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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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Before the Atomic Safety and Licensing Board

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

In the Matter of	)	
	)	
Philadelphia Electric Company	)	Docket Nos. 50-352
	)	50-353
(Limerick Generating Station,	)	
Units 1 and 2)	)	

APPLICANT'S PROPOSED FINDINGS OF FACT  
AND CONCLUSIONS OF LAW IN THE FORM  
OF A PARTIAL INITIAL DECISION

Philadelphia Electric Company, Applicant in the captioned proceeding, in accordance with 10 C.F.R. §2.754 and the Atomic Safety and Licensing Board's Order of July 13, 1982, hereby submits the attached proposed findings of fact and conclusions of law in the form of a partial initial decision with respect to those contentions for which the hearing has been completed.

Pursuant to the instructions of the Licensing Board (Tr. 3892), Applicant has prepared its submission utilizing the format followed in the Susquehanna Initial Decision, dated April 12, 1982 and in accordance with the specific instructions outlined by the Board (Tr. 3892 et seq.).

Respectfully submitted,

CONNER & WETTERHAHN, P.C.

*Troy B. Conner, Jr.*  
Troy B. Conner, Jr.  
Counsel for Applicant

November 9, 1982

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Lawrence Brenner, Esq., Chairman  
Dr. Richard F. Cole, Member  
Dr. Peter A. Morris, Member

In the Matter of )  
 )  
Philadelphia Electric Company ) Docket Nos. 50-352  
 ) 50-353  
(Limerick Generating Station, )  
Units 1 and 2) )

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APPEARANCES

TROY B. CONNER, JR., Esq., MARK J. WETTERHAHN, Esq., ROBERT M. RADER, Esq., and INGRID M. OLSON, Esq., of Conner & Wetterhahn, P.C., Washington, D.C. for Philadelphia Electric Company.

JOSEPH RUTBERG, Esq., ANN P. HODGDON, Esq. and ELAINE I. CHAN, Esq., Office of the Executive Legal Director, U.S. Nuclear Regulatory Commission, Washington, D.C. for the NRC Staff.

ROBERT J. SUGARMAN, Esq., for Del-Aware Unlimited, Inc.

PARTIAL INITIAL DECISION  
(OPERATING LICENSE PROCEEDING)

OPINION

I. BACKGROUND

This partial initial decision concerns the application filed with the Nuclear Regulatory Commission (hereinafter "Commission" or "NRC") by the Philadelphia Electric Company (hereinafter "Applicant") for facility operating licenses which would authorize the operation of the Limerick Generating Station, Units 1 and 2 (hereinafter "Limerick" or "facility"). Applicant is responsible for operation of the facility, which utilizes two boiling water nuclear reactors, each designed to operate at a core power level of 3440 megawatts thermal, with an equivalent net electrical output of 1055 megawatts. The facility is located on the Applicant's site on the Schuylkill River, near Pottstown, in Limerick Township, Montgomery County, Pennsylvania.

The application for operating licenses was filed by Applicant on March 17, 1981 and docketed by the NRC on July 27, 1981. <sup>1/</sup> On August 21, 1981, the Commission published "Notice of Receipt of Application for Facility Operating Licenses; Notice of Consideration of Issuance of Facility Operating Licenses; Notice of Availability of Applicant's

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<sup>1/</sup> The application consists of its formal portion, the Final Safety Analysis Report ("hereinafter "FSAR") and the Environmental Report-Operating License Stage (hereinafter "EROL") and amendments thereto.

Environmental Report; and Notice of Opportunity for Hearing." 2/

On September 8, 1981 this Atomic Safety and Licensing Board (hereinafter "Licensing Board" or "Board") was established to rule on the petitions and the requests for participation as interested governmental agencies. 3/

Following a special prehearing conference held on January 6-8, 1982 to consider the petitions and requests, the Licensing Board issued a Special Prehearing Conference Order (hereinafter "SPCO") on June 1, 1982. As regards the instant decision, the only petitioner raising relevant contentions was Del-Aware Unlimited, Inc. (hereinafter "Del-Aware"), which the Board admitted as an intervenor.

The three admitted contentions litigated by Del-Aware and decided herein raise environmental issues pertaining to the supply of supplemental cooling water by way of the Point Pleasant diversion, which will furnish water to Limerick by way of an intake structure and pumping station located on the Delaware River in Point Pleasant, Pennsylvania. 4/ As described in greater detail below, this system will convey

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2/ 46 Fed. Reg. 42557 (August 21, 1981).

3/ Establishment of Atomic Safety and Licensing Board to Preside in Proceeding, 46 Fed. Reg. 45715 (September 14, 1981).

4/ Inasmuch as Del-Aware was the only intervenor to pursue these three particular contentions, the Board shall refer to the Applicant, the Staff and Del-Aware hereinafter as "the parties."

water to the Bradshaw Reservoir, which will then be pumped to the Limerick facility via the East Branch of the Perkiomen Creek.

The project includes various components, some of which will be operated solely by Applicant and others which will be utilized only by the Neshaminy Water Resources Authority (hereinafter "NWRA") to furnish water to Montgomery and Bucks Counties. The intake structure and pumping station will be operated by NWRA. For convenience, the Board will refer only to "Applicant" in describing the joint usage of this facility by both entities.

The hearing on the two remaining contentions was commenced in Norristown, Pennsylvania on October 4-8 1982 and completed in Bethesda, Maryland on October 18-26, 1982. <sup>5/</sup> At the hearing, the parties agreed to a stipulation, which the Board approved, withdrawing one of the three contentions (Contention V-16b), which related to alleged groundwater contamination and hydraulic saturation (Tr. 2371).

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<sup>5/</sup> In its SPCO, the Licensing Board stated its intent to consider these contentions on an accelerated basis in order to decide them prior to the scheduled construction of the Point Pleasant intake structure and pumping station and the Bradshaw Reservoir as authorized by the Delaware River Basin Commission (hereinafter "DRBC") in DRBC Docket Nos. D-79-52 CP and D-65-76 CP(8), both issued on February 18, 1981. SPCO at 88-89. Accordingly, the Board adopted a schedule for the resolution of supplemental cooling water contentions prior to the scheduled commencement of construction at Point Pleasant on or about December 15, 1982.

The decisional record in this proceeding consists of the following:

- a. The Commission's Notice of Hearing;
- b. The pertinent pleadings filed herein, including the petitions and other pleadings filed by the parties, and the orders issued by the Licensing Board during the course of this proceeding;
- c. The transcripts of the special prehearing conference on January 6-8, 1982 (Tr. 1 to 737), and the transcript of testimony of the evidentiary hearings (Tr. 738 to 4038);
- d. All of the exhibits marked for identification, whether received into evidence, are listed in Appendix A to this partial initial decision.

This Board's jurisdiction is limited to a determination of findings of fact and conclusions of law on matters put into controversy by the parties to the proceeding or found by the Board to involve a serious safety, environmental or common defense and security question. <sup>6/</sup> The Board has made no such additional determinations in this case.

## II. CONTENTIONS

### Legal Background

The Point Pleasant project has been the subject of ongoing review by a number of concerned agencies. For

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<sup>6/</sup> See 10 C.F.R. 2.760(a); 10 C.F.R. Part 2, Appendix A, Section VIII(b).

several years, proceedings on the project were conducted before the Delaware River Basin Commission ("DRBC") which, as noted below, granted final approvals to NWRA and to PECO for their respective components of the project on February 18, 1981. <sup>6/</sup> The DRBC docket decisions issued at that time authorized construction of the project and incorporate earlier decisions which set the terms and conditions for the allocation of Delaware River water to be withdrawn at Point Pleasant.

Separate permit activities were conducted by NWRA before the United States Army Corps of Engineers, which on October 25, 1982 issued dredge and fill permits to NWRA pursuant to Section 10 of the Rivers and Harbors Appropriations Act of 1899, 33 U.S.C. §403 and Section 404 of the Clean Water Act, 33 U.S.C. §1344. Such permits are necessary for construction of the intake structure for the Point Pleasant pumping station in the Delaware River. <sup>7/</sup>

Each of these respective agencies determined that environmental impacts associated with the project were minimal and, in the context of the undertaking, insignificant. Each agency issued an environmental

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<sup>6/</sup> See note 5, supra.

<sup>7/</sup> On September 2, 1982, stream crossing and encroachment permits were issued to Applicant by the Pennsylvania Department of Environmental Resources ("PaDER"), as well as to NWRA.

assessment in which the agency's findings and conclusions were explained in detail. <sup>8/</sup>

Throughout the proceedings, the Applicant has taken the position that the review by DRBC pursuant to its statutory authority under its Compact precludes the NRC from reevaluating de novo environmental impacts associated with the operation of the pumping station as to Applicant and NWRA. It takes the position that the NRC has no jurisdiction over NWRA. Applicant also contends that the recently completed review by the Corps of Engineers in issuing dredge and fill permits precludes the NRC from altering the intake structure design or location. <sup>9/</sup> In Applicant's view, the NRC is precluded from considering anew potential environmental impacts as to which the DRBC and Corps of Engineers have made conclusive findings by (1) "lead agency" concept under the National Environmental Policy Act ("NEPA") of 1969, 42 U.S.C. §4321, et seq.; (2) the NRC Second Memorandum of Understanding, Federal Water Pollution Control Act, <sup>10/</sup> and (3) the decision at the

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<sup>8/</sup> See Final Environmental Assessment for the Neshaminy Water Supply System, DRBC (August 1980); Neshaminy Water Resources Authority, Point Pleasant Diversion Project - Environmental Assessment, Corps of Engineers (October 14, 1982); Environmental Assessment Report and Findings - Point Pleasant Water Supply Project, PaDER (August 1982).

<sup>9/</sup> These matters were reviewed by the Corps of Engineers and discussed in its Environmental Assessment issued in conjunction with the permits. The Board takes official notice of the Environmental Assessment prepared by DRBC, PaDER and the Corps of Engineers.

<sup>10/</sup> 40 Fed. Reg. 60115 (December 31, 1975).



construction permit stage on the utilization of environmental findings by other agencies. <sup>11/</sup> Nonetheless, the Licensing Board has conducted a full evidentiary hearing on the two contentions involving the Point Pleasant project and has determined, for the reasons discussed in detail below, that construction of the project may proceed, regardless of what weight is given to the findings of other agencies.

1. Impacts Upon Fish Resources and Recreational Activities (Contention V-15 and V-16a in part).

Intervenor Del-Aware contends that the Point Pleasant intake will be relocated in the Delaware River so as to cause significant adverse impacts on fish in the area, particularly American shad and shortnose sturgeon. Del-Aware also claims that the intake structure will cause drawdown of the pool formed by the wing dam at Lumberville approximately one mile downriver, which will adversely affect boating and recreation in the area. A great number of subsidiary issues were raised at the hearing. Although the Board has decided all relevant issues in making particularized findings of fact, it has attempted to discuss in this opinion only the more vigorously contested matters.

The Board considered the location of the intake structure as now proposed, the design and configuration of the intake structure, flow characteristics of the Delaware

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<sup>11/</sup> Limerick, ALAB-262, 1 NRC 163 (1975).

River at this location and the physical and behavioral characteristics of shortnose sturgeon likely to be present in the intake structure area at all stages of their development.

Location of the Intake and  
Flow Characteristics of the  
Delaware River at Point Pleasant

Although a shoreline location utilizing vertical traveling screens was initially planned, it was later decided to use cylindrical wedge wire screens located in the river in order to maximize environmental protection for aquatic life. The finally selected location at Station 8+62 (approximately 245 feet from the shoreline) was selected over alternative locations in the river in order to minimize any adverse impact on aquatic life in the Delaware River. Both the Applicant's and Staff's witnesses, as well as the expert on shortnose sturgeon subpoenaed by Del-Aware, agreed that the selected location provides optimal protection of aquatic life in the area and that deployment of the intake further into the channel would yield no greater protection. (Board Findings 11-13, 114-21, 123).

Measurements of velocity were taken by Applicant at the location of the intake at flows of 3,000 cfs and 4,500 cfs. These measurements show that even at a low flow of 3,000 cfs, the velocity at the intake site will be 1 fps or greater. Applicant was able, by extrapolation from these values to show that even under the minimum low flow of 2,500 cfs anticipated under the most severe circumstances, bypass

velocity at the intake would be .8 fps. (Board Findings 36-51).

Del-Aware attempted to discredit Applicant's measurements and calculations. Del-Aware suggested that the locations where Applicant's measurements were taken were inaccurate. Applicant, however, was able to show that its depiction of station locations in the river was reasonably accurate. The Staff and even Del-Aware's own witness agreed to the accuracy of these locations. Further, the Applicant's evidence establishes that the instruments used to take the velocity measurements produced accurate results. Del-Aware's witness conceded that the measurements of the speed of the current were accurate within 5 percent. The Staff made independent calculations and agreed that Applicant's data were reasonably accurate. (Board Findings 36-41).

Applicant correlated elevations at Point Pleasant to flow levels on a rating curve. The curve shows measured elevations at flows as low as 2,700 cfs. From these measurements, Applicant extrapolated the values at lower levels of flow. Del-Aware attempted to discredit Applicant's data, asserting that the values on the rating curve at lower levels failed to take into account the hydraulic control of the downstream Lumberville wing dam. Applicant, however, was able to show that the effect of the dam on the extrapolated values was minimal and had in fact been considered. Thus, the Board finds that the Applicant's

data for flows and elevation are accurate. (Board Findings 37-39).

Del-Aware contended that Applicant's determination of the flow at Point Pleasant failed to consider the diversion via the Delaware-Raritan Canal. The Board finds that the probable discrepancy is approximately 100 cfs, which the Board finds is insignificant and does not substantially affect Applicant's velocity measurements at Point Pleasant and derived values. (Board Findings 49-51).

The flow characteristics of the Delaware River at Point Pleasant are significant in this proceeding to analyze potential impacts of the intake on the American shad and shortnose sturgeon. Specifically, one issue raised was whether the ratio of the river flow velocity past the intake to the intake velocity is sufficient to protect American shad and shortnose sturgeon from entrainment or impingement by the intake.

Basically, the evidence establishes that a ratio of 2:1 or greater will exist between the bypass velocity of the river as it flows past the intake as compared to the maximum intake velocity during periods in which the Delaware River flow will constitute 3,000 cfs or greater, which constitutes the conditions which will exist for 90 percent of the time the intake is in operation. Although a 2:1 or better ratio provides optimal protection to aquatic life which may be affected by the intake's operation, minor fluctuations below that ratio will make no discernible difference. Even a 1:1

ratio will assure adequate protection to aquatic life. In fact, wedge wire screens provide substantial protection from impingement and entrainment even where utilized in still water. From the evidence considered by the Board, the 2:1 or better ratio, even with minor variations, will adequately protect aquatic life. (Board Findings 34-36, 44-48, 52-58, 71-72, 114-121).

For its part, Del-Aware was unable to establish that greater flow velocities existed further into the channel, or that greater bypass velocities than those anticipated at the present location of the intake would provide any further protection to aquatic life in the area, specifically American shad and shortnose sturgeon. The Board is not persuaded by the apparent "more is better" philosophy which dominated the opinions of Del-Aware's witnesses. (Board Findings 117-120).

Del-Aware also asserted that cross currents created by a bar upstream from the intake which might affect the efficiency of the wedge wire screens had not been considered by Applicant. Del-Aware's witness could not support a proposition that a cross current would pass the screens at a 30° vector. The Del-Aware witness merely speculated that a current created by the bar could meet the intake at an angle of 5° to 25°. The Board is persuaded by the Applicant and Staff answers to cross-examination and Board questions that even a cross current at an angle of 30° would not adversely affect the effectiveness of the wedge wire screens in

minimizing impingement and entrainment. (Board Findings 65-66).

Del-Aware also attempted to establish that during periods of low flow, the eddy would expand such that its waters would be drawn into the intake. Del-Aware contended that this would have an adverse impact upon shad. However, the Board concluded that the evidence proffered by the Applicant and Staff demonstrates that the eddy's water will not reach the intake structure in the Delaware River channel, even during periods of low flow. Del-Aware's witness conceded that the main channel flow will push the eddy toward the shore and was unable to predict whether any of the eddy's water would be drawn in by the intake. Assuming that the eddy did not reach the intake, shad in the eddy would not be affected. Accordingly, Del-Aware failed to show that any adverse impact upon shad would result from the alleged drawing of water from the eddy. (Board Findings 14-16, 59-64).

Finally, Del-Aware purported to show that the rate of impingement or entrainment of eggs on the wedge wire screens would be higher than Applicant's predicted rate at Point Pleasant. However, the study relied upon by Del-Aware involved striped bass, whose eggs are smaller than those of fish within the scope of its contention. Further, the data cited by Del-Aware were obtained from laboratory studies in which conditions were created to maximize adverse environmental consequences, e.g. concentrated amounts of

eggs were introduced by means of a flow which was recirculated in the flume as much as 20 times. These studies were therefore not intended to yield meaningful data for circumstances at Point Pleasant. (Board Finding 103).

Design and Configuration  
of the Intake Structure

The Point Pleasant intake structure will utilize passive wedge wire screens, which constitute the state-of-the-art technology. Given their particular design, the wedge wire screens provide a substantial improvement in reducing impact on aquatic life over the conventional shoreline, traveling screens generally utilized. Further, this particular design is less susceptible to clogging and can be easily replaced or repaired. The Board concludes that the use of wedge wire screens on the intake will afford the greatest possible protection to aquatic life. (Board Findings 17-33, 56-58, 67-68, 71-76, 121).

Del-Aware contended that the slot orientation for the wedge wire screens might not provide optimal protection for aquatic life if changes in current direction occurred. The evidence, nonetheless, showed that such variances would not materially reduce the protection afforded by the wedge wire screens. (Board Findings 67-68).

Effect on Fish in General

The evidence demonstrated that at a flow of 3,000 cfs, the DRBC specified low flow value and the lowest rate of flow at which withdrawals at Point Pleasant will be permitted absent

upstream compensation, only a maximum of 5 percent of the fish eggs and larvae in the river flow would be susceptible to entrainment, assuming uniform distribution of these life stages in the withdrawn flow. Only a relatively small percentage of potentially affected larval fish would be impinged, most of which would escape from the wedge wire screen. Given the anticipated ratio between bypass and intake velocities, only a very small percentage of fish are likely to be impinged on the wedge wire screens. Further, fish generally react to physical contact with a burst swimming response. Contact with the wedge wire screens will therefore cause most fish to swim away. (Board Findings 52-58, 69-75).

