelon's project review applications are without foundation.

ACE's comment that the Commission collects millions of dollars a year from Exelon's LGS is incorrect. Through 2010, when the Commission modestly increased its water supply charging rates for the first time in 30 years, Exelon's water usage payments for the LGS facility were between \$624,000 and \$716,000 per year. In 2011 and 2012, Exelon's payments were \$944,543 and \$927,503, respectively. The higher payments were attributable to the increase in the Commission's rates. Exelon's annual water usage at the LGS has been fairly consistent at between 14.2 and 14.6 billion gallons per year.

In a letter dated October 21, 2008 to Dr. Lewis Cuthbert, President of the organization Alliance for a Clean Environment (ACE), the Commission listed LGS's reported 2007 water use and corresponding payments by Exelon for withdrawals from the Schuylkill River, along with similar data for several other Exelon facilities. In 2007, the Commission's water charging rates were \$60 per million gallons for consumptive use (water not returned to the basin, due for example to evaporation) and \$0.60 per million gallons for non-consumptive use (water returned to the basin, for example via discharge to a waterway). (In September, 2010 the Commission approved an increase to the surface charging rates for consumptive and non-consumptive use to \$80 and \$0.80 per million gallons respectively.) Exelon's reported total LGS withdrawal from the Schuylkill River was 12,634.152 million gallons, of which 9,708.571 gallons were used consumptively and 2,925.851 were used non-consumptively. Payments to the Commission totaled \$584,269.61. This did not include water pumped to the LGS from the Delaware River via the Perkiomen Creek.

In May of 2004, when Exelon filed its application for the WMP Demonstration Project, Exelon offered to contribute funding to support projects that would help restore and protect the Schuylkill River and the Perkiomen Creek. The Commission accepted Exelon's proposal. The fund was named the Restoration and Monitoring Fund (RMF). Exelon agreed to contribute \$0.06 for every 1,000 gallons of water *not* pumped from the Delaware River (and conveyed to LGS via the Perkiomen Creek) as a result of suspension of the temperature-based restriction on withdrawals from the Schuylkill River. The funding program was included as a condition III. Of Docket No. D-69-210 CP (Final) (Revision 12) approved in October of 2004. Monies contributed to the RMF are managed through a program called the Schuylkill River Restoration Fund (SRRF or "fund"). During the Demonstration Project Exelon's contribution to the RMF has been between \$158,000 and \$271,000 per year. Exelon's fund contribution goes directly to the Schuylkill River Greenway Association, a 501(c)(3) corporation located in Pottstown, PA, not to the Commission.

ACE's allegations regarding water usage by the LGS appear to stem from a misunderstanding of the distinctions between (1) the amount of water Exelon requested in its project review applications; (2) the water allocations approved by the Commission in dockets

issued to Exelon; and (3) the amount of water actually withdrawn and either consumptively or non-consumptively used by the LGS. Water charges were levied and paid only on the last of these sets of numbers – water actually used by the LGS. Exelon’s applications filed with the Commission include projected average usage and projected maximum daily usage. The water allocations approved by the Commission in dockets issued to Exelon for the LGS are based not on projected average usage, but on projected maximum daily usage. They are likewise expressed as “up to X million gallons per day,” not as an average daily use. Exelon’s docket also includes a monthly allocation limit, which ensures that Exelon cannot take the maximum daily use quantity every day.

The maximum daily usage established in a docket is usually the highest *actual* usage by the docket holder on any single day over a ten-year period, or the highest usage *projected* for a single day over the course of ten years. In other words, the limitation is based on either historical records or projected needs. Multiplying the maximum allowable daily withdrawal by 365 days will result in an inflated usage estimate, because this calculation erroneously assumes that the facility is withdrawing its maximum daily use every day of the year. The Commission requires docket holders to meter and report actual water usage. Metered usage determines the docket holder’s compliance with docket conditions and the amount owed the Commission in water supply charges.

**50. COMMENT:**

One commenter asserted that the Commission’s Water Resources Management Branch has more than two dozen employees whose expertise could be used to design and conduct independent studies.

**RESPONSE:**

The Water Resources Management Branch (WRMB) has a staff of 12. Four of these individuals are responsible primarily for tasks associated with reservoir management and not the review of projects. Studies that the docket holder is required to perform or to engage others to perform as a condition of the docket approval are reviewed by the Commission staff. The WRMB draws on the expertise of other Commission branches as appropriate.

**XIV. Schuylkill River Restoration Fund (SRRF) or Restoration and Monitoring Fund (RMF)**

**51. COMMENT:**

Some commenters recommended the continuation of the SRRF. Others suggested that the fund be discontinued. One commenter requested that the rate for fund contributions be increased from \$0.015 to \$0.02 per thousand gallons.