Much of the testimony relating to aquatic impacts proffered by Del-Aware related to the characteristics of fishes other than American shad and shortnose sturgeon. The Board has accepted this evidence, e.g., the existence of a "pollution block" created by low levels of dissolved oxygen in the river, within the record for background purposes in understanding the general nature of the Point Pleasant vicinity as a recreational resource for fishing. (Tr. 780). However, the Board has made no findings with regard to possible impacts of the intake's operation upon other fishes since Del-Aware's contention encompasses only these two particular species.

#### American Shad

The Board found no evidence that shad spawn in the Delaware River at Point Pleasant, although the area is a



suitable spawning habitat. Juvenile shad do utilize Point Pleasant as a nursery area. Even if shad did spawn at Point Pleasant, the characteristics of shad eggs make it unlikely that they would be entrained by the intake. Most shad eggs are larger than the 2 mm. wedge wire screen slot. Moreover, shad eggs in a free river environment suffer a mortality rate on the order of 99.99 percent. The survivors are those which generally find appropriate lodging in interstices among the rocks on the bottom immediately after spawning. Accordingly, any eggs which might be entrained by the intake would be those more likely not to have otherwise survived. The larval stage for shad is relatively brief, and other members of the shad genus have shown behavior resistance to entrainment and impingement by wedge wire screens. Juvenile and adult shad have sufficient strength and swimming speed to avoid impingement on the wedge wire screens. (Board Findings 77-93, 103, 121).

It is contended by Del-Aware that insufficient consideration had been given to the possibility that shad spawn in the pool area which, as noted, is problematical. The intake's design assumes conservatively that shad may spawn at Point Pleasant. Also, if spawning occurs in the pool, the Board concludes that shad eggs, which are demersal and sink to the bottom soon after spawning, will not be drawn up into the water column. On the other hand, any shad eggs (only a small fraction of which survive) which are impinged against the intake screens or entrained are

unlikely to have been productive in any event. (Board Findings 82-87).

Del-Aware's witnesses conceded that their main concern was that young shad present in the eddy might be impinged or entrained by the intake. They stated that they would be "satisfied" if it could be shown that the eddy would not reach the intake. As discussed above, the Board has concluded that the eddy lies beyond the area of the intake's withdrawal, even at periods of low flow. (Board Findings 59-63, 120).

#### Shortnose Sturgeon

The Board has received no evidence that the shortnose sturgeon, which is on the Secretary of the Interior's list of endangered species, is present at Point Pleasant. The documented capture of shortnose sturgeon nearest the Point Pleasant vicinity occurred at Lambertville, New Jersey, eight miles downstream of Point Pleasant. A sampling program specifically designed to determine the presence of shortnose sturgeon in the Point Pleasant intake vicinity during the time of the year when construction would occur, conducted in 1981, yielded no shortnose sturgeon. Other upstream sampling programs have also produced no shortnose sturgeon. While Del-Aware challenged the validity of the sampling programs, it offered no evidence showing the presence of shortnose sturgeon in the area. (Board Findings 94-97).

Even if sturgeon were present in the vicinity, they would not be affected by the intake structure. Shortnose

sturgeon eggs are approximately 3.2 mm. and thus too large to pass through the 2 mm. slots. The witnesses agreed that it is very difficult to collect shortnose sturgeon eggs, larvae and adults due to their very strong association with the river bottom. This indicates a low likelihood that shortnose sturgeon at any life stage would be entrained or impinged by the intake, which is located more than two feet above the river bottom. Even relatively young larvae are able to outswim the intake velocity, thereby essentially eliminating the possibility of impingement. The National Marine Fisheries Service, which has jurisdiction over the shortnose sturgeon under the Endangered Species Act, 16 U.S.C. §1536, to provide formal opinions to federal agencies, has determined that the Point Pleasant project will cause no adverse impact upon the shortnose sturgeon. (Board Findings 98-113, 121).

#### Drawdown and Recreation Resources

The testimony of Del-Aware's witnesses regarding recreational impacts conflicted with their testimony regarding impacts on aquatic life. Basically, Del-Aware asserted that moving the intake further into the river channel would reduce potential aquatic impacts, but also contended that relocating the intake at the shoreline would be less likely to interfere with fishing in or along the Pennsylvania side of the river. Del-Aware's witnesses conceded that the recreational concerns were subordinate. Nonetheless, the Board is unpersuaded that the presence of

the intake in the river channel would, as those witnesses speculated, tend to divert fish migrating upstream past the intake toward the New Jersey shore. (Board Findings 122-23, 130).

The Board received uncontroverted testimony that the drawdown of the immediate river area at Point Pleasant, conservatively estimated, would be no more than 3/4 inch if all four pumps were started at the same time at the 3,000 cfs flow level. The Board believes that this minor fluctuation in water level is insignificant to aquatic life and would be overshadowed by other fluctuations unrelated to pumping operations. No difference in surface water current or other effects could be anticipated from such minor fluctuations. (Board Findings 124-27, 130).

Boating and other recreational activities would also be unaffected. Inasmuch as the intake structure will be covered by a minimum of four feet of water, the intake will not be a hazard to boaters, rafters or water skiers. The Board is unpersuaded by the data submitted by Del-Aware that river elevation would, under any flow conditions, change drastically enough to reduce significantly the four foot water buffer. (Board Findings 128-30).

#### Conclusion

Having considered all of the evidence, the Board concludes that the location of the intake structure and the use of passive wedge wire screens will provide optimal protection for fishes in the area, given the flow

characteristics of the Delaware River at Point Pleasant as well as the behavioral and physical characteristics of fishes at Point Pleasant. The Board finds that any potential environmental impacts upon such aquatic life have been eliminated or mitigated to the fullest extent reasonably possible. (Board Findings 1-130).

2. Potential Noise and Dredging Maintenance Impacts (Contention V-16a).

In this contention, Del-Aware asserted that noise and dredging maintenance connected with the operation of the intake structure and pump station would adversely affect the peace and tranquility of the Point Pleasant proposed historic district. Evidence was submitted by Del-Aware with regard to the cultural characteristics of the Point Pleasant area. The Board itself toured the site during the hearings in order to assist it in evaluating testimony as to the surrounding environs. The Board was therefore able to rely upon its own observations in determining what is essentially an issue of aesthetics. (Board Finding 132).

Noise Levels

A site noise survey conducted in 1981 determined that ambient daytime noise levels were not significantly different from nighttime levels. The equivalent A-weighted sound levels ranged from 46 dB to 53 dB. This provided a basis for comparing noise from the operation of the pumphouse with ambient levels at the site boundary. (Board Findings 133-34).

The pumphouse will contain four pumps, located approximately 50 feet below the floor of the pumphouse driven by electrical motors, which will have a maximum A-weighted sound rating of 86 dB at one meter. The Board determined that, because the concrete walls of the pumphouse will attenuate 50 to 60 dB, very little noise will emanate outside. Additional sound attenuating features, e.g., acoustical lining on main ventilating and air conditioning ducts, will be utilized to reduce even further the noise level outside the pumphouse. Thus, noise generated by the operation of equipment within the pumphouse will not increase ambient noise levels beyond the site. (Board Findings 135-46).

The Board also found that the noise levels from equipment outside the pumphouse would be relatively insignificant. Two low noise level transformers with an A-weighted sound level rating of 57 dB will be installed outside the pumphouse. The noise from the transformers at the site boundary will be approximately 36 to 38 dB, which may or may not be audible. If it appears that there would be an increase in the ambient noise level at the boundary in the direction of nearby residences, the Applicant is committed to construct sound wall barriers so as not to increase the ambient noise level in the direction of such residences. The Board has incorporated this commitment as a condition in this decision. While Del-Aware attempted to discredit the data and calculations proffered by the

Applicant and Staff, its cross-examination did not refute their accuracy. Nor did Del-Aware present any affirmative evidence which materially contradicted such data. (Board Findings 147-57).

#### Dredging Maintenance

Under present plans, the river bottom upon which the intake structure has been built will be returned to its natural contours, such that no maintenance dredging is anticipated once the construction of the intake is complete.

River borings show little change in the bottom grade at the intake site since an initial survey 14 years ago. Further, flow velocities in the river channel where the intake structure will be located are sufficiently strong to keep the river bottom clean. Finally, the channel bottom area under the intake will be covered with riprap to prevent erosion. The Board finds that these circumstances render maintenance dredging very unlikely. Del-Aware presented no evidence showing that such dredging would be required. (Board Findings 158-61, 177).

The Board also considered whether other maintenance would be required for the intake structure. If any debris flows down the river, it will likely come during periods of floods or high flows. Because the elevation of the river at these times will be higher, it is unlikely that the intake would be damaged by debris. During periods of flood, flows are generally over 90,000 cfs. and the intake will be submerged by over 19 feet. Further, the intake will be

protected by 12-inch steel guard posts which will deflect any debris passing by the intake. In the unlikely event that debris collects around the intake, it could be cleared away by divers from a boat. If damage were to occur to the intake screens, they would likely be repaired by divers. Such infrequent and hardly noticeable activity, if it did occur, would not significantly disturb the peace and tranquility of the Point Pleasant community. (Tr. 162-67).

It is anticipated that the intake structure will be used only minimally during winter months when frazil ice might occur. Thus, it is not expected that frazil ice clogging of the intake will necessitate any maintenance. However, the intake will be equipped with an air backwash system, which should effectively eliminate any frazil ice if clogging does occur. (Board Findings 168-77).

Del-Aware attempted to establish by photographic evidence that ice floes and frozen debris in the Delaware River could damage the intake structure. The Board found these photographs and related testimony to be inconclusive, chiefly because they did not establish the depth of any such floes or any particular potential for inflicting subsurface damage. There was no evidence that the steel guard posts would not withstand and deflect any ice or debris that might strike them. (Board Findings 165, 174).

#### Conclusions

The Board has considered all of the data concerning the predicted noise levels associated with the operation of the



intake structure and pump station as well as the likelihood of any dredging and/or maintenance activities. The Board has concluded that ambient noise levels beyond the site area will not be increased and, if necessary, can be further mitigated by the provision of sound attenuating structures. The Board is also of the view that dredging and repairs for the intake structure are not likely to be required. If any such activities are necessary, however, they will be isolated and nonintrusive in nature without any significant esthetic impact upon the Point Pleasant area. (Board Findings 131-177).

#### FINDINGS OF FACT

#### III. CONTENTIONS

##### Background

1. The Point Pleasant project is comprised of a number of components whose purpose and function is to supply supplemental cooling water for the Limerick facility and provide water to both Montgomery and Bucks County as stated by the Delaware River Basin Commission in its Final Environmental Assessment on the Neshaminy Water Supply System (August 1980). The diversion also serves the incidental function of augmenting low stream flows in both the East Branch Perkiomen and North Branch Neshaminy Creek, by which the diverted water is carried for its respective uses. (Final Environmental Assessment on the Neshaminy Water Supply System at II-1 (August 1980) ("DRBC FEA")).

2. Neshaminy Water Resources Authority ("NWRA") will construct and operate the Point Pleasant pumping station (including the intake structure), and the combined transmission main. Applicant will construct and operate the Bradshaw Reservoir. <sup>12/</sup> (DRBC Negative Declaration, Attachment at 1 (August 25, 1980)).

3. Applicant is a customer of NWRA for water for Limerick, for which NWRA pays a charge in accordance with the provisions of DRBC Resolution No. 74-6, as amended. (DRBC Docket No. D-65-76 CP(8) at p. 13 (February 18, 1982); DRBC Docket No. 79-52 CP at p. 3 (February 18, 1981)).

4. The pumping station will draw water from the Delaware River by means of an intake structure set into the Delaware River channel approximately 245 feet from the shore and approximately 800 feet below the of the Tohickon Creek and the Delaware River at river mile 157.2 (Applicant's Testimony at 3; Masnik Testimony at 4).

5. The pumping station will have a withdrawal capacity of 95 million gallons per day ("mgd") as allowed by DRBC in its docket decisions. 46 mgd of this is allocated by the DRBC to the Limerick facility as supplemental cooling water. (DRBC Docket No. 79-52 CP at p. 3 (February 18, 1981)).

6. The combined transmission main, which will convey the water withdrawn from the Delaware River by the pumping

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<sup>12/</sup> The matters discussed herein pertain to both Applicant's and NWRA's use of the pumping station and Bradshaw Reservoir, unless otherwise stated.

station, will run from the station underground for approximately 2.5 miles and will connect with the Bradshaw Reservoir, which has a 70 million gallon capacity, and the North Branch Transmission Main. (Applicant's Testimony at 17, 19).

7. The Bradshaw Reservoir is a relatively small reservoir designed to permit distribution of water to supply the Limerick facility with cooling water sufficient for one day's operation in order to compensate short-term fluctuations in water supply. It will also serve to supply water to NWRA. Its water is not required for the safe shutdown of the Limerick reactors. (Applicant's Testimony at 17-19; DRBC Docket No. 79-52 CP at p. 3 (February 18, 1981)).

8. The contentions pertinent to this partial initial decision relate wholly to operation of the Point Pleasant pumping station and intake structure. The only admitted contention relating to the Bradshaw Reservoir was withdrawn by Del-Aware. Withdrawn Contention V-16b, which related to alleged seepage of toxics from the Bradshaw Reservoir, was abandoned by Del-Aware when its engineering witness determined that there was no basis upon which to predict that such seepage would occur. (Tr. 2371).

9. The remaining components of the system which will convey supplemental cooling water for Limerick are not at issue and will be reviewed by the Staff in the course of its

environmental review and preparation of an FES for Limerick. Much of this review was completed at the construction permit stage. In accordance with 10 C.F.R. §30.23(e), the draft and final environmental impact statements for Limerick will therefore focus upon any changes which have occurred since that time.

Impacts of the Intake on American  
Shad, Shortnose Sturgeon, the Fish  
Resources and Boating and Recreation

10. Contentions V-15 and V-16a (in part), as litigated in this proceeding reads as follows:

Contentions V-15 and V-16a (in part) -  
The intake will be relocated such that it will have significant adverse impact on American shad and short-nosed sturgeon. The relocation will adversely affect a major fish resource and boating and recreation area due to draw-down of the pool.

11. The intake in the Delaware River for the Point Pleasant Pumping Station has not been "relocated" within the context of this contention. Various locations for the intake have been considered (Applicant's Testimony at 2, Harmon, Tr. 2406; Bourquard, Tr. 2586).

12. In order to minimize any adverse impact on the stream biota, the intake was changed from a shoreline vertical traveling screen structure to a passive wedge wire screen structure located out in the river channel about 200 feet from the west shore line in the application by NWRA to the U.S. Army Corps of Engineers filed on July 18, 1980 (Applicant's Testimony at 2-3; Harmon, Tr. 2406-07, 2578-79; Applicant's Exh. 2 at p. 1; Del-Aware Exh. 1-C).

13. To assure higher river flow velocities past the intake screens, the intake was later moved an additional 45 feet further out into the river channel to Station 8+62 which is the site to be utilized for construction of the intake facility (Applicant's Testimony at 3; Applicant's Exh. 2 at p. 2; Bourquard, Tr. 2213, 2586, 2661-62).

14. The intake has been described as being located in the "pool" formed by the Lumberville wing dam. For the purposes of Applicant's biological evaluation, the pool extends upriver from the Lumberville wing dam to the riffle or rapids near the mouth of Tohickon Creek. (Applicant's Testimony at 6; Boyer, Tr. 2412-13; Harmon, Tr. 2413).

15. An eddy is a circular current of water, one part of which runs contrary to the main current. There is an eddy inshore of the Point Pleasant intake. (Applicant's Testimony at 6; Harmon, Tr. 1405-06; Boyer, Tr. 1403; Bourquard, Tr. 2524; Brundage, Tr. 2952).

16. The intake is located near the upstream limits of the Lumberville pool. It is in the main current, it is not in in a slackwater or eddy area (Applicant's Testimony at 6; Applicant's Exh. 2 at p. 1; Harmon, Tr. 2361-62, 2573; Bourquard, Tr. 2574; Brundage, Tr. 2973; Boyer, Tr. 2766; Plevyak, Tr. 1941).

17. The intake at Point Pleasant will use passive wedge wire screens which are the state of the art technology (Applicant's Testimony at 3; Boyer, Tr. 1350).

18. Until fairly recently, comparable intake structures used vertical traveling screens located on the shoreline, and this type of screen design was initially selected. These screen systems, even with low velocity of water travel through the screens, still had certain minimal but inherent, biological drawbacks (Applicant's Testimony at 3).

19. To address such concerns, the wedge wire screen technology was adopted. The wedge wire screen design to be used at Point Pleasant will effect a substantial reduction in losses of aquatic life at the intake when compared to a conventional traveling screen intake design (Applicant's Testimony at 3).

20. The greater protection of aquatic life afforded by the wedge wire screen derives from its hydrodynamic characteristics which in turn result from its shape and construction. (Applicant's Testimony at 3).

21. Del-Aware's ichthyological witnesses testified as to studies of impingement at other facilities which, however, did not utilize wedge wire screens. The witnesses agreed that less impingement would be expected for wedge wire screens. (Emery, Tr. 2058-59, 2071).

22. Six 40-inch diameter by 10 feet 4 inch cylindrical screen sections will be placed end-to-end, which, with intermediate spacing, results in a total row length of about 75 feet (Applicant's Testimony at 3; Masnik Testimony at 4).

23. Two parallel rows will be installed in the river with the long axis oriented parallel to the flow of the river. The two rows will have a clear space between them of more than 7 feet. (Applicant's Testimony at 4; Masnik Testimony at 4).

24. The top side of the screen surface will be a minimum of 4 feet below the minimum water level, and the bottom screen surface will be slightly more than 2 feet above the existing river bed. (Applicant's Testimony at 4; Masnik Testimony at 5).

25. The 360 degree clearance around all screens will permit the unrestricted flow of water into the screens throughout their entire circumference and the flow of the river will pass along the screens thus helping to keep the screens clean of debris and silt. (Applicant's Testimony at 4; Masnik Testimony at 5).

26. Each screen section will resemble a "T" with screening at each end and the combination support/outlet pipe in the middle. (Applicant's Testimony at 4).

27. The screens will be made by helically winding a stainless steel wire with a wedge shaped profile around a cylindrical frame. (Applicant's Testimony at 4; Masnik Testimony at 4).

28. The point of the wedge wire will face inward so that the exterior screen surface will be smooth and flat. (Applicant's Testimony at 4).

29. The screen openings will be 2 mm. wide. (Applicant's Testimony at 4; Masnik Testimony at 4-5).

30. Biofouling of the screens will not occur inasmuch as the type of organisms that cause biofouling are not present at the Point Pleasant location. (Harmon, Tr. 2586).

31. The design and positioning of wedge wire screens make them less susceptible to clogging. (Emery, Tr. 1770).

32. The intakes will be equipped with an air backwashing system to clean the screens. (Applicant's Testimony at 4).

33. If debris accumulates on the screens, they will be cleaned by using the air backwash system. (Boyer, Tr. 2558-59, 2561; Bourquard, Tr. 2557-61). In the event of significant debris, the screens will be cleared by divers. (Bourquard, Tr. 2428; Boyer, Tr. 2540).

34. The maximum intake velocity through the screens is .5 fps, with an average velocity of .35 fps. (Applicant's Testimony at 5; Applicant's Exh. 2 at p. 1; Boyer, Tr. 1351; Emery, Tr. 1768, 1774).

35. The average intake velocity will decrease from about .071 fps at a distance of one foot from the screen surface to .011 fps at five feet from the screen and to .0037 fps at 10 feet from the screen (Applicant's Testimony at 5; Harmon, Tr. 2854-56, 2899; Dickinson, Tr. 2854-55; Boyer, Tr. 1363).

36. Measurements taken at the intake site (Station 8+62) on July 23, 1981 when the flow was 4,500 cfs and the



river elevation was 71.4 showed velocities of over 2 fps at the depths measured. With a low flow of 3,000 cfs and an elevation of 70.8 on July 23, 1981, velocity at the depth of the intake was over 1 fps. River velocities at the intake site will provide a 2:1 or greater ratio of bypass velocity to intake velocity. (Harmon, Tr. 2399; Boyer, Tr. 1350-51, 1385-93; Applicant's Exh. 1-A at p. 2 - Question E240.27).

37. The velocity measurements at the intake site are reasonably accurate. (Harmon, Tr. 2683). Del-Aware's witness agreed that the measurement of the speed of the current is accurate within 5 percent. (Phillips, Tr. 3826). An inconsistency in determining the location of the shoreline did not affect the accuracy of the velocity measurements in the vicinity of Station 8+62. (Boyer, Tr. 2203, 2638-43, 2651; Bourquard, Tr. 2193, 2747; Wescott Testimony at 4; Wescott, Tr. 3599-3600).

38. The methods used by Applicant in determining distance locations in the river where the flow velocity measurements were taken produced reasonably accurate results. (Harmon, Tr. 2184-87, 2648-49; Boyer, Tr. 2186; Bourquard, Tr. 2648-49; Wescott, Tr. 3600). Even Del-Aware's witness agreed that the stationing is accurate. (Phillippe, Tr. 3764).

39. Applicant developed a rating curve showing elevation correlated to river flows. This curve is reasonably accurate. The hydrologic effect of the Lumberville dam on the lower flow values is minimal and has

been taken into account by Applicant. (Boyer, Tr. 2593-98, 2616-17; Bourquard, Tr. 2272-73, 2282-84, 2593-98, 2600, 2676-78).

40. Flows at Point Pleasant may be calculated by taking 97 percent of the flow measured at the Trenton gage. (Bourquard, Tr. 2283, 2287-88; Phillippe, Tr. 3663).

41. For flows below 3,000 cfs, bypass velocity can be extrapolated from its own flow values, since flow and velocity are on the average proportional. (Boyer, Tr. 1358-60, 1368-69; Wescott, Tr. 3609).

42. At a flow of 2,500 cfs, the minimum bypass velocity will be approximately .8 fps. (Boyer, Tr. 1367, 1391-92; Wescott, Tr. 3610).

43. Even at a flow of 2,000 cfs, which is well below the minimum low flow of 2,500 cfs anticipated under the most severe circumstances, bypass velocity at the intake would be .6 fps. (Boyer, Tr. 1363).

44. Del-Aware's witness agreed that a flow of 3,000 cfs would result in a bypass velocity of at least 1 fps at the intake. (Emery, Tr. 1770).

45. Del-Aware's ichthyological witness conceded that the zone of influence of the intake velocity was approximately two inches. (Kaufmann, Tr. 1882).

46. At flows of 3,000 cfs or less, the maximum rate of pumping through the year 2010 as calculated will be 2/3 of the withdrawal permitted by DRBC. (Boyer, Tr. 1621; Bourquard, Tr. 1625).

47. Historically, flows at the Trenton gage have exceeded 2900 cfs 90 percent of the time for the period 1913 to 1980. During this period, many presently existing storage projects or reservoirs which can increase river flow were not in operation. Since the drought of the 1960's there has been an addition of approximately 135 billion gallons of storage on the Delaware River, i.e., an increase of 56 percent. (Boyer, Tr. 1362, 2575-77).

48. With the existing upstream storage on the Delaware, flows at Trenton can be regulated so that they will never fall below 2,500 cfs even with the advent of the most severe drought of record. (Hansler, Tr. 1261, 1275; Bourquard, Tr. 2332; Boyer, Tr. 2343-45, 2575-77).

49. The Delaware-Raritan Canal comes off the Delaware River below Point Pleasant and flows parallel to the river to a point above Trenton. (Boyer, Tr. 2833-34). The net diversion by this canal is presently limited by physical restrictions to 60 mgd or 90 cfs. The authorized maximum diversion from the basin is 100 mgd or 150 cfs. (Boyer, Tr. 2834).

50. The out of basin flow into the Delaware-Raritan Canal at the time relevant velocity measurements were taken was small and relatively constant. Additional water flowing into the canal is largely returned to the Delaware through overflow points at stream crossings and thus is included the flow at Trenton. (Boyer, Tr. 2835-36, 2858-63, 2869). The out of basin flow would not affect the flow values for the

respective velocity measurements at Point Pleasant. (Boyer, Tr. 2843-45).

51. Even if the flows into the Delaware-Raritan Canal would affect the flow values, the degree of error would be at most 100 cfs, an insignificant amount. (Boyer, Tr. 2869).

52. A 2:1 ratio of bypass velocity to intake velocity is fully adequate to protect against impingement and entrainment of fish. (Brundage, Tr. 2932; Boyer, Tr. 1351).

53. There is only a negligible difference between the protection afforded by a 2:1 ratio and a 1:1 ratio. (Harmon, Tr. 2853, 2399-2400). A 1:1 ratio affords a high level of protection for aquatic life. (Harmon, Tr. 2357-59, 2394-96, 2826, 2851; Boyer, Tr. 1351; Masnik, Tr. 4026).

54. If there were no bypass velocity at Point Pleasant, there would be no impact on American shad or shortnose sturgeon. (Harmon, Tr. 2827, 2846-47, 2850-54, 2898; Brundage, Tr. 2956).

55. The ratio of the bypass velocity to the intake velocity is only one of the factors which affords protection from impingement and entrainment on the screens to aquatic biota. (Harmon, Tr. 2519; Brundage, Tr. 2957).

56. Passive wedge wire screens have been shown to provide substantial protection from impingement and entrainment even when used in lakes where there is no bypass velocity. (Boyer, Tr. 1363; Harmon, Tr. 2582, 2855-56, 2886; Brundage, Tr. 2978).

57. Virtually all fishes will be completely protected from impingement on this type of intake. (Harmon, Tr. 2396).

58. Field studies in areas of varying flows from zero to over 1 fps indicate that bypass velocity does not make a detectable difference biologically. (Masnik, Tr. 4025-28).

59. In high flows the eddy, inshore of the Point Pleasant intake, is very close to the shore and, as flows increase, the eddy will recede to the shoreline and eventually may cease to exist as an eddy type of flow or slack water flow. In other words, the overlapping water at the rock bar at the mouth of Tohickon Creek will push the eddy back toward the shore. (Harmon, Tr. 1406, 1410; Boyer, Tr. 1417, 1427, 1431-32, 1678).

60. The width of the eddy does not expand greatly at lower flows and remains relatively constant. (Harmon, Tr. 1406; Boyer, Tr. 1404, 1417, 1432).

61. The rock bar at the mouth of the Tohickon Creek is not a factor in calculating the bypass velocity at the intake for low rates of flow. (Applicant's Exh. 1-A, Response to Question E240.27) provides velocity measurements at flow rates of 3,000 and 4,500 cfs. The full length of the bar is virtually uncovered when flows are approximately 4,500 cfs. Lower flows do not further uncover the bar significantly. In other words, at 4,500 cfs flows, there is only a small flow over the length of the bar. Accordingly, bypass velocities extrapolated by Applicant's witnesses for

rates of flow below 3,000 cfs at the intake would not be affected by exposure of the bar. (Applicant's Exh. 1-A; Boyer, Tr. 1412-13, 1417, 1675).

62. At flows of 3,000 cfs the edge of the eddy is at station 7+75. The intake is located at Station 8+62, 88 feet beyond the edge of the eddy. (Boyer, Tr. 1424).

63. Del-Aware's witnesses were unable to state whether the eddy would reach the intake or even what they consider to be the main current. (Kaufmann, Tr. 2117-18; Miller, Tr. 3059-60, 3133; Phillippe, Tr. 3753, 3757).

64. Even if eddy waters were to reach the intake, recirculation of water past the intake is not a significant problem. (Masnik, Tr. 3558).

65. The Del-Aware witness speculated but failed to establish that a cross current of 5° to 25° could pass by the screens. (Phillippe, Tr. 3735).

66. A cross current of 30° would have no effect on the protection afforded by the screens. (Harmon, Tr. 2807; Masnik, Tr. 4005).

67. Slot orientation perpendicular to flow provides some additional hydrodynamic protection to larvae, but a non-perpendicular slot orientation would not be a detriment. (Harmon, Tr. 2811-14; Brundage, Tr. 2970).

68. Perpendicular orientation of slots provides shortnose sturgeon larvae with a substrate from which they can spring off and escape from the screens. Even if the flow approaches the screens at a slight angle, it would not

affect the ability of larvae to escape from the screen. (Brundage, Tr. 2979, 3000-01).

69. At flows of 3,000 cfs, a maximum of 5 percent of the river flow would be withdrawn by the intake. (Masnik Testimony at 13; Harmon, Tr. 2398; Masnik, Tr. 3557; Emery 2063-64). At flows of 2,500 cfs, 5.9 percent of the water would be withdrawn. (Masnik, Tr. 3557).

70. This means that a maximum of 5 percent of aquatic life in the flow past the intake would be potentially affected at a 3,000 cfs rate of flow. (Masnik Testimony at 15; Masnik, Tr. 3557; Harmon, Tr. 2398; Emery, Tr. 2064).

71. The wedge wire screen affords 20-80 percent protection for the aquatic life in the maximum of 5 percent of the flow at 3,000 cfs that could potentially be affected by the intake. (Harmon, Tr. 2398, 2563).

72. The intake design and location are described on page 8 of DRBC Docket No. D-65-76 CP(8). Condition L of the Docket provides: "State and federal fishery managers should be satisfied that the final design of the intake structure is appropriate prior to construction." In an April 13, 1981 letter, the Executive Director of the DRBC informed NWRA that Condition L had been satisfied. (Del-Aware Exh. 1-C at p. 1).

73. A study conducted by Hanson exposed 1,318 specimens of 19 species of fish (none of which was shad or shortnose sturgeon) to profile wire screens. Only 260 specimens were impinged for a short period of time; 208

specimens eventually escaped from the screen. This was in the total absence of a bypass velocity (Brundage, Tr. 2972).

74. To the extent the situations are comparable, results of studies at other facilities support Applicant's conclusions as to the likelihood of impingement and entrainment at the Point Pleasant intake. (Masnik, Tr. 3547).

75. Larval fish generally show a counter current orientation. Physical contact with the intake will elicit a burst swimming response away from the screens. (Brundage, Tr. 3022-23).

76. The on-off pattern of operation of the intake will not affect fish. The pumps are equipped with a variable speed device which starts the pumps slowly so there will not be a sudden rush of water through the screens. The pumps will not be started simultaneously. (Boyer, Tr. 2418, 2603; Harmon, Tr. 2396).

77. Adult shad enter the Delaware River in early Spring (late March - early April) with peak migration occurring when the water temperature ranges from 56-60°F. (Applicant's Testimony at 7).

78. Shad spawning occurs from April through early June with the peak spawning period occurring in May. (Masnik Testimony at 11; Emery, Tr. 2061; Harmon, Tr. 2368; Masnik, Tr. 3558).

79. Flows in the Delaware River are generally high during the peak spawning period for fish generally. (Boyer,



Tr. 1364; Brundage, Tr. 2954, 3003). The percent of river flow withdrawn by the intake during this period is very small. (Applicant's Testimony at 8).

80. The main spawning grounds for shad are upstream of the Delaware Water Gap about 80-100 miles from Point Pleasant. (Masnik Testimony at 11; Emery, Tr. 1762; Harmon, Tr. 2420; Masnik, Tr. 4015).

81. There is no evidence that shad spawn at Point Pleasant, even though the area does contain a suitable spawning habitat. (Applicant's Testimony at 7; Masnik Testimony at 12; Masnik, Tr. 3559; Emery, Tr. 1762; Harmon, Tr. 2404; Kaufmann, Tr. 2101).

82. The intake system was designed and evaluated on the conservative assumption that shad would reinhabit the Point Pleasant area as a spawning ground (Harmon, Tr. 2405, 2408, 2508).

83. Shad eggs range from approximately 1.1 to 3.8 mm., with a mean of 2.83 mm. in size, and are slightly adhesive and demersal. They sink out of the water column rapidly and do not drift far from where they are spawned. They are normally swept under rocks and boulders. (Applicant's Testimony at 8; Masnik Testimony at 12, 16; Emery Tr. 1761, 1797; Masnik, Tr. 3993, 4006).

84. Spawned shad eggs will settle in the water column to the bottom approximately 5 to 35 meters from the point of spawning. (Emery, Tr. 1761).

85. These characteristics of shad eggs make it unlikely that shad eggs, even if present at Point Pleasant, would interact with the intake. (Harmon, Tr. 2573). Shad are not likely to spawn at the intake. (Kaufmann, Tr. 1961). Their size would prevent most shad eggs from entering the 2 mm. screen slot. (Applicant's Testimony at 8; Applicant's Exh. 2 at p. 1-2; Masnik Testimony at 16).

86. From the time the eggs are released until they are in a protected environment, there is a mortality rate of 99.99 percent. Any eggs which might be entrained in the intake would be those which had a higher probability of not surviving. (Masnik, Tr. 3560, 4007; Emery, Tr. 1761).

87. Three operating power stations have intakes in areas closer to the spawning grounds of the shad. They have had minimal impact on fish. (Harmon, Tr. 2852, 2894-97).

88. The transformation of shad from egg to larvae to juvenile takes place in about 4-5 weeks whereupon the fish are 20-30 mm. in length and assume a very strong schooling habit, which demonstrates a strong swimming ability. Juveniles are virtually completely protected. (Applicant's Testimony at 9; Harmon, Tr. 2416, 2853; Kaufmann, Tr. 2102, 2105; Emery, Tr. 2109, 2110; Miller, Tr. 3240).

89. Thus, the early life stages of shad have a very short period of potential vulnerability to entrainment. (Applicant's Testimony at 9; Harmon, Tr. 2853; Masnik Testimony at 17; Emery, Tr. 1871, 2109).

90. American shad are of the Alosa genus. Other members of the Alosa genus show behavior resistance to entrainment and impingement by wedge wire intake screens at a size less than necessary to achieve physical exclusion. (Applicant's Testimony at 9; Masnik Testimony at 17-18; Harmon, Tr. 2421, 2397).

91. In terms of ecological impact to the species, the loss of 5 to 10 percent of the shad larvae in the Point Pleasant vicinity would not be significant. (Masnik, Tr. 3560-62, 3575).

92. Juvenile shad utilize the Point Pleasant area as a nursery area. They would not be affected by the intake. (Applicant's Testimony at 7; Harmon, Tr. 2416; Emery, Tr. 1963-64).

93. Adult shad will pass through the Point Pleasant area during the migration. Healthy adult shad in the channel will not be affected by the intake. (Applicant's Testimony at 8; Masnik Testimony at 22-23; Emery, Tr. 1871, 1955; Kaufmann, Tr. 1882-83, 1950).

94. Shortnose sturgeon have never been observed at Point Pleasant. (Applicant's Testimony at 9; Masnik Testimony at 6; Harmon, Tr. 2681; Brundage Tr. 2928, 2990; Kaufmann, Tr. 1868).

95. The only documented capture of shortnose sturgeon above the fall line has been made at the shad haul seine fishery at Lambertville, New Jersey (river mile 119), 14 river miles above Trenton and 8 miles downriver of Point

Pleasant. Here two specimens were taken in 1975 and 11 in 1981. (Applicant's Testimony at 10; Emery, Tr. 1797-98).

96. A sampling program specifically designed to determine presence of shortnose sturgeon in the Point Pleasant intake vicinity during the proposed construction period (fall-winter) was conducted in 1981 for NWRA. Gill nets fished for a total of 816 hours but took no sturgeon. (Applicant's Testimony at 10).

97. In a recent 1981-82 shortnose sturgeon investigation, no shortnose sturgeon were collected upriver of Scudder's Falls (river mile 140). This study utilized appropriate sampling gear (gill nets) and would have collected sturgeon if present. This study captured over 170 sturgeon in the estuary. (Applicant's Testimony at 10-11).

98. Shortnose sturgeon spawn in fast current areas, (Brundage, Tr. 2927), in fresh water at or near the limits of the tide at a narrow band of temperature from 9-12°C. (Brundage, Tr. 2983-84). They spawn over rubble, cobble, or gravel bottoms. (Applicant's Testimony at 10; Masnik Testimony at 7).