**RESPONSE:**

In May of 2004, when Exelon filed its application for the WMP Demonstration Project, Exelon offered to contribute funding to support projects that would help restore and protect the Schuylkill River and the Perkiomen Creek. The Commission accepted Exelon's proposal. The fund was named the Restoration and Monitoring Fund (RMF). Exelon agreed to contribute \$0.06 for every 1,000 gallons of water *not* pumped from the Delaware River (and conveyed to LGS via the Perkiomen Creek) as a result of suspension of the temperature-based restriction on withdrawals from the Schuylkill River. The funding program was included as a condition III. Of Docket No. D-1969-210 CP – Final (Revision 12) approved in October of 2004.

Monies contributed to the RMF are managed through a program called the Schuylkill River Restoration Fund (SRRF or "fund"). It was hoped that this name would attract broader participation and other contributors. SRRF awards grants to government agencies and non-profit organizations for projects that improve water quality in the Schuylkill River Watershed. The grants focus on three major sources of pollution: stormwater run-off, agricultural pollution and abandoned mine drainage. Since its creation, the fund has received contributions of more than \$1.9 million and has funded more than 30 projects. These include projects to control agricultural nonpoint source pollution, perform stream restoration, and treat acid mine water, as well as others to restore streams and improve water quality. The fund is managed by the Schuylkill River Greenway Association, based in Pottstown, PA ([www.schuylkillriver.org](http://www.schuylkillriver.org)), a NGO founded in 1974 to preserve the riverfront in Berks and Schuylkill Counties.

The projects funded by the SRRF have improved stream quality and the Commission supports the fund's continuation. Several entities other than Exelon have contributed to the fund, including most notably the Philadelphia Water Department. Exelon has agreed to continue its voluntary contributions to the SRRF. Provision for such contributions is included in the O&M Plan that accompanies the docket (*see* O&M Plan, p. 21). Removal of the temperature-based restriction on LGS withdrawals from the Schuylkill River has necessitated a change in the method of calculating Exelon's contribution to the fund. Payments will be made annually by March 31<sup>st</sup> of each year, in an amount determined by applying the rate of \$0.015 per thousand gallons to LGS's actual consumptive surface water use for the preceding calendar year, as reported to DRBC. Although the rate per thousand gallons has been reduced (it had previously been \$0.06 per thousand gallons), the base to which the rate is applied will be LGS's total annual consumptive surface water use – a quantity considerably greater than the amount of water not pumped from the Delaware as result of suspension of the temperature-based restriction on consumptive use withdrawals from the Schuylkill River. Exelon's total annual contribution is expected to remain approximately the same as its average annual contribution under the prior docket.

**52. COMMENT:**

Commenters who oppose the continuation of the SRRF alleged that the fund is being used to whitewash irreversible harm to the Schuylkill River and to buy silence and support for the LGS. They also objected to Exelon having a hand in deciding which projects receive grants from the SRRF. These commenters recommended that the funds contributed by Exelon be put towards a filtration system.

**RESPONSE:**

The projects funded through the SRRF have had the purpose of restoring streams and improving water quality in the Schuylkill River Watershed. Project outcomes have been positive and tangible. The fund is managed by the Schuylkill River Greenway Association (SRGA). An advisory committee to the SRGA comprised of representatives from the Commission, the U.S. EPA, PADEP, Partnership for the Delaware Estuary, Philadelphia Water Department, Schuylkill River Heritage Area, Schuylkill Action Network and Exelon reviews grant applications and recommends the projects to be awarded SRRF funds. The Executive Director of the Commission determines which projects ultimately receive funding. Exelon does not have the ability to overrule the advisory Committee or the Executive Director.

## **XV. Air Releases**

### **53. COMMENT:**

Some comments concerned an air release at the LGS. One commenter requested that the Commission review issues associated with a Title V permit issued by the PADEP.

### **RESPONSE:**

The Commission has no authority to review matters relating to air emissions or permits issued pursuant to the federal Clean Air Act. Matters relating to air emissions are referred to the PADEP.

## **XVI. Tamaqua Reservoirs**

### **54. COMMENT:**

One commenter requested that action on the docket be postponed until review of the Tamaqua Area Water Authority (TAWA) docket could be completed, in light of conditions in the draft LGS docket that are tied to proposed changes in the TAWA docket.

### **RESPONSE:**

The Commission approved Docket No. D-2010-028 CP-1 for the Tamaqua Area Water Authority (TAWA) and Tamaqua Borough (TB) at a public meeting on December 5, 2012, following a duly noticed public hearing. The TAWA/TB docket includes Commission approval for an increase from 36 mgd to 43.3 mgd in the combined releases from the Tamaqua reservoirs (Still Creek and Owl Creek reservoirs) for use by Exelon to meet consumptive and non-consumptive cooling water needs at the LGS. A condition in the public comment draft of Docket No. D-1969-210 CP-13 that was contingent upon approval of the TAWA/TB docket has been modified accordingly.

### **55. COMMENT:**

One group alleged that the DRBC allowed Exelon to pump one billion gallons each year from the Still Creek Reservoir in order to dilute WMP discharges and thereby hide actual contamination levels in the WMP discharge. The group stated that the Demonstration Project was approved for the express purpose of providing such dilution.