99. Shortnose sturgeon eggs are spawned near the bottom. They water harden and are demersal and adhesive. The eggs are very dense and there is little opportunity for them to be transported in the water column. (Applicant's Testimony at 11; Masnik Testimony at 7; Brundage, Tr. 2969-70; Emery, Tr. 1798, 1801, 1814).

100. Shortnose sturgeon therefore have relatively little capacity for drift and would not be subject to entrainment if spawned more than 20 meters beyond the intake. (Emery, Tr. 1799).

101. Shortnose sturgeon eggs are approximately 3.2 mm. and are thus too large to pass through the 2 mm. slots. (Applicant's Testimony at 11; Masnik Testimony at 7; Brundage, Tr. 2969; Emery Tr. 1798).

102. If water hardened eggs encountered the slots, they would just roll along the slots in the majority of cases. (Brundage, Tr. 3028).

103. Another study performed by Hanson relied upon by Del-Aware to show that the likelihood of impingement and entrainment would be greater than estimated by Applicant involved striped bass eggs, not shad or shortnose sturgeon. The eggs of striped bass range from 1.3 to 2.7 mm., and are smaller than shad or shortnose sturgeon eggs. Additionally, they are not demersal. Also, the study involved an intake with higher intake velocity than that which will exist at Point Pleasant. Further, the study utilized a higher concentration of eggs by means of a flow recirculated in the flume up to 20 times, unlike conditions which would exist at Point Pleasant. (Emery, Tr. 2135-39; Brundage, Tr. 2935-36, 2987, 2991).

104. During the early days of life, shortnose sturgeon are very benthicly oriented. There is essentially no movement off the bottom until they are 16 days old. During

this time they stay under rocks and in rock interstices. Then there is some movement off the bottom, but it is not significant. (Masnik Testimony at 7-8; Masnik, Tr. 3594; Harmon, Tr. 2517; Brundage, Tr. 2945-49; Kaufmann, Tr. 1869).

105. Given the spawning habits of shortnose sturgeon, the characteristics of its eggs, the design of the intake and flow characteristics in the area, shortnose sturgeon eggs will not be entrained in the intake. (Masnik Testimony at 8; Emery, Tr. 1870; Brundage, Tr. 2969-70, 2972).

106. The maximum length and age at which a shortnose sturgeon could be entrained is approximately 20 mm. in length or approximately 18.5 days old. At this size a shortnose sturgeon could be entrained only if it had its head pointed to the screen. That is a difficult position for the larvae, given the perpendicular orientation of the slots. (Masnik Testimony at 7; Brundage, Tr. 2943).

107. Shortnose sturgeon larvae show a strong swimming ability. A 16.5 mm. larvae has a swimming ability of 14.7 cm. per second (approximately .5 fps). By the time a larva reaches a size where it is impingeable, it can easily outswim the intake velocity. Before it reaches this size, it remains in the rocks and is invulnerable to impingement. (Masnik Testimony at 8; Brundage, Tr. 2972-73, 2988).

108. A shortnose sturgeon has the adult characteristics within 30 to 40 days. (Brundage, Tr. 2993). Adult shortnose sturgeon will not be affected by the intake. (Applicant's Testimony at 11).

109. The utilization of 2 mm. slots, the low intake velocity and the placement of the intake in the ambient current and the shortnose sturgeon's swimming capacity will essentially eliminate the possibility of shortnose sturgeon impingement. (Masnik Testimony at 8-9; Brundage, Tr. 2943; Harmon, Tr. 2396).

110. Adult shortnose sturgeon may remain near the spawning grounds after spawning or move downstream to upper estuary summer foraging areas where they may remain through winter. (Applicant's Testimony at 10).

111. The lower estuary may also function as a forage and overwintering area for shortnose sturgeon. (Applicant's Testimony at 10).

112. The National Marine Fisheries Service ("NMFS"), which has statutory jurisdictions over shortnose sturgeon, found in its Biological Opinion that the Point Pleasant project will cause no adverse effect on shortnose sturgeon. (Masnik Testimony at 5-6).

113. Del-Aware's ichthyological witness agreed that NMFS is the source of the best available information. (Kaufmann, Tr. 1868-69).

114. The finally selected location of the intake in the Delaware River meets biological criteria and no improvement will result from moving the intake further from the Pennsylvania shore. (Harmon, Tr. 2350, 2399, 2853; Brundage, Tr. 2959; Masnik, Tr. 4032).

115. Moving the intake further into the river will not reduce the risk of impingement or entrainment. (Masnik, Tr. 4032).

116. Although Del-Aware's witness contended that the entire intake structure was not in the deepest point of the river channel, he was unable to define the channel width. (Emery, Tr. 1924-25).

117. Del-Aware's ichthyological witnesses were unable to establish that relocating the intake further into the main channel would yield greater bypass velocity or in any way reduce the risk of entrainment or impingement of shad and shortnose sturgeon if present. (Emery, Tr. 1804-05, 1832; Kaufmann, Tr. 1958-60).

118. These witnesses noted that they had not made any measurements of velocity at Point Pleasant and conceded that velocity at the depth of the intake could not be determined without such measurements. (Kaufmann, Tr. 1914-15).

119. The main concern expressed by these witnesses was that the intake location was beyond the eddy in which shad juveniles congregate. They stated that they would be satisfied with the intake's location if this were established. (Kaufmann, Tr. 1959-60).

120. At the hearing, EPA's witness was unable to offer any facts or data tending to show any increase in environmental impacts resulting from the "relocation" of the intake. (Pence, Tr. 1486).



121. Operation of the intake will not have a significant impact on American shad, shortnose sturgeon or other fish resources in the Delaware River at Point Pleasant (Applicant's Testimony at 7-13; Applicant's Exh. 2 at pp. 1-3); Masnik Testimony at 5-6, 8-10; Harmon, Tr. 2396, 2884; Brundage, Tr. 2972) (Board Findings 11-115).

122. Operation of the intake will not affect the number of fish going upstream which would be game for fishermen. Although the intake may divert fish in the main channel to one side or the other, Del-Aware's witnesses conceded that it is purely speculative that fish would be disproportionately diverted toward either the Pennsylvania or New Jersey shore, or that Pennsylvania residents would be unable to fish along the New Jersey shoreline. (Kaufmann, Tr. 1792-94, 1948-50, 2129-30; Plevyak, Tr. 2018).

123. While Del-Aware's ichthyological witnesses stated that a shoreline location of the intake was ideal for avoiding diversion of shad away from fishermen on the Pennsylvania side of the river, they conceded that this would have a negative environmental impact on the shad population, which was the predominant concern. (Kaufmann, Tr. 1957-58).

124. Drawdown of the immediate river area is conservatively determined to be no more than 3/4 inch if all 4 pumps are operating at the same time (at 3,000 cfs river flow). (Applicant's Testimony at 13; Wescott Testimony at 3; Bourquard, Tr. 2591-92; 2602-03).

125. This fluctuation in water level is insignificant to fishes and will be overshadowed by fluctuations due to other causes unrelated to Point Pleasant pumping station operations (Applicant's Testimony at 13; Masnik Testimony at 25).

126. River level variations at any flow due to pumping would not be noticeable and far less than variations due to normal wind, current and flow effects. (Applicant's Testimony at 13).

127. No discernible surface water current or other effects are anticipated above the screens due to the pumping operation. (Applicant's Testimony at 13).

128. Boating and recreation will not be affected by drawdown of the pool; the intake's presence will be unnoticeable. (Applicant's Testimony at 13).

129. With a minimum water coverage of 4 feet over the screens, they will not present a hazard to boaters, rafters or water skiers. (Applicant's Testimony at 13; Bourquard, Tr. 2331).

130. The location of the intake will not adversely affect any major fish resource or boating and recreation in the area due to drawdown of the pool. (Board Findings 122-29).

Potential Impacts From Noise  
and Dredging Maintenance

131. Contention V-16a as litigated in this proceeding reads as follows:

Contention V-16a

Noise effects and constant dredging maintenance connected with operations of the intake and its associated pump station will adversely affect the peace and tranquility of the Point Pleasant proposed historic district.

132. The members of the Licensing Board conducted a tour of areas relevant to the two contentions. Specifically, the Board viewed the location for the intake structure by boat and viewed the Point Pleasant pumping station and surrounding environs from the adjoining towpath and roadway. The Board also viewed the Lumberville Dam and location for the Bradshaw Reservoir. (Dickinson, Tr. 2154).

133. NWRA conducted a site noise survey in 1981 to determine ambient noise levels. Noise levels were measured for a full 24-hour period, and it was shown that daytime levels were not significantly different from night time levels. The equivalent A-weighted sound levels ranged between 46 dB to 53 dB. (Applicant's Testimony at 13-14; Moiseev, Tr. 1039, 1042-44, 1077).

134. The principal local noise source is traffic on River Road. However, the area is also subjected to noise from motor boats on the river and blasting operations conducted in a nearby quarry. (Applicant's Testimony at 14; Moiseev, Tr. 1041-42, 1077).

135. The pumphouse is located 65 feet from the nearest property line. (Moiseev, Tr. 984).

136. The pumphouse dimensions are 35.5 feet by 60.5 feet by 44.5 feet in height. (Applicant's Testimony at 14; Boyer, Tr. 990).

137. The pumphouse will contain 4 vertical multistage centrifugal pumps driven by electrical motors. Three will be installed initially and the fourth when needed, estimated to be in the period from 1990 to 2000. The pumps will be approximately 50 feet below the floor of the pumphouse. (Applicant's Testimony at 14; Bourquard, Tr. 1062).

138. The pumphouse will also contain two two-stage electrically driven air compressors rated at 25 hp. (Applicant's Testimony at 14).

139. The pumphouse will be of concrete construction faced with decorative stone veneer or wood. All walls will be insulated. The floors will be concrete and the roof will be insulated concrete plank. There will be no windows (Applicant's Testimony at 14).

140. The pumps will have a decibel rating of 86 dB. (Bourquard, Tr. 988).

141. The concrete walls of the pumphouse will attenuate 50 to 60 dB. Considering the noise level in the pumphouse, minus 50 or 60 dB, there will be very little noise on the outside. (Moiseev, Tr. 983-86; Policastro, Tr. 1124-25).

142. In order to minimize noise emanating from the pumphouse, sound attenuating designs will be utilized for all ventilating system exterior inlets and outlets. The air

compressors take suction from the interior of the building. (Applicant's Testimony at 15; Policastro Testimony at 3; Moiseev, Tr. 1016-17).

143. Noise transmission is minimized within the structure through the use of acoustical lining on main ventilating and air conditioning ducts. (Applicant's Testimony at 15; Policastro Testimony at 3; Moiseev, Tr. 1016-17).

144. Noise generated by equipment operation within the pumphouse will be confined within the pumphouse structure and will not increase ambient levels at the site property line. (Applicant's Testimony at 15; Policastro Testimony at 3; Moiseev, Tr. 981, 984-86, 1003, 1062, 1078-79; Bourquard, Tr. 1062).

145. The availability of final specifications and plans would not improve the calculations as to noise levels from the pumphouse. (Moiseev, Tr. 1017).

146. The secondary source of power for the pumphouse will be supplied by local power. No emergency generator will be installed. There will be no need to add emergency or backup equipment. (Boyer, Tr. 1020-21, 1023).

147. Two low noise level transformers will be installed outside the pumphouse adjacent to the building. These "quiet transformers" will have a dB level of 57, or 10 dB lower than a standard transformer. (Boyer, Tr. 989-90, 1030-31; Bourquard, Tr. 988; Moiseev, Tr. 989, 1031).

148. These transformers are self-cooling, eliminating the need for cooling fans. (Applicant's Testimony at 15).

149. The transformers will be 15 to 20 feet apart and will be separated by a firewall. (Boyer, Tr. 991).

150. The noise from one transformer will not significantly affect the noise of the other transformer. (Bourquard, Tr. 989, 1058).

151. The noise from the transformers at the property line is approximately 36-38 dB. (Moiseev, Tr. 1029).

152. The noise contributions from these transformers will be less than ambient at the site property line, and will not be audible at the nearest residence. (Moiseev, Tr. 992, 1045).

153. It is no problem to construct sound wall barriers around the transformers at Point Pleasant to attenuate their sound so that it is not audible at the property line. (Moiseev, Tr. 1046, 1055; Policastro, Tr. 1153, 1158-59, 1178).

154. There is a space around the transformers for sound wall barriers, if needed. (Bourquard, Tr. 1047).

155. Applicant is committed to the operation of transformers so that there is no increase in the ambient noise level at the property line in the direction of the nearest residence. If necessary, Applicant will put sound wall barriers around the quieted transformers. (Applicant's Testimony at 15; Boyer, Tr. 1049; Moiseev Tr. 1055; Bourquard, Tr. 1047, 1053).

156. There would be no problem in measuring the noise level from the transformers after their installation and then, if necessary, constructing the necessary sound barrier walls. (Boyer, Tr. 1049; Bourquard, Tr. 1047; Policastro, Tr. 1178-79).

157. The peace and tranquility of the Point Pleasant proposed historic district will not be adversely affected by noise effects connected with the operation of the intake and its associated pumphouse. (Board Findings 132-57).

158. No maintenance dredging is anticipated because once construction is complete, the river bottom will be returned to its natural contours. (Applicant's Testimony at 15; Bourquard, Tr. 2255).

159. River borings at the intake site in 1981 showed little change in bottom grade since the initial survey made in 1967, 14 years previously. (Bourquard, Tr. 2606-09). Hurricane Agnes caused a severe flood in the Susquehanna, but did not have such an effect in the Delaware. (Applicant's Testimony at 15-16; Bourquard, Tr. 2178).

160. The intake structure is near the middle of the river channel. Flow velocities there should keep the bottom area under the intake swept clean. (Applicant's Testimony at 15).

161. Also, the channel bottom area under the intake will be rock riprapped to prevent erosion. (Applicant's Testimony at 16; Boyer, Tr. 2554, 2562, 2822-23; Bourquard Tr. 2551-55, 2562, 2822).

162. If any debris comes down the Delaware River from the Tohickon Creek, it will most likely be during floods, when the bar near Tohickon Creek will be topped over. This debris will flow along the west shore of the river, not the main channel. (Bourquard, Tr. 2431).

163. During floods, flows in the Delaware will generally exceed 90,000 cfs (2-year flood peak), which will submerge the intake by over 19 feet (El. 85-El. 66). The chance that objects will strike the intake is remote. (Applicant's Testimony at 16).

164. During high flows the river will have greater elevation and debris will not present a problem with the intake as it is located. (Boyer, Tr. 2439). During winter months the intake will be submerged by 5 or more feet of water. (Applicant's Testimony at 16; Boyer, Tr. 2537; Bourquard, Tr. 2436).

165. The intake will be protected by 12-inch steel guard posts. The guard post will deflect any debris coming down the river causing the debris to pass around the screens or lessening the impact of anything moving down the river. (Applicant's Testimony at 16; Boyer, Tr. 2541).

166. In the unlikely event that it is necessary to enter the river to clear debris from the intake, it would be done from boats with divers. (Applicant's Testimony at 16; Bourquard, Tr. 2440; Boyer, Tr. 2440).

167. Any fish hooks caught on the screens could likewise be removed by divers. (Emery, Tr. 1815).



168. During winter months when floating and frazil ice can be expected occasionally in the river, the intake will have minimal usage. Flow records for the Schuylkill River indicate that Delaware River water would be needed for operation of Limerick during the winter months very infrequently. (Applicant's Testimony at 16; Boyer, Tr. 2438).

169. Frazil ice occurs in waters of 32°; it is ice forming in the water at various depths in very small pieces of ice that move along with the current. It is not as solid as frozen surface ice. (Boyer, Tr. 2538-39).

170. In the unlikely event that frazil ice clogs the intake, it would be cleared by the air backwash system. Air jets have been shown to be relatively effective on the few occasions that frazil ice creates problems. (Bourquard Tr. 2436-37; Boyer, Tr. at 2437-38).

171. Ice does not occur around boulders, piers, bridge abutments and foundations presently in the river. Accordingly, there is no reason to believe that the intake will attract ice. (Boyer, Tr. 2537).

172. When ice floes or ice blocks occur, the river elevation would be high. There would be more than 3 feet of water above the intake. It is highly unlikely that any surface ice floe or block would submerge to the depth of the intake. (Boyer, Tr. 2537).

173. The screen and its framework rests upon a steel frame which is a 36-inch cylinder made of 1/2 inch

plate. It is highly improbable that such a substantial piece of steel could be damaged by ice or debris floating in the river. (Boyer, Tr. 2540-42).

174. Although Delaware's witness attempted to establish by photographs and testimony that subsurface ice and ice-impacted debris could damage the intake, there is no credible evidence subsurface ice would reach the intake or have a capacity to cause any damage. (McNutt, Tr. 3385 et seq).

175. Even if the intake's steel frame were damaged, it could be repaired by underwater welding. This would be a minor repair operation that would involve one boat or barge on the river. (Boyer, Tr. 2546-47).

176. If a screen section were damaged or blocked so that it could not be cleaned manually by divers, the required maintenance would involve unbolting the flange section, removing the screen and its supporting framework, and then making necessary repairs externally or replacing the screen. Unbolting the screen's 24-inch flange would present no problem to divers. (Boyer, Tr. 2539-40; McNutt, Tr. 3440).

177. There will be no constant dredging maintenance and noise effects connected with operations of the intake and its associated pump station will not adversely affect the peace and tranquility of the Point Pleasant proposed historic district. (Board Findings 133-77).

III. CONCLUSIONS OF LAW

178. The Licensing Board has considered the entire record of the proceeding and all of the proposed findings of fact and conclusions of law submitted by the parties. Each of the proposed findings of fact and conclusions of law which is not incorporated, expressly or inferentially, in this Partial Initial Decision is rejected as being unsupported in fact or law or as immaterial to this decision.

179. Based upon the foregoing Findings of Fact which are supported by reliable probative and substantial evidence as required by the Administrative Procedure Act and the Commission's Rules of Practice, and upon consideration of the entire evidentiary record in this proceeding, the Board makes the following Conclusions of Law concerning the two contentions V-15 and V-16a(in part) and V-16a:

- (1) All environmental impacts associated with the operation of the Point Pleasant pumping station and intake structure are sufficiently understood such that the Licensing Board can make an assessment with reasonable assurance as to the potential for such impacts.
- (2) There have been no significant changes in such impacts as previously anticipated at the construction permit stage.
- (3) The environmental review conducted by the Staff pursuant to the National Environmental Policy Act

of 1969 as to such impacts has adequately addressed these matters and will be incorporated into the Staff's FES for Limerick upon its preparation and completion.

- (4) Environmental impacts associated with the operation of the Point Pleasant pumping station and intake structure are insignificant and are extremely unlikely to tilt the ultimate cost/benefit balance against the issuance of operating licenses for the Limerick facility. The Board has weighed all environmental costs attributable to the operation of the Point Pleasant pumping station and intake structure and has independently considered the final balance among the various factors contained in the record of this proceeding, the Board determines that there have been no significant changes with regard to potential environmental impacts associated with the operation of the Point Pleasant pumping station and intake, and that there is no basis for a stay of the construction of this facility.
- (5) The Board has thoroughly considered the foregoing Findings of Fact concerning the issues in controversy in this operating license proceeding and other matters which have been addressed in this Partial Initial Decision and has concluded that none of the matters raised herein involving

environmental considerations precludes going forward with the activities relating to this facility authorized by the Delaware River Basin Commission, United States Army Corps of Engineers and other agencies.

- (6) After installation of the two low noise level transformers to be installed outside the pumphouse, Applicant shall conduct such tests as may be necessary to determine whether noise from the transformers increases the ambient noise level at the site property line in the direction of the nearest residence. If so, sound wall barriers around the transformers shall be constructed to assure that noise from the station does not exceed the ambient level at the boundary toward the nearest residence.

ORDER

180. WHEREFORE IT IS ORDERED in accordance with 10 C.F.R. §§2.760, 2.762, 2.764, 2.785 and 2.786 of the Commission's Rules of Practice, that this Partial Initial Decision shall become effective immediately and shall constitute with respect to the matters decided therein the final action of the Commission forty-five (45) days after the date of issuance hereof, subject to any review pursuant to the Commission's Rules of Practice.

181. Exceptions to this Partial Initial Decision may be filed by any party within seven (7) days after service of

this Partial Initial Decision. Within fifteen (15) days thereafter (twenty (20) days in the case of the Staff), any party filing such exceptions shall file a brief in support thereof. Within fifteen (15) days of the filing of the brief of the appellant (twenty (20) days in the case of the Staff), any other party may file a brief in support of, or in opposition to, the exceptions.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND LICENSING BOARD

Judge Lawrence J. Brenner, Chairman

Judge Peter A. Morris, Member

Judge Richard F. Cole, Member

Dated at Bethesda, Maryland,  
this \_\_\_\_\_ day of \_\_\_\_\_

APPENDIX A

1. Exhibits received into evidence:

Staff Exhibits

<u>No.</u>		<u>Received</u>	<u>Identified</u>
1	Drawing of American Shad, 21 mm. larva.		3223
2	Exhibit 4 from Applicant Exhibit 2, Point Pleasant Pumping Station, Delaware River Channel Section at Water Intake.		3487
3	Exhibit 5 from Applicant Exhibit 2, Point Pleasant Pumping Station Location and Layout Plan, General Profile, December 22, 1981, revised January 13, 1981.		3488
4	Exhibit 10 from Applicant Exhibit 2, Point Pleasant Pumping Station Intake Screen Assembly and Piping Details, September 1, 1981, revised January 13, 1982.		3488
5	Assessment of the impacts of the proposed Point Pleasant Pumping Station and intake structure on the shortnose sturgeon, by H. Brundage, 1982.		3501

Applicant Exhibits

<u>No.</u>		<u>Received</u>	<u>Identified</u>
1	Environmental Report Section (with index), including portions of Exhibits 1, 1A and 1B directly applicable to contentions.	949	937, 974
1A	September 3, 1982 Responses to Requests for Additional Information.	949	937
1B	September 17, 1982 Responses to Requests for Additional Information.	949	938
2	January 22, 1982 letter from E.H. Bourquard to Corps of Engineers with Table 1.	1328	1324
3	Applicant's list of Exhibits and other documents which the Licensing Board is requested to officially notice.		1334
4	Map of Point Pleasant showing location of intake.	2154	2152
5	Letter from P.L. Harmon to E.H. Bourquard (revision of Table 1 in November 1980 report), dated May 11, 1981.	2829	2829
6	Letter from R.L. Baldwin, Corps of Engineers to H.N. Larsen, U.S. Fish and Wildlife Service, dated September 24, 1982, concerning Notice of Intent to Issue a Department of Army Permit to NWRA.		3179



Del-Aware Exhibits

<u>No.</u>		<u>Received</u>	<u>Identified</u>
1-A	Issue #1 Response on water quality data at Point Pleasant.	1313	1299
1-B	Issue #2 Response on sea level elevation of Lumberville Dam.	1313	1300
1-C	Issue #4 Response on further assessments of intake location after 1980 Environmental Assessment.	1313	1301
1-D	Issue #6 Response on cross section data on Delaware River at Point Pleasant.	1313	1302
1-E	Issue #7 Response on status of Point Pleasant withdrawal in Recommendation 13.		1302
1-F	Issue #5 Response on current status of Merrill Creek project.		1302
2	Tabulation of available data and Delaware River Flow Velocities at Intake Site (3).		1376
3	Water Quality Analyses, Area-Specific Dilution Studies, Region III, January 1981.		1449
4	Water Quality Analyses, Ten Area-Specific Dilution Studies.		1460
5	Letter to Mr. Hansler from Mr. Torok dated March 12, 1980.		1465
6	Letter to Col. Baldwin from Mr. Pence dated March 17, 1982.	1494	1471
7	Development of Relationship Between Water Discharge and Water Surface Elevation, January 4, 1982.		1639
8	Draft - Background Report Concerning the Interstate Water Management Recommendations of the Parties to the U.S. Supreme Court Decree of 1954 to the DRBC (Without Appendices).		1660

<u>No.</u>		<u>Received</u>	<u>Identified</u>
9	Letter to E.H. Bourquard from P.L. Harmon dated July 28, 1981 and three Tables on Velocity Measurements.	2225	2211
10	The American Shad ( <i>Alosa sapidissima</i> ) in the Delaware River, by J.P. Miller, F.R. Griffiths and P.A. Thurston-Rogers.		2227
11	Rating Curve - Point Pleasant Intake Site.		2275
12	USGS Data Sheets for October 1980, May 1981 and July 1981.	2329	2320
13	Point Pleasant Pumping Station Preliminary Design, Sheets 1, 2 and 3 of 4.		2321
14	Letter to W.H. Dickinson from E.H. Bourquard dated August 10, 1982, including Tables.		2392
15	Memorandum from W.H. Dickinson, "Mechanical Engineering Division," dated May 14, 1982.		2460
16	Memorandum from D.L. Morad, "Making Water System Status Report," dated December 16, 1981.		2465
17	Memorandum of meeting of January 5, 1982 (2 pages) including Figures and Excerpts of Hansen paper, by E.H. Bourquard.		2570
18	Actual versus Measured Readings (Rangefinder) dated March 1981 (Tables) from handwritten note from Mr. Bourquard to Mr. Harmon dated March 10-11, 1981.		2758
19	Delaware Intake Points Below, Real and Actual Distance from Split-Image Measuring Devices, E.H. Bourquard, dated March 10, 1981.		2768
20	Letter from H.M. Brundage III to R.A. Flowers, dated July 27, 1982.		2966

<u>No.</u>		<u>Received</u>	<u>Identified</u>
21	Single page, marked "13," excerpted from "Assessment of the impacts of the proposed Point Pleasant Pumping Station and intake structure on the shortnose sturgeon."		2975
22	Letter from H.M. Bruniage III to E.H. Bourquard dated November 30, 1981.		3026
23	Letter from C. Culp, U.S. Fish and Wildlife Service to R. Baldwin, dated September 14, 1982.		3342
24	Photographs identified in McNutt testimony, including Cross-referenced Photo Numbers List.	3384	3384
25	Policastro 1 with J.T. Phillippe's markings.		3748
26	J.T. Phillippe's plotting of 17-18 points relating to Trenton.		3776
27	Excerpts from Ecological Studies of the Nanticoke River and Nearby Area, Volume II, dated December 1980.		3953

Board Exhibits

<u>No.</u>		<u>Received</u>	<u>Identified</u>
1	Page 15 of "Biological Evaluation of the Proposed Water Intake in the Delaware River at Point Pleasant, Pennsylvania for NWRA" by P.L. Harmon, dated November 1980.		2637
2	Cover letter from Mr. Richmond to Mr. Conner (index of contents); letter to Col. Baldwin from Pennsylvania Historic Museum Commission dated September 28, 1981; letter from Mr. Gordon of National Marine Fisheries Service to Mr. Sugarman dated September 30, 1982; letter from Mr. Hoffman of EPA to Mr. Cianfranni of Army Corps of Engineers dated August 5, 1982, signed by Col. Baldwin on October 14, 1982; Memorandum of Agreement between Corps of Engineers, the Advisory Council on Historic Preservation, and the State Historic Preservation Officer.		3955

2. Professional Qualifications of Witnesses:

<u>Professional Qualifications</u>	<u>Transcript Page</u>
Vincent S. Boyer	933
W. Haines Dickinson, Jr.	933
E.H. Bourquard	933
Neil Moiseev	933
Anthony J. Policastro	1118
Brian J. Richter	1118
Paul L. Harmon	1321
John E. Edinger	1321
George D. Pence	1439
Charles E. Emery, III	1736
Michael Lee Kaufman	1736
Stanley Plevyak	1930
Harold M. Brundage, III	2965
Richard Hunt McNutt	3382
Rex G. Wescott	3490
Michael T. Masnik	3504
Jonathan T. Phillippe	3658
Pierce F. Lewis	4036

DOCKETED  
USNRC

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

NOV -9 P1:30

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH  
Before the Atomic Safety and Licensing Board

In the Matter of )  
 )  
Philadelphia Electric Company ) Docket Nos. 50-352  
 ) 50-353  
(Limerick Generating Station, )  
Units 1 and 2) )

APPLICANT'S RESPONSE TO LICENSING BOARD'S REQUEST  
FOR INFORMATION REGARDING HISTORICAL RECORD OF FLOWS  
FOR THE SCHUYLKILL RIVER AND EAST BRANCH PERKIOMEN CREEK

Near the conclusion of the recently completed hearings on supplemental cooling water issues, the Atomic Safety and Licensing Board ("Licensing Board" or "Board") requested Philadelphia Electric Company ("Applicant") to provide the Board and parties with certain information to assist it in ruling on the admissibility of proposed contention V-24 as submitted by Del-Aware Unlimited, Inc. ("Del-Aware"). 1/ The proposed contention relates to the use of one versus two units at Limerick in evaluating the cost/benefit balance for the facility.

Specifically, the Board requested information as follows:

Using only waters available from the Schuylkill River and the Perkiomen Creek and considering the DRBC conditions on flow and temperature restrictions and considering no flow from the Delaware

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1/ Tr. 3620-28 (October 25, 1982).

River -- that is, as if the Point Pleasant diversion did not exist -- please determine based upon the available historical record of flows what percentage of time, or average number of days per year, if you prefer to express it that way, would an operation of at least one unit be permitted; and, (B) operation of two units be permitted.

Now, in addition to simply answering the question as phrased, and most importantly we insist that the basic underlying data with a year-by-year breakdown be provided, showing us the basis upon which the answer was formulated. The result of the answers supported by the data should give us the percentage of time that one or more units could operate and also the percentage of time that two units could operate. And the difference, of course, would give us the percentage of time falling in between that.

In addition, the Board also requests any information available that would modify those predictions of future flows of between 529 and 560 c.f.s. in the Schuylkill at Pottstown, which are based solely on historic data.

The last question, to state it another way, is to give us information as to any changes that are now ascertainable in the water supply available that would be pertinent to the situation of one unit operating but not to two units operating, which we should consider, the parties should provide that.

The underlying data and conclusions as to when one or two units would have been permitted to operate is contained in attached Appendices A and B.

The availability of water storage on the Schuylkill River is not expected to change in the foreseeable future. Currently, there are two reservoirs on the Schuylkill River

upstream of the Limerick Generating Station. The Ontelaunee reservoir in Berks County is used for local water supply. The Blue Marsh Reservoir, also in Berks County, completed in 1977, is used primarily for replacing depletive uses, meeting instream needs and flood loss reduction. Neither of these reservoirs has excess capacity that could be used to meet Limerick's needs.

After the 1976 decision to defer construction of Tocks Island, the Delaware River Basin Commission ("DRBC") directed the power companies that operate in the basin to start planning for their own reservoir storage. The utilities acting as the Delaware River Basin Electric Utilities Group ("DRBEUG") selected four reservoir site alternatives, two in the Schuylkill River basin (Mill Creek and Red Creek) and two in the Delaware River basin (Little Martins Creek and Merrill Creek). Merrill Creek was selected as the site for the reservoir. Engineering has progressed on the Merrill Creek project. Applications have been submitted and are awaiting approval from various regulatory agencies. After selection of Merrill Creek as the most suitable reservoir site, no further developmental work was done on the other less environmentally suitable sites.

There are two other reservoir sites in the Schuylkill River basin that were contained in DRBC's comprehensive plan. However, the Maiden Creek Reservoir proposed to be built in Berks County has been dropped from the



comprehensive plan. The Evansburg Reservoir in Montgomery County remains in the plan but no dates or plans have been set for construction. If Evansburg Reservoir were to be built for water supply, it could barely meet the average daily demand deficiencies in central Montgomery County. 2/

The Pennsylvania Department of Environmental Resources concluded:

"Both the State Water Plan and the DRBC Level B study indicate that technical, environmental, economic or social conditions virtually preclude development of significant new surface water storage facilities in the Schuylkill River Basin in the foreseeable future." 3/

Respectfully submitted,  
CONNER & WETTERHAHN, P.C.

*Troy B. Conner, Jr.*  
Troy B. Conner, Jr.  
Counsel for Applicant

November 9, 1982

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2/ See Environmental Assessment Report and Findings - Point Pleasant Water Supply Project at 75, Department of Environmental Resources, Commonwealth of Pennsylvania (August 1982).

3/ Id. at 74.

MECHANICAL ENGINEERING DIVISION  
N2-1 2301 Market Street

MEMORANDUM

Subject: Availability of Make-up Water  
Schuylkill River & Perkiomen Creek  
Limerick Generating Station

An analysis of the water availability from the Schuylkill River and Perkiomen Creek for use in the condenser cooling water system, assuming one unit and two unit operation, was made based on the DRBC conditions regarding flow and temperature.

The results of the analysis are presented below:

Calendar Year	Days Data Available	Days Water is Available Schuylkill & Perkiomen			% of Days per Year Water Available		
		1 Unit	2 Units	Difference	1 Unit	2 Units	Difference
1971	92*	80*	75*	5	87*	82*	5
1972	365	261	252	9	72	69	3
1973	365	247	245	2	68	67	1
1974	364	248	236	12	68	65	3
1975	334	270	264	6	81	79	2
1976	263	181	179	2	69	68	1
1977	242	148	144	4	61	60	1
1978	236	176	170	6	75	72	3
1979	365	287	272	15	79	75	4
1980	364	164	157	7	45	43	2
1981	149*	129*	123*	6	87*	83*	4

\* Based on a partial year's data.