**RESPONSE:**

Releases from the Tamaqua reservoirs are made by gravity flow, not pumping. Such releases are not necessarily made concurrently with releases from the WMP. They are made for the purpose of providing consumptive use water for LGS and not to dilute contamination from the WMP, as the commenter alleges.

**56. COMMENT:**

One commenter wanted to know what impact releasing an additional 7.3 mgd of water from the Still Creek and Owl Creek reservoirs would have on aquatic life and streambed make-up in the Little Schuylkill River. The commenter recommended that the DRBC require a stream channel geomorphic survey to establish a baseline in the Little Schuylkill River before allowing the additional 7.3 mgd releases.

**RESPONSE:**

No significant adverse impact is expected from the additional releases into the Little Schuylkill River. Releases will generally coincide with low natural flows in the Little Schuylkill River, when the additional flow is likely to have a beneficial effect. Monitoring of the Little Schuylkill River below the Still Creek Reservoir was required during the Demonstration Project, with no adverse impacts reported. Benthos and fishery monitoring and reporting for the Little Schuylkill River is required by the O&M Plan approved with the docket.

**XVII. Other Matters**

**57. COMMENT:**

The docket holder requested that the effective date of the docket be changed to June 1, 2013.

**RESPONSE:**

The effective date in the draft docket was May 8, 2013. In light of the applicant's request and subsequent consultations with the applicant, the Commission has approved a final docket that requires the docket holder to continue to comply with the terms and conditions of Docket No. D-69-210 CP (Final) (Revision 12) (as amended by Resolution No. 2012-6) until midnight of December 31, 2013. On January 1, 2014 the docket holder is required to commence operating under the terms and conditions of Docket No. D-1969-210 CP-13. This approach will allow for a smooth transition from operation of the LGS under its former docket to operation of the facility

under Docket No. D-1969-210 CP-13 by allowing time for the docket holder to, make the necessary adjustments in its monitoring programs and other aspects of its operations. The docket expiration date remains the same as in the draft docket, in order to synchronize the docket and NPDES permit terms.

**58. COMMENT:**

One commenter requested that a docket condition be added requiring that the matter of impingement and entrainment (I&E) be revisited upon adoption by the EPA of final standards for implementing Clean Water Act Section 316, expected in 2013.

**RESPONSE:**

Section 316(b) of the Clean Water Act requires that the location, design, construction and capacity of cooling water intake structures reflect the best technology available (“BTA”) for minimizing adverse environmental impact. Under a modified settlement agreement in two cases consolidated in the Federal District Court for the Southern District of New York, EPA is working to finalize standards for cooling water intake structures at existing facilities in accordance with this provision by June 27, 2013. Notably, cooling towers such as those installed at the LGS facility are currently viewed as BTA under Section 316(b).

Under the Clean Water Act, the USEPA and PADEP are jointly responsible for implementing Section 316(b) in Pennsylvania. Section 1.5 of the Delaware River Basin Compact provides, “It is the purpose of the signatory parties to preserve and utilize the functions, powers and duties of existing offices and agencies of government ... and to utilize and employ such offices and agencies for the purposes of this compact to the fullest extent it finds feasible and advantageous.” Consistent with this clause and to avoid unnecessary duplication, the Commission defers to the USEPA and PADEP in implementing Section 316(b). Accordingly, a condition such as that recommended by the commenter has not been added.

**59. COMMENT:**

Numerous comments expressed concern about Commission decisions in the past extending and modifying Docket No. D-69-210 CP (Final) (Revision 12).

**RESPONSE:**

Each of the referenced decisions was made by the Commission following public notice and a public hearing. No appeals of these decisions were filed and the time for such appeals has elapsed. Comment on these matters is no longer timely.

**60. COMMENT:**

Several comments expressed concerns related to Docket No. D-2010-40 CP-1 for Exelon’s Schuylkill Generating Station (SGS).

**RESPONSE:**

Docket No. D-2010-40 CP-1 was approved on May 11, 2011 after public notice and public hearing. The docket was issued to Exelon Generation Company, LLC for the discharge of non-contact cooling water (NCCW) from Exelon's Schuylkill Generating Station (SGS), located in Philadelphia, PA. The docket approved an existing combined discharge of up to 231.84 million gallons per day (mgd) of NCCW and traveling screen backwash from the SGS, Tri-Gen Corporation, and Gray's Ferry Cogen Facility (GFCF) via existing Outfall No. 001. Outfall No. 001 discharges to the tidal portion of the Schuylkill River at River Mile 92.47 – 5.6 (Delaware River – Schuylkill River), in Water Quality Zone 4 in the City of Philadelphia, Pennsylvania.

No appeal of the Commission decision approving Docket No. D-2010-40 CP-1 has been filed, and the time for such appeals has elapsed. Docket No. D-2010-40 CP -1 is not related to the LGS docket.