Prepared by: W. H. Dickinson  
Mechanical Engineering Division  
November 8, 1982

WHD/dmc 12/4

Data Used to Evaluate 1 versus 2 Unit Availability of Schuylkill River and Perkiomen Creek Water for Operation of Limerick Generating Station

I. Schuylkill River Temperature Data Used (degrees Centigrade)

<u>Period</u>	<u>Location<sup>a</sup> of Measurement</u>
10/1/71-9/30/75	S90900-5 Pottstown Water Filtration Plant (Daily log sheets)
10/1/75-12/31/75	S77440-3 RMC (PECo) Data Obtained Near LGS Site (weekends and holidays missing)
1/5/76-12/20/78	S77660-3
1/1/79-5/31/81	S90900-5 Pottstown Water Filtration Plant

II. Schuylkill River Flow Data Used (coded as station S77660-3) (meters<sup>3</sup>/sec.)

10/1/71-9/30/80	USGS Gage (#01472000) at Pottstown (final data)
10/1/80-5/31/81	Provisional Data

III. Perkiomen Creek Flow Data Used (coded as P14390-3) (meters<sup>3</sup>/sec.)

10/1/71-9/30/80	USGS Gage (#01473000) at Graterford (final data)
10/1/80-5/31/81	Provisional Data

<sup>a</sup>Alpha-numeric designator is stream (S = Schuylkill River, P = Perkiomen Creek) and five-digit river meter distance from mouth of stream

Flow conversions:	<u>cfs</u>	=	<u>meters<sup>3</sup>/sec.</u>
	180		5.09
	210		5.94
	530		15.00
	560		15.85
	1,791		50.69

CONSUMPTIVE COOLING WATER USE - NUMBER OF DAYS PER MONTH WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

YEAR	MON	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE		DAYS DATA AVAILABLE	DAYS IN MONTH
		1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS		
1971	OCT	0	0	19	15	12	16	31	31
	NOV	23	23	7	6	0	1	30	30
	DEC	31	31	0	0	0	0	31	31
1972	JAN	31	31	0	0	0	0	31	31
	FEB	29	29	0	0	0	0	29	29
1973	MAR	31	31	0	0	0	0	31	31
	APR	30	30	0	0	0	0	30	30
	MAY	26	26	0	0	5	5	31	31
	JUN	21	21	3	1	6	8	30	30
	JUL	0	0	21	15	10	16	31	31
	AUG	0	0	0	0	31	31	31	31
	SEP	0	0	0	0	30	30	30	30
	OCT	9	9	1	0	21	22	31	31
	NOV	29	29	0	0	1	1	30	30
	DEC	30	30	0	0	0	0	30	31
	JAN	31	31	0	0	0	0	31	31
	FEB	28	28	0	0	0	0	28	28
1974	MAR	31	31	0	0	0	0	31	31
	APR	30	30	0	0	0	0	30	30
	MAY	31	31	0	0	0	0	31	31
	JUN	20	20	2	2	8	8	30	30
	JUL	0	0	10	8	21	23	31	31
	AUG	0	0	3	3	28	28	31	31
	SEP	0	0	1	1	29	29	30	30
	OCT	0	0	1	1	30	30	31	31
	NOV	28	28	0	0	2	2	30	30
	DEC	31	31	0	0	0	0	31	31
	JAN	31	31	0	0	0	0	31	31
	FEB	28	28	0	0	0	0	28	28
1975	MAR	31	31	0	0	0	0	31	31
	APR	27	27	3	3	0	0	30	30
	MAY	11	11	12	7	8	13	31	31
	JUN	0	0	11	9	19	21	30	30
	JUL	0	0	2	1	29	30	31	31
	AUG	0	0	7	6	23	24	30	31
	SEP	0	0	16	14	14	16	30	30
	OCT	9	9	7	6	15	16	31	31
	NOV	22	22	0	0	8	8	30	30
	DEC	31	31	0	0	0	0	31	31
	JAN	31	31	0	0	0	0	31	31
	FEB	28	28	0	0	0	0	28	28
MAR	31	31	0	0	0	0	31	31	
APR	30	30	0	0	0	0	30	30	
MAY	28	28	1	1	2	2	31	31	
JUN	18	18	6	5	6	7	30	30	
JUL	0	0	22	19	9	12	31	31	
AUG	0	0	8	7	23	24	31	31	

WILLAMETTE INDUSTRIES L.M. 02903

CONSUMPTIVE COOLING WATER USE - NUMBER OF DAYS PER MONTH WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

YEAR	MON	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE		DAYS DATA AVAILABLE	DAYS IN MONTH
		1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS		
1975	SEP	0	0	10	10	20	20	30	30
	OCT	15	15	3	2	4	5	22	31
	NOV	17	17	1	1	0	0	18	30
	DEC	21	21	0	0	0	0	21	31
1976	JAN	19	19	0	0	0	0	19	31
	FEB	20	20	0	0	0	0	20	29
	MAR	23	23	0	0	0	0	23	31
	APR	25	25	0	0	3	3	28	30
	MAY	20	20	0	0	5	5	25	31
	JUN	11	11	1	1	12	12	24	30
	JUL	0	0	3	2	18	19	21	31
	AUG	0	0	2	1	20	21	22	31
	SEP	0	0	1	1	19	19	20	30
1977	OCT	14	14	1	1	5	5	20	31
	NOV	20	20	0	0	0	0	20	30
	DEC	21	21	0	0	0	0	21	31
	JAN	9	9	0	0	0	0	9	31
	FEB	13	13	0	0	0	0	13	28
	MAR	22	22	0	0	0	0	22	31
	APR	25	25	3	1	0	2	28	30
	MAY	12	12	1	0	11	12	24	31
	JUN	1	1	0	0	20	20	21	30
	JUL	0	0	2	1	18	19	20	31
	AUG	0	0	1	1	22	22	23	31
	SEP	0	0	0	0	21	21	21	30
1978	OCT	18	18	0	0	1	1	19	31
	NOV	20	20	0	0	1	1	21	30
	DEC	21	21	0	0	0	0	21	31
	JAN	19	19	0	0	0	0	19	31
	FEB	11	11	0	0	0	0	11	28
	MAR	19	19	0	0	0	0	19	31
	APR	27	27	0	0	0	0	27	30
	MAY	28	28	0	0	0	0	28	31
	JUN	9	9	5	4	11	12	25	30
	JUL	0	0	7	6	13	14	20	31
	AUG	0	0	11	8	9	12	20	31
	SEP	0	0	2	1	17	18	19	30
1979	OCT	11	11	1	1	10	10	22	31
	NOV	14	14	0	0	0	0	14	30
	DEC	12	12	0	0	0	0	12	31
	JAN	31	31	0	0	0	0	31	31
	FEB	28	28	0	0	0	0	28	28
	MAR	31	31	0	0	0	0	31	31
	APR	30	30	0	0	0	0	30	30
	MAY	17	17	8	4	6	10	31	31
	JUN	7	7	11	10	12	13	30	30
	JUL	0	0	12	9	19	22	31	31

CONSUMPTIVE COOLING WATER USE - NUMBER OF DAYS PER MONTH WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

YEAR	MON	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE		DAYS DATA AVAILABLE	DAYS IN MONTH
		1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS		
1979	AUG	0	0	4	3	27	28	31	31
	SEP	0	0	16	13	14	17	30	30
	OCT	11	11	20	17	0	?	31	31
	NOV	29	29	1	1	0	0	30	30
	DEC	31	31	0	0	0	0	31	31
1980	JAN	31	31	0	0	0	0	31	31
	FEB	29	29	0	0	0	0	29	29
	MAR	30	30	0	0	0	0	30	31
	APR	29	29	1	0	0	1	30	30
	MAY	23	23	2	1	6	7	31	31
	JUN	0	0	3	1	27	29	30	30
	JUL	0	0	1	1	30	30	31	31
	AUG	0	0	0	0	31	31	31	31
	SEP	0	0	1	0	29	30	30	30
	OCT	2	2	2	2	27	27	31	31
	NOV	8	7	0	0	22	23	30	30
	DEC	2	1	0	0	28	29	30	31
1981	JAN	13	6	9	13	9	12	31	31
	FEB	27	27	1	0	0	1	28	28
	MAR	31	31	0	0	0	0	31	31
	APR	30	30	0	0	0	0	30	30
	MAY	14	14	4	2	11	13	29	31



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
100171	22.0	27.04	15.52			YES	YES		
100271	20.0	25.99	15.29			YES	YES		
100371	21.0	27.58	10.82			YES	YES		
100471	21.0	25.99	3.14					YES	YES
100571	21.0	24.24	2.97					YES	YES
100671	21.0	22.99	2.89					YES	YES
100771	21.0	21.55	2.69					YES	YES
100871	20.0	20.39	2.49					YES	YES
100971	18.0	19.68	2.49					YES	YES
101071	19.0	49.84	91.18			YES	YES		
101171	18.0	56.07	44.46			YES	YES		
101271	18.0	36.81	14.38			YES	YES		
101371	17.0	30.30	6.92			YES	YES		
101471	17.0	27.84	7.22			YES	YES		
101571	19.0	26.28	6.40			YES	YES		
101671	20.0	25.23	5.58			YES			YES
101771	19.0	24.24	5.24			YES			YES
101871	20.0	23.73	5.07					YES	YES
101971	18.0	22.51	4.87					YES	YES
102071	18.0	21.32	4.50					YES	YES
102171	18.0	21.07	4.22					YES	YES
102271	18.0	20.61	3.99					YES	YES
102371	18.0	20.39	4.19					YES	YES
102471	19.0	32.85	14.98			YES	YES		
102571	19.0	41.06	19.51			YES	YES		
102671	19.0	39.08	11.30			YES	YES		
102771	19.0	39.64	8.52			YES	YES		
102871	19.0	33.13	7.16			YES	YES		
102971	19.0	30.30	6.23			YES	YES		
103071	19.0	28.32	5.80			YES			YES
103171	19.0	27.04	5.64			YES			YES
110171	19.0	35.40	5.92			YES			YES
110271	19.0	135.35	31.43			YES	YES		
110371	18.0	180.38	45.87			YES	YES		
110471	17.0	138.47	23.50			YES	YES		
110571	16.0	104.77	13.11			YES	YES		
110671	16.0	85.80	10.48			YES	YES		
110771	17.0	80.14	12.54			YES	YES		
110871	15.0	74.47	11.16	YES	YES				
110971	13.0	61.73	8.66	YES	YES				
111071	14.0	56.35	8.13	YES	YES				
111171	13.0	52.95	7.73	YES	YES				
111271	14.0	48.99	6.85	YES	YES				
111371	13.0	46.44	6.63	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PEPKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
111471	11.0	44.17	6.03	YES	YES				
111571	12.0	42.48	5.92	YES	YES				
111671	13.0	42.76	6.85	YES	YES				
111771	13.0	40.21	6.03	YES	YES				
111871	12.0	37.10	5.61	YES	YES				
111971	12.0	35.96	5.27	YES	YES				
112071	10.0	36.53	5.61	YES	YES				
112171	14.0	36.53	5.61	YES	YES				
112271	10.0	34.55	5.27	YES	YES				
112371	10.0	32.00	4.39	YES	YES				
112471	9.0	29.45	4.11	YES	YES				
112571	9.0	119.50	82.69	YES	YES				
112671	9.0	153.76	43.61	YES	YES				
112771	10.0	110.72	22.37	YES	YES				
112871	10.0	94.29	21.52	YES	YES				
112971	11.0	113.83	54.93	YES	YES				
113071	12.0	269.86	92.88	YES	YES				
120171	9.0	208.13	27.84	YES	YES				
120271	10.0	145.83	16.59	YES	YES				
120371	8.0	114.97	12.54	YES	YES				
120471	9.0	95.99	11.16	YES	YES				
120571	8.0	84.10	9.71	YES	YES				
120671	8.0	78.44	9.09	YES	YES				
120771	8.0	120.06	23.79	YES	YES				
120871	8.0	143.57	33.98	YES	YES				
120971	11.0	139.88	18.18	YES	YES				
121071	12.0	131.67	14.67	YES	YES				
121171	9.0	118.93	12.74	YES	YES				
121271	10.0	110.44	10.48	YES	YES				
121371	12.0	104.77	9.85	YES	YES				
121471	10.0	96.28	8.66	YES	YES				
121571	10.0	87.78	8.81	YES	YES				
121671	12.0	79.29	8.81	YES	YES				
121771	9.0	73.62	8.13	YES	YES				
121871	11.0	67.96	7.73	YES	YES				
121971	11.0	61.16	6.48	YES	YES				
122071	9.0	58.05	6.85	YES	YES				
122171	9.0	56.35	7.33	YES	YES				
122271	9.0	52.67	6.63	YES	YES				
122371	9.0	43.89	5.49	YES	YES				
122471	9.0	45.31	5.72	YES	YES				
122571	8.0	45.31	6.26	YES	YES				
122671	9.0	43.89	5.72	YES	YES				
122771	9.0	42.48	5.72	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
122871	13.0	42.48	5.72	YES	YES				
122971	12.0	42.48	5.49	YES	YES				
123071	9.0	43.32	5.72	YES	YES				
123171	9.0	47.57	9.71	YES	YES				
010172	3.0	42.76	6.74	YES	YES				
010272	7.0	58.33	23.22	YES	YES				
010372	7.0	77.30	32.56	YES	YES				
010472	12.0	65.41	15.94	YES	YES				
010572	10.0	71.36	33.13	YES	YES				
010672	9.0	71.64	19.43	YES	YES				
010772	7.0	63.71	12.37	YES	YES				
010872	7.0	61.16	10.17	YES	YES				
010972	8.0	60.88	9.09	YES	YES				
011072	8.0	89.76	32.85	YES	YES				
011172	10.0	86.37	27.52	YES	YES				
011272	9.0	86.37	19.68	YES	YES				
011372	11.0	87.22	15.94	YES	YES				
011472	9.0	109.59	20.44	YES	YES				
011572	8.0	114.12	13.65	YES	YES				
011672	6.0	95.14	8.81	YES	YES				
011772	4.0	82.40	9.09	YES	YES				
011872	4.0	79.85	8.95	YES	YES				
011972	7.0	73.62	7.48	YES	YES				
012072	5.0	69.94	7.33	YES	YES				
012172	7.0	64.28	7.22	YES	YES				
012272	7.0	60.03	7.22	YES	YES				
012372	8.0	59.18	7.99	YES	YES				
012472	8.0	59.47	8.81	YES	YES				
012572	8.0	59.47	9.57	YES	YES				
012672	8.0	56.07	8.41	YES	YES				
012772	8.0	48.42	6.26	YES	YES				
012672	8.0	46.72	5.66	YES	YES				
012972	8.0	45.31	5.38	YES	YES				
013072	7.0	44.17	5.10	YES	YES				
013172	8.0	41.91	5.10	YES	YES				
020172	5.0	38.79	4.81	YES	YES				
020272	6.0	40.78	5.38	YES	YES				
020372	8.0	43.89	6.14	YES	YES				
020472	9.0	97.69	45.02	YES	YES				
020572	5.0	74.47	14.02	YES	YES				
020672	4.0	61.73	11.67	YES	YES				
020772	4.0	63.43	9.26	YES	YES				
020872	5.0	53.52	8.41	YES	YES				
020972	4.0	45.31	7.08	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
021072	6.0	42.48	5.95	YES	YES				
021172	4.0	39.64	6.23	YES	YES				
021272	4.0	42.48	6.51	YES	YES				
021372	7.0	107.32	74.76	YES	YES				
021472	5.0	204.16	59.38	YES	YES				
021572	6.0	145.27	33.70	YES	YES				
021672	6.0	118.36	25.03	YES	YES				
021772	8.0	100.52	17.95	YES	YES				
021872	6.0	88.91	14.44	YES	YES				
021972	6.0	88.35	15.09	YES	YES				
022072	5.0	82.10	13.85	YES	YES				
022172	4.0	71.36	14.67	YES	YES				
022272	4.0	74.19	13.11	YES	YES				
022372	6.0	63.43	10.99	YES	YES				
022472	7.0	61.16	11.67	YES	YES				
022572	7.0	60.31	10.17	YES	YES				
022672	6.0	68.53	16.59	YES	YES				
022772	6.0	74.76	22.37	YES	YES				
022872	6.0	71.64	22.37	YES	YES				
022972	6.0	85.80	50.69	YES	YES				
030172	9.0	120.63	88.91	YES	YES				
030272	11.0	226.53	96.28	YES	YES				
030372	11.0	254.85	90.05	YES	YES				
030472	7.0	212.38	35.68	YES	YES				
030572	7.0	188.31	26.59	YES	YES				
030672	6.0	148.95	18.18	YES	YES				
030772	6.0	123.46	15.52	YES	YES				
030872	9.0	110.44	15.72	YES	YES				
030972	8.0	95.43	12.74	YES	YES				
031072	8.0	85.80	10.65	YES	YES				
031172	7.0	77.30	10.02	YES	YES				
031272	8.0	74.47	12.18	YES	YES				
031372	9.0	78.15	11.33	YES	YES				
031472	9.0	76.17	17.50	YES	YES				
031572	9.0	79.85	27.84	YES	YES				
031672	10.0	77.87	67.68	YES	YES				
031772	9.0	165.94	86.37	YES	YES				
031872	9.0	164.80	32.56	YES	YES				
031972	10.0	136.77	19.94	YES	YES				
032072	8.0	114.12	15.72	YES	YES				
032172	9.0	100.52	14.67	YES	YES				
032272	11.0	107.89	31.71	YES	YES				
032372	12.0	159.99	19.94	YES	YES				
032472	9.0	133.94	15.09	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
032572	8.0	116.38	13.11	YES	YES				
032672	9.0	103.92	10.99	YES	YES				
032772	9.0	92.88	10.65	YES	YES				
032872	9.0	84.95	8.95	YES	YES				
032972	9.0	77.30	8.95	YES	YES				
033072	11.0	73.62	9.26	YES	YES				
033172	11.0	69.66	8.66	YES	YES				
040172	10.0	64.00	8.13	YES	YES				
040272	11.0	61.16	8.13	YES	YES				
040372	11.0	58.33	7.33	YES	YES				
040472	11.0	56.63	8.55	YES	YES				
040572	9.0	54.93	8.13	YES	YES				
040672	11.0	51.54	7.33	YES	YES				
040772	12.0	49.84	7.48	YES	YES				
040872	11.0	49.55	7.22	YES	YES				
040972	8.0	46.72	6.74	YES	YES				
041072	7.0	43.89	6.48	YES	YES				
041172	12.0	44.17	6.37	YES	YES				
041272	11.0	43.89	6.26	YES	YES				
041372	14.0	56.63	11.67	YES	YES				
041472	14.0	59.47	13.65	YES	YES				
041572	14.0	65.13	11.16	YES	YES				
041672	14.0	127.43	14.87	YES	YES				
041772	14.0	115.53	65.41	YES	YES				
041872	10.0	102.22	31.15	YES	YES				
041972	15.0	91.18	16.99	YES	YES				
042072	16.0	84.38	14.16	YES	YES				
042172	14.0	85.23	12.74	YES	YES				
042272	16.0	75.89	14.16	YES	YES				
042372	14.0	80.42	16.99	YES	YES				
042472	14.0	87.22	25.49	YES	YES				
042572	15.0	75.32	16.99	YES	YES				
042672	14.0	67.11	14.16	YES	YES				
042772	16.0	62.58	12.37	YES	YES				
042872	16.0	58.62	11.84	YES	YES				
042972	15.0	56.07	10.02	YES	YES				
043072	15.0	54.65	7.73	YES	YES				
050172	15.0	52.95	7.73	YES	YES				
050272	17.0	55.78	8.81	YES	YES				
050372	17.0	58.33	14.02	YES	YES				
050472	18.0	102.22	34.26	YES	YES				
050572	17.0	145.27	21.24	YES	YES				
050672	18.0	114.12	13.48	YES	YES				
050772	16.0	96.84	10.34	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
050872	17.0	103.07	17.95	YES	YES				
050972	17.0	122.33	58.62	YES	YES				
051072	15.0	147.25	52.01	YES	YES				
051172	16.0	120.63	25.66	YES	YES				
051272	17.0	107.04	15.94	YES	YES				
051372	17.0	97.13	11.67	YES	YES				
051472	17.0	90.05	10.34	YES	YES				
051572	18.0	95.43	20.44	YES	YES				
051672	17.0	93.45	27.52	YES	YES				
051772	19.0	86.93	15.52	YES	YES				
051872	18.0	94.58	12.91	YES	YES				
051972	18.0	76.17	10.02	YES	YES				
052072	18.0	73.62	9.26	YES	YES				
052172	19.0	71.36	10.65	YES	YES				
052272	19.0	67.11	8.41	YES	YES				
052372	19.0	62.30	6.97	YES	YES				
052472	21.0	56.63	5.92	YES	YES				
052572	21.0	50.97	5.27	YES	YES				
052672	20.0	48.14	4.67					YES	YES
052772	20.0	45.02	4.28					YES	YES
052872	21.0	43.32	4.11					YES	YES
052972	20.0	42.19	3.94					YES	YES
053072	21.0	41.91	3.74					YES	YES
053172	21.0	129.12	61.45	YES	YES				
060172	20.0	172.45	94.01	YES	YES				
060272	20.0	117.51	22.94	YES	YES				
060372	20.0	99.68	17.05	YES	YES				
060472	20.0	82.97	11.50	YES	YES				
060572	22.0	73.62	9.26	YES	YES				
060672	22.0	64.85	7.73	YES	YES				
060772	22.0	59.75	7.73	YES	YES				
060872	23.0	54.09	6.14	YES	YES				
060972	24.0	49.55	5.49			YES			YES
061072	24.0	47.29	5.38			YES			YES
061172	22.0	45.87	4.59					YES	YES
061272	23.0	42.48	4.11					YES	YES
061372	21.0	39.64	4.28					YES	YES
061472	21.0	38.23	4.67					YES	YES
061572	21.0	36.81	4.59					YES	YES
061672	22.0	39.64	4.98					YES	YES
061772	23.0	56.63	11.51	YES	YES				
061872	22.0	50.97	7.48	YES	YES				
061972	22.0	48.14	15.29			YES	YES		
062072	22.0	119.44	19.43	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
062172	22.0	117.23	13.85	YES	YES				
062272	21.0	821.19	376.61	YES	YES				
062372	21.0	2016.16	225.40	YES	YES				
062472	21.0	826.85	67.11	YES	YES				
062572	21.0	331.31	62.86	YES	YES				
062672	21.0	243.52	35.40	YES	YES				
062772	21.0	218.04	22.09	YES	YES				
062872	21.0	198.22	15.29	YES	YES				
062972	21.0	169.90	15.94	YES	YES				
063072	20.0	212.38	26.90	YES	YES				
070172	19.0	169.90	15.29			YES	YES		
070272	19.0	141.58	10.65			YES	YES		
070372	22.0	127.43	9.71			YES	YES		
070472	22.0	127.43	13.11			YES	YES		
070572	22.0	113.27	8.55			YES	YES		
070672	22.0	101.94	8.81			YES	YES		
070772	20.0	93.45	7.33			YES	YES		
070872	21.0	87.78	6.74			YES	YES		
070972	20.0	84.95	6.85			YES	YES		
071072	21.0	84.95	5.92			YES			YES
071172	22.0	79.29	5.18			YES			YES
071272	22.0	73.62	4.79					YES	YES
071372	24.0	99.11	20.44			YES	YES		
071472	24.0	107.60	15.09			YES	YES		
071572	25.0	64.28	7.73			YES	YES		
071672	25.0	61.73	5.92			YES			YES
071772	25.0	96.84	7.11			YES	YES		
071872	25.0	72.77	6.03			YES	YES		
071972	26.0	80.42	7.33			YES	YES		
072072	26.0	63.43	5.27			YES			YES
072172	27.0	56.35	5.38			YES			YES
072272	27.0	51.25	5.38			YES			YES
072372	28.0	46.72	4.19					YES	YES
072472	28.0	43.89	3.57					YES	YES
072572	29.0	41.34	3.17					YES	YES
072672	29.0	43.04	3.85					YES	YES
072772	29.0	39.08	3.48					YES	YES
072872	29.0	36.53	3.09					YES	YES
072972	29.0	33.98	2.86					YES	YES
073072	25.0	32.56	2.63					YES	YES
073172	25.0	31.71	2.58					YES	YES
080172	26.0	32.28	2.78					YES	YES
080272	24.0	30.87	2.78					YES	YES
080372	26.0	28.88	2.49					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
080472	27.0	34.26	2.58					YES	YES
080572	27.0	30.30	2.38					YES	YES
080672	27.0	27.04	2.18					YES	YES
080772	27.0	26.79	2.12					YES	YES
080872	27.0	30.58	2.24					YES	YES
080972	26.0	28.88	2.38					YES	YES
081072	25.0	24.98	2.18					YES	YES
081172	26.0	23.50	1.98					YES	YES
081272	25.0	22.26	1.93					YES	YES
081372	26.0	22.74	1.87					YES	YES
081472	26.0	22.74	1.93					YES	YES
081572	26.0	20.64	1.87					YES	YES
081672	26.0	20.13	1.81					YES	YES
081772	25.0	19.68	1.81					YES	YES
081872	25.0	20.61	1.87					YES	YES
081972	25.0	20.61	1.81					YES	YES
082072	25.0	19.91	1.76					YES	YES
082172	25.0	18.50	1.73					YES	YES
082272	25.0	17.90	1.67					YES	YES
082372	25.0	17.44	1.67					YES	YES
082472	25.0	17.24	1.67					YES	YES
082572	26.0	17.44	2.04					YES	YES
082672	27.0	17.90	2.04					YES	YES
082772	28.0	22.99	3.65					YES	YES
082872	28.0	27.04	2.63					YES	YES
082972	29.0	23.73	2.12					YES	YES
083072	28.0	18.80	1.93					YES	YES
083172	27.0	17.05	1.81					YES	YES
090172	26.0	16.20	1.76					YES	YES
090272	26.0	16.20	1.87					YES	YES
090372	26.0	16.59	2.04					YES	YES
090472	26.0	15.97	1.98					YES	YES
090572	25.0	15.74	1.73					YES	YES
090672	25.0	15.55	1.67					YES	YES
090772	25.0	15.15	1.61					YES	YES
090872	25.0	14.53	1.61					YES	YES
090972	24.0	16.40	1.67					YES	YES
091072	25.0	17.24	1.56					YES	YES
091172	25.0	15.74	1.56					YES	YES
091272	24.0	15.55	1.61					YES	YES
091372	24.0	17.44	1.56					YES	YES
091472	24.0	18.80	1.56					YES	YES
091572	23.0	17.05	1.56					YES	YES
091672	24.0	14.92	1.61					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
091772	24.0	14.53	1.56					YES	YES
091872	25.0	16.68	1.50					YES	YES
091972	24.0	30.58	1.50					YES	YES
092072	24.0	27.84	1.67					YES	YES
092172	24.0	18.58	1.61					YES	YES
092272	22.0	17.05	1.61					YES	YES
092372	22.0	16.20	1.44					YES	YES
092472	21.0	14.89	1.44					YES	YES
092572	21.0	14.72	1.44					YES	YES
092672	22.0	16.74	1.50					YES	YES
092772	22.0	18.12	1.61					YES	YES
092872	23.0	17.24	1.76					YES	YES
092972	23.0	16.82	1.76					YES	YES
093072	22.0	18.12	1.87					YES	YES
100172	21.0	39.08	1.61					YES	YES
100272	21.0	37.10	1.61					YES	YES
100372	20.0	26.59	1.56					YES	YES
100472	20.0	17.67	1.61					YES	YES
100572	20.0	17.44	1.61					YES	YES
100672	19.0	18.69	1.76					YES	YES
100772	21.0	36.81	5.18			YES			YES
100872	20.0	31.15	4.59					YES	YES
100972	18.0	22.65	2.44					YES	YES
101072	18.0	18.41	2.07					YES	YES
101172	16.0	17.05	1.87					YES	YES
101272	17.0	16.82	1.81					YES	YES
101372	17.0	17.05	1.81					YES	YES
101472	18.0	17.05	1.81					YES	YES
101572	17.0	16.59	1.76					YES	YES
101672	16.0	16.82	1.70					YES	YES
101772	16.0	16.59	1.70					YES	YES
101872	17.0	16.59	1.70					YES	YES
101972	16.0	17.67	1.98					YES	YES
102072	13.0	18.80	2.18	YES	YES				
102172	12.0	18.12	2.24	YES	YES				
102272	14.0	17.44	2.04	YES	YES				
102372	16.0	17.67	1.87					YES	YES
102472	14.0	17.90	1.70	YES	YES				
102572	13.0	17.24	1.76	YES	YES				
102672	15.0	16.82	1.76	YES	YES				
102772	16.0	16.59	1.93					YES	YES
102872	14.0	22.91	2.78	YES	YES				
102972	14.0	39.08	7.33	YES	YES				
103072	16.0	30.30	3.26					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
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ACCORDING TO ONE OF TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
103172	15.0	23.73	2.63	YES	YES				
110172	15.0	21.32	2.32	YES	YES				
110272	16.0	22.03	2.38					YES	YES
110372	15.0	23.98	3.00	YES	YES				
110472	15.0	22.99	2.63	YES	YES				
110572	15.0	19.45	2.63	YES	YES				
110672	14.0	17.90	2.86	YES	YES				
110772	14.0	16.59	2.49	YES	YES				
110872	14.0	88.35	94.58	YES	YES				
110972	14.0	255.42	166.50	YES	YES				
111072	15.0	134.79	25.03	YES	YES				
111172	14.0	111.00	12.35	YES	YES				
111272	13.0	73.34	8.95	YES	YES				
111372	14.0	59.47	6.97	YES	YES				
111472	15.0	182.93	228.80	YES	YES				
111572	11.0	242.96	63.25	YES	YES				
111672	10.0	172.45	24.92	YES	YES				
111772	12.0	113.83	15.49	YES	YES				
111872	11.0	90.90	11.61	YES	YES				
111972	12.0	77.30	9.91	YES	YES				
112072	11.0	165.65	117.23	YES	YES				
112172	11.0	130.82	30.02	YES	YES				
112272	10.0	105.90	16.28	YES	YES				
112372	9.0	90.05	12.12	YES	YES				
112472	8.0	78.15	9.63	YES	YES				
112572	9.0	69.94	8.50	YES	YES				
112672	9.0	124.88	39.93	YES	YES				
112772	9.0	149.23	26.05	YES	YES				
112872	9.0	121.20	14.50	YES	YES				
112972	9.0	107.04	11.95	YES	YES				
113072	9.0	92.03	11.27	YES	YES				
120172	8.0	99.11	43.61	YES	YES				
120272	7.0	97.13	29.45	YES	YES				
120372	9.0	81.84	18.63	YES	YES				
120472	8.0	82.12	14.10	YES	YES				
120572	11.0	82.97	11.95	YES	YES				
120672	12.0	107.32	30.58	YES	YES				
120772	9.0	211.24	64.28	YES	YES				
120872	11.0	188.87	38.79	YES	YES				
120972	9.0	232.76	96.84	YES	YES				
121072	9.0	215.77	52.39	YES	YES				
121172	8.0	210.68	34.26	YES	YES				
121272	11.0	173.30	20.30	YES	YES				
121372	10.0	154.33	19.79	YES	YES				

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
121472	8.0	134.50	15.89	YES	YES				
121572	8.0	131.39	28.03	YES	YES				
121672	7.0	169.05	64.56	YES	YES				
121772	7.0	132.24	19.79	YES	YES				
121872	7.0	113.83	12.80	YES	YES				
121972	6.0	104.21	11.61	YES	YES				
122072	6.0	104.21	14.10	YES	YES				
122172	7.0	106.47	17.27	YES	YES				
122272	8.0	180.09	108.17	YES	YES				
122372	8.0	189.16	47.01	YES	YES				
122472	8.0	165.37	28.32	YES	YES				
122572	N/A	145.27	21.07	---	---	---	---	---	---
122672	10.0	129.12	17.73	YES	YES				
122772	8.0	122.33	20.56	YES	YES				
122872	9.0	104.77	15.29	YES	YES				
122972	9.0	91.18	11.61	YES	YES				
123072	8.0	85.52	10.25	YES	YES				
123172	9.0	130.26	19.79	YES	YES				
010173	10.0	245.79	27.75	YES	YES				
010273	9.0	189.44	16.28	YES	YES				
010373	9.0	150.93	12.12	YES	YES				
010473	9.0	179.25	41.91	YES	YES				
010573	8.0	155.74	30.02	YES	YES				
010673	9.0	132.52	17.50	YES	YES				
010773	8.0	112.13	11.10	YES	YES				
010873	7.0	99.96	10.19	YES	YES				
010973	6.0	91.75	9.34	YES	YES				
011073	6.0	84.38	8.50	YES	YES				
011173	5.0	79.57	7.65	YES	YES				
011273	5.0	73.06	7.08	YES	YES				
011373	4.0	69.09	6.51	YES	YES				
011473	4.0	66.26	5.66	YES	YES				
011573	5.0	64.00	5.47	YES	YES				
011673	5.0	62.30	5.35	YES	YES				
011773	6.0	59.47	5.47	YES	YES				
011873	6.0	58.33	5.47	YES	YES				
011973	7.0	56.92	6.06	YES	YES				
012073	6.0	71.36	11.98	YES	YES				
012173	6.0	60.31	7.50	YES	YES				
012273	7.0	61.45	8.21	YES	YES				
012373	7.0	143.85	28.60	YES	YES				
012473	9.0	117.23	15.89	YES	YES				
012573	8.0	94.58	10.93	YES	YES				
012673	7.0	84.38	9.06	YES	YES				

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
012773	7.0	98.83	36.53	YES	YES				
012873	7.0	135.35	67.68	YES	YES				
012973	9.0	224.55	146.11	YES	YES				
013073	8.0	190.57	32.00	YES	YES				
013173	7.0	135.07	17.27	YES	YES				
020173	8.0	112.98	12.12	YES	YES				
020273	5.0	165.09	118.93	YES	YES				
020373	6.0	334.14	115.82	YES	YES				
020473	7.0	257.40	37.10	YES	YES				
020573	6.0	192.27	23.62	YES	YES				
020673	7.0	155.74	18.18	YES	YES				
020773	8.0	135.07	18.63	YES	YES				
020873	6.0	124.88	22.34	YES	YES				
020973	7.0	128.84	34.26	YES	YES				
021073	6.0	106.47	14.89	YES	YES				
021173	5.0	94.58	11.10	YES	YES				
021273	5.0	84.95	10.25	YES	YES				
021373	5.0	81.55	9.77	YES	YES				
021473	5.0	78.72	7.90	YES	YES				
021573	5.0	101.37	20.56	YES	YES				
021673	7.0	99.39	17.73	YES	YES				
021773	5.0	76.17	9.77	YES	YES				
021873	5.0	67.68	10.59	YES	YES				
021973	4.0	67.11	9.49	YES	YES				
022073	4.0	64.56	7.08	YES	YES				
022173	5.0	62.30	7.22	YES	YES				
022273	7.0	60.03	7.36	YES	YES				
022373	7.0	57.77	6.82	YES	YES				
022473	6.0	53.80	6.20	YES	YES				
022573	6.0	52.10	5.47	YES	YES				
022673	6.0	50.12	5.47	YES	YES				
022773	6.0	49.27	5.47	YES	YES				
022873	7.0	46.44	5.13	YES	YES				
030173	7.0	45.31	5.01	YES	YES				
030273	8.0	45.31	5.01	YES	YES				
030373	8.0	48.42	5.80	YES	YES				
030473	10.0	57.77	14.89	YES	YES				
030573	9.0	56.92	15.69	YES	YES				
030673	9.0	55.22	13.51	YES	YES				
030773	10.0	53.80	13.31	YES	YES				
030873	10.0	60.03	24.13	YES	YES				
030973	10.0	72.21	20.81	YES	YES				
031073	13.0	65.41	13.71	YES	YES				
031173	12.0	65.98	11.61	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
031273	11.0	67.68	12.97	YES	YES				
031373	11.0	63.71	11.10	YES	YES				
031473	12.0	57.20	9.06	YES	YES				
031573	11.0	57.77	10.59	YES	YES				
031673	12.0	58.62	10.93	YES	YES				
031773	12.0	72.77	32.56	YES	YES				
031873	11.0	108.45	24.92	YES	YES				
031973	11.0	95.14	14.50	YES	YES				
032073	11.0	84.95	10.93	YES	YES				
032173	10.0	78.15	8.78	YES	YES				
032273	9.0	71.36	8.07	YES	YES				
032373	9.0	64.00	7.22	YES	YES				
032473	10.0	57.20	6.31	YES	YES				
032573	11.0	59.47	6.06	YES	YES				
032673	10.0	110.44	61.45	YES	YES				
032773	10.0	90.33	28.72	YES	YES				
032873	10.0	72.77	15.09	YES	YES				
032973	11.0	65.41	11.61	YES	YES				
033073	11.0	65.41	11.27	YES	YES				
033173	11.0	67.11	12.29	YES	YES				
040173	12.0	84.95	35.96	YES	YES				
040273	12.0	278.07	151.78	YES	YES				
040373	12.0	226.82	49.27	YES	YES				
040473	11.0	200.77	71.36	YES	YES				
040573	11.0	269.01	61.73	YES	YES				
040673	11.0	209.26	26.90	YES	YES				
040773	12.0	168.20	19.31	YES	YES				
040873	14.0	191.14	58.90	YES	YES				
040973	11.0	182.64	41.91	YES	YES				
041073	11.0	213.23	73.34	YES	YES				
041173	11.0	212.09	34.83	YES	YES				
041273	10.0	175.85	21.07	YES	YES				
041373	9.0	150.93	16.88	YES	YES				
041473	10.0	129.97	13.51	YES	YES				
041573	11.0	114.68	11.78	YES	YES				
041673	11.0	103.92	10.59	YES	YES				
041773	12.0	96.84	9.77	YES	YES				
041873	13.0	92.60	9.63	YES	YES				
041973	14.0	86.93	9.20	YES	YES				
042073	14.0	80.70	8.21	YES	YES				
042173	18.0	76.17	7.22	YES	YES				
042273	15.0	71.64	6.97	YES	YES				
042373	16.0	72.77	7.50	YES	YES				
042473	17.0	76.74	11.10	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
042573	17.0	71.36	8.64	YES	YES				
042673	17.0	86.93	32.85	YES	YES				
042773	14.0	96.84	24.92	YES	YES				
042873	18.0	95.43	41.91	YES	YES				
042973	15.0	84.95	21.58	YES	YES				
043073	16.0	75.32	13.51	YES	YES				
050173	14.0	71.64	11.27	YES	YES				
050273	14.0	69.94	10.08	YES	YES				
050373	15.0	71.64	10.25	YES	YES				
050473	16.0	75.32	13.71	YES	YES				
050573	14.0	68.24	10.59	YES	YES				
050673	13.0	62.58	8.92	YES	YES				
050773	15.0	59.47	7.65	YES	YES				
050873	16.0	58.33	6.57	YES	YES				
050973	16.0	67.68	14.10	YES	YES				
051073	17.0	82.12	14.50	YES	YES				
051173	16.0	92.03	10.25	YES	YES				
051273	18.0	109.59	7.93	YES	YES				
051373	17.0	102.79	7.08	YES	YES				
051473	16.0	92.03	6.71	YES	YES				
051573	17.0	84.95	6.06	YES	YES				
051673	16.0	80.99	7.36	YES	YES				
051773	16.0	77.30	6.71	YES	YES				
051873	16.0	74.47	12.63	YES	YES				
051973	18.0	69.09	8.78	YES	YES				
052073	16.0	68.24	7.36	YES	YES				
052173	16.0	88.35	12.80	YES	YES				
052273	16.0	84.95	12.12	YES	YES				
052373	16.0	72.21	8.64	YES	YES				
052473	17.0	72.77	11.27	YES	YES				
052573	17.0	75.04	13.90	YES	YES				
052673	16.0	71.64	16.08	YES	YES				
052773	15.0	70.51	12.12	YES	YES				
052873	16.0	116.67	103.64	YES	YES				
052973	16.0	260.51	55.22	YES	YES				
053073	16.0	186.61	23.87	YES	YES				
053173	17.0	154.33	16.88	YES	YES				
060173	17.0	126.86	12.29	YES	YES				
060273	19.0	107.04	10.42	YES	YES				
060373	18.0	96.56	8.92	YES	YES				
060473	19.0	90.33	8.21	YES	YES				
060573	20.0	95.43	11.27	YES	YES				
060673	21.0	82.40	8.21	YES	YES				
060773	22.0	105.34	8.21	YES	YES				

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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
060873	20.0	100.24	7.79	YES	YES				
060973	22.0	76.17	5.95	YES	YES				
061073	22.0	68.24	5.35	YES	YES				
061173	23.0	63.15	4.47	YES	YES				
061273	22.0	60.88	15.89	YES	YES				
061373	25.0	80.99	32.00	YES	YES				
061473	25.0	60.03	8.50	YES	YES				
061573	24.0	52.67	5.35	YES	YES				
061673	24.0	51.54	4.47	YES	YES				
061773	21.0	50.12	4.59					YES	YES
061873	22.0	50.40	4.11					YES	YES
061973	22.0	49.84	4.19					YES	YES
062073	22.0	46.44	4.28					YES	YES
062173	23.0	45.87	4.19					YES	YES
062273	23.0	108.17	8.50	YES	YES				
062373	20.0	56.07	7.65	YES	YES				
062473	20.0	48.42	7.50			YES	YES		
062573	23.0	48.14	7.65			YES	YES		
062673	23.0	44.17	5.01					YES	YES
062773	22.0	40.49	4.28					YES	YES
062873	23.0	40.21	4.59					YES	YES
062973	23.0	421.92	150.65	YES	YES				
063073	24.0	261.08	66.54	YES	YES				
070173	23.0	136.49	18.41			YES	YES		
070273	23.0	101.94	11.10			YES	YES		
070373	23.0	109.59	9.49			YES	YES		
070473	24.0	165.09	44.74			YES	YES		
070573	23.0	122.61	22.85			YES	YES		
070673	23.0	96.84	12.12			YES	YES		
070773	23.0	80.14	8.07			YES	YES		
070873	24.0	70.51	6.31			YES	YES		
070973	24.0	66.26	5.47			YES			YES
071073	26.0	60.88	5.01					YES	YES
071173	28.0	57.20	4.59					YES	YES
071273	27.0	53.24	4.79					YES	YES
071373	24.0	48.99	3.91					YES	YES
071473	25.0	47.01	3.62					YES	YES
071573	25.0	47.29	4.28					YES	YES
071673	25.0	46.16	5.13			YES			YES
071773	25.0	44.17	3.91					YES	YES
071873	25.0	40.49	3.31					YES	YES
071973	25.0	39.08	2.89					YES	YES
072073	25.0	37.38	2.69					YES	YES
072173	25.0	48.99	3.62					YES	YES

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
072273	26.0	49.27	3.99					YES	YES
072373	25.0	41.91	3.31					YES	YES
072473	25.0	37.10	2.83					YES	YES
072573	26.0	34.55	2.41					YES	YES
072673	25.0	33.98	2.10					YES	YES
072773	26.0	35.68	2.27					YES	YES
072873	26.0	33.41	2.35					YES	YES
072973	28.0	31.71	2.21					YES	YES
073073	28.0	31.15	2.15					YES	YES
073173	27.0	30.58	2.10					YES	YES
080173	27.0	32.28	2.15					YES	YES
080273	27.0	97.41	69.66			YES	YES		
080373	26.0	77.59	15.89			YES	YES		
080473	26.0	53.52	6.31			YES	YES		
080573	26.0	46.16	4.19					YES	YES
080673	26.0	41.34	3.23					YES	YES
080773	26.0	37.94	2.75					YES	YES
080873	27.0	35.40	2.55					YES	YES
080973	27.0	33.41	2.35					YES	YES
081073	27.0	33.13	2.21					YES	YES
081173	26.0	68.81	2.15					YES	YES
081273	28.0	64.56	2.10					YES	YES
081373	28.0	48.42	2.10					YES	YES
081473	28.0	45.31	2.04					YES	YES
081573	27.0	39.36	2.04					YES	YES
081673	27.0	37.38	2.10					YES	YES
081773	26.0	36.25	2.04					YES	YES
081873	26.0	33.13	1.98					YES	YES
081973	25.0	32.56	1.98					YES	YES
082073	25.0	35.68	2.83					YES	YES
082173	25.0	34.26	2.27					YES	YES
082273	25.0	31.15	2.10					YES	YES
082373	25.0	29.17	1.73					YES	YES
082473	25.0	28.09	1.61					YES	YES
082573	24.0	28.09	1.56					YES	YES
082673	24.0	27.44	1.53					YES	YES
082773	24.0	27.13	1.53					YES	YES
082873	25.0	27.13	1.47					YES	YES
082973	27.0	25.57	1.53					YES	YES
083073	28.0	24.64	1.53					YES	YES
083173	29.0	23.79	1.67					YES	YES
090173	29.0	24.95	1.73					YES	YES
090273	29.0	22.65	1.67					YES	YES
090373	27.0	22.37	1.61					YES	YES

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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
090473	28.0	21.80	1.61					YES	YES
090573	28.0	22.65	2.10					YES	YES
090673	28.0	22.37	1.84					YES	YES
090773	28.0	22.37	1.84					YES	YES
090873	27.0	22.09	1.84					YES	YES
090973	27.0	21.55	1.78					YES	YES
091073	26.0	21.04	1.73					YES	YES
091173	24.0	20.27	1.61					YES	YES
091273	25.0	20.02	1.56					YES	YES
091373	23.0	19.51	1.53					YES	YES
091473	24.0	36.25	2.49					YES	YES
091573	24.0	252.02	19.09			YES	YES		
091673	23.0	104.77	4.79					YES	YES
091773	23.0	63.15	2.69					YES	YES
091873	22.0	58.62	2.89					YES	YES
091973	22.0	84.95	3.71					YES	YES
092073	22.0	59.18	2.69					YES	YES
092173	21.0	50.40	2.15					YES	YES
092273	21.0	45.02	1.93					YES	YES
092373	21.0	49.27	1.98					YES	YES
092473	21.0	50.40	2.10					YES	YES
092573	21.0	41.06	2.04					YES	YES
092673	21.0	36.81	1.84					YES	YES
092773	21.0	34.83	1.78					YES	YES
092873	21.0	33.41	1.93					YES	YES
092973	21.0	38.23	3.14					YES	YES
093073	22.0	44.46	3.91					YES	YES
100173	20.0	35.40	2.61					YES	YES
100273	21.0	32.00	2.27					YES	YES
100373	22.0	36.53	3.71					YES	YES
100473	22.0	35.40	2.89					YES	YES
100573	22.0	31.43	2.41					YES	YES
100673	22.0	29.45	2.15					YES	YES
100773	22.0	28.15	1.98					YES	YES
100873	21.0	27.81	1.93					YES	YES
100973	22.0	27.13	1.93					YES	YES
101073	21.0	26.42	1.93					YES	YES
101173	21.0	27.13	1.78					YES	YES
101273	20.0	26.11	1.78					YES	YES
101373	19.0	24.52	1.78					YES	YES
101473	20.0	24.83	1.78					YES	YES
101573	20.0	24.52	1.56					YES	YES
101673	20.0	24.21	1.56					YES	YES
101773	20.0	23.90	1.47					YES	YES

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
101873	18.0	22.96	1.53					YES	YES
101973	17.0	23.28	1.53					YES	YES
102073	17.0	22.03	1.56					YES	YES
102173	18.0	22.03	1.56					YES	YES
102273	16.0	21.41	1.56					YES	YES
102373	17.0	21.10	1.53					YES	YES
102473	16.0	20.78	1.56					YES	YES
102573	16.0	20.78	1.56					YES	YES
102673	17.0	20.78	1.56					YES	YES
102773	17.0	21.10	1.53					YES	YES
102873	17.0	20.16	1.53					YES	YES
102973	16.0	30.02	2.49					YES	YES
103073	16.0	89.76	11.44			YES	YES		
103173	16.0	62.86	4.28					YES	YES
110173	15.0	50.40	3.31	YES	YES				
110273	15.0	45.59	3.23	YES	YES				
110373	16.0	39.08	2.69					YES	YES
110473	17.0	35.11	2.35					YES	YES
110573	14.0	33.13	2.27	YES	YES				
110673	15.0	32.00	2.21	YES	YES				
110773	14.0	31.71	2.15	YES	YES				
110873	14.0	28.60	2.10	YES	YES				
110973	14.0	27.47	2.15	YES	YES				
111073	14.0	25.77	2.10	YES	YES				
111173	12.0	25.77	2.04	YES	YES				
111273	11.0	25.15	1.98	YES	YES				
111373	11.0	25.46	1.84	YES	YES				
111473	12.0	25.15	1.84	YES	YES				
111573	12.0	24.52	1.84	YES	YES				
111673	14.0	24.52	1.84	YES	YES				
111773	14.0	24.21	1.93	YES	YES				
111873	12.0	22.65	1.84	YES	YES				
111973	12.0	24.21	1.98	YES	YES				
112073	13.0	23.90	2.83	YES	YES				
112173	13.0	22.96	1.98	YES	YES				
112273	13.0	22.65	1.70	YES	YES				
112373	14.0	22.03	1.70	YES	YES				
112473	13.0	20.78	1.70	YES	YES				
112573	13.0	23.90	2.27	YES	YES				
112673	13.0	27.47	1.70	YES	YES				
112773	13.0	27.13	1.70	YES	YES				
112873	13.0	28.15	9.91	YES	YES				
112973	14.0	35.11	17.95	YES	YES				
113073	13.0	30.30	11.95	YES	YES				

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
120173	12.0	28.88	2.89	YES	YES				
120273	12.0	27.81	2.49	YES	YES				
120373	12.0	26.45	2.41	YES	YES				
120473	11.0	26.11	2.41	YES	YES				
120573	11.0	50.69	26.90	YES	YES				
120673	12.0	116.10	31.43	YES	YES				
120773	12.0	87.78	9.91	YES	YES				
120873	11.0	65.69	6.46	YES	YES				
120973	12.0	100.52	48.70	YES	YES				
121073	10.0	146.68	36.25	YES	YES				
121173	10.0	129.97	15.69	YES	YES				
121273	10.0	106.75	9.91	YES	YES				
121373	9.0	89.48	7.93	YES	YES				
121473	8.0	113.55	37.38	YES	YES				
121573	8.0	99.39	17.95	YES	YES				
121673	12.0	88.35	11.10	YES	YES				
121773	9.0	88.35	10.08	YES	YES				
121873	8.0	75.61	8.50	YES	YES				
121973	7.0	64.85	8.21	YES	YES				
122073	8.0	82.12	9.49	YES	YES				
122173	10.0	427.58	404.93	YES	YES				
122273	8.0	421.92	59.18	YES	YES				
122373	7.0	266.18	26.05	YES	YES				
122473	8.0	178.68	18.18	YES	YES				
122573	8.0	132.52	12.97	YES	YES				
122673	8.0	168.48	118.36	YES	YES				
122773	8.0	266.18	120.91	YES	YES				
122873	9.0	225.40	33.98	YES	YES				
122973	9.0	176.13	20.56	YES	YES				
123073	9.0	149.23	16.68	YES	YES				
123173	9.0	127.43	13.31	YES	YES				
010174	8.0	113.55	16.48	YES	YES				
010274	8.0	101.94	14.10	YES	YES				
010374	7.0	87.78	11.78	YES	YES				
010474	7.0	101.37	35.96	YES	YES				
010574	7.0	89.76	22.85	YES	YES				
010674	8.0	80.70	16.08	YES	YES				
010774	7.0	77.30	13.90	YES	YES				
010874	7.0	72.49	12.63	YES	YES				
010974	6.0	66.54	9.77	YES	YES				
011074	5.0	68.53	11.27	YES	YES				
011174	6.0	74.76	28.03	YES	YES				
011274	5.0	90.61	38.79	YES	YES				
011374	7.0	71.64	19.54	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
011474	6.0	63.71	13.14	YES	YES				
011574	5.0	59.47	11.95	YES	YES				
011674	4.0	60.03	11.10	YES	YES				
011774	5.0	65.13	20.30	YES	YES				
011874	6.0	65.69	16.48	YES	YES				
011974	4.0	64.28	12.12	YES	YES				
012074	4.0	63.43	13.14	YES	YES				
012174	5.0	86.93	46.16	YES	YES				
012274	6.0	154.04	72.21	YES	YES				
012374	8.0	157.72	43.61	YES	YES				
012474	7.0	149.23	30.87	YES	YES				
012574	7.0	137.62	21.07	YES	YES				
012674	7.0	118.00	16.28	YES	YES				
012774	8.0	116.08	21.07	YES	YES				
012874	8.0	116.67	17.95	YES	YES				
012974	8.0	125.16	21.58	YES	YES				
013074	8.0	121.20	15.69	YES	YES				
013174	9.0	111.00	12.80	YES	YES				
020174	9.0	101.94	11.10	YES	YES				
020274	8.0	88.91	9.77	YES	YES				
020374	9.0	84.95	9.20	YES	YES				
020474	6.0	80.70	7.93	YES	YES				
020574	6.0	67.11	6.97	YES	YES				
020674	5.0	60.88	7.22	YES	YES				
020774	5.0	63.43	6.46	YES	YES				
020874	6.0	62.01	6.06	YES	YES				
020974	4.0	55.78	6.57	YES	YES				
021074	5.0	52.10	6.46	YES	YES				
021174	5.0	50.69	5.95	YES	YES				
021274	5.0	48.99	5.13	YES	YES				
021374	5.0	47.01	5.35	YES	YES				
021474	6.0	48.70	6.20	YES	YES				
021574	7.0	47.29	5.58	YES	YES				
021674	6.0	41.91	4.79	YES	YES				
021774	6.0	42.48	4.90	YES	YES				
021874	6.0	41.63	4.47	YES	YES				
021974	7.0	41.91	4.67	YES	YES				
022074	7.0	66.54	12.43	YES	YES				
022174	7.0	63.43	9.63	YES	YES				
022274	7.0	53.80	9.34	YES	YES				
022374	8.0	119.78	16.88	YES	YES				
022474	8.0	99.96	9.06	YES	YES				
022574	8.0	89.76	8.21	YES	YES				
022674	7.0	84.10	7.50	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
022774	7.0	68.53	6.57	YES	YES				
022874	6.0	60.88	7.22	YES	YES				
030174	7.0	62.01	9.91	YES	YES				
030274	8.0	62.86	9.34	YES	YES				
030374	8.0	60.03	8.35	YES	YES				
030474	9.0	58.05	8.50	YES	YES				
030574	9.0	54.37	7.65	YES	YES				
030674	10.0	52.67	6.57	YES	YES				
030774	10.0	51.54	5.95	YES	YES				
030874	11.0	47.01	5.80	YES	YES				
030974	11.0	91.18	23.11	YES	YES				
031074	10.0	109.02	27.47	YES	YES				
031174	10.0	106.19	14.50	YES	YES				
031274	9.0	91.75	11.27	YES	YES				
031374	8.0	84.38	9.34	YES	YES				
031474	7.0	74.47	7.65	YES	YES				
031574	8.0	67.68	6.71	YES	YES				
031674	8.0	67.68	11.61	YES	YES				
031774	8.0	103.64	45.02	YES	YES				
031874	8.0	92.60	16.48	YES	YES				
031974	8.0	72.77	11.44	YES	YES				
032074	9.0	69.09	9.77	YES	YES				
032174	9.0	94.58	49.55	YES	YES				
032274	11.0	138.47	46.16	YES	YES				
032374	9.0	107.04	19.79	YES	YES				
032474	10.0	100.52	15.49	YES	YES				
032574	10.0	91.75	11.78	YES	YES				
032674	10.0	76.17	9.91	YES	YES				
032774	9.0	70.23	9.20	YES	YES				
032874	9.0	67.11	8.07	YES	YES				
032974	10.0	65.13	7.65	YES	YES				
033074	10.0	89.48	38.23	YES	YES				
033174	9.0	176.13	168.77	YES	YES				
040174	9.0	172.73	50.40	YES	YES				
040274	7.0	73.91	29.17	YES	YES				
040374	7.0	138.47	23.36	YES	YES				
040474	9.0	198.50	50.97	YES	YES				
040574	11.0	232.48	52.67	YES	YES				
040674	13.0	207.28	44.17	YES	YES				
040774	14.0	177.55	23.87	YES	YES				
040874	11.0	156.03	18.41	YES	YES				
040974	11.0	188.87	105.90	YES	YES				
041074	10.0	151.78	45.02	YES	YES				
041174	9.0	128.28	24.92	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
041274	10.0	114.68	19.09	YES	YES				
041374	11.0	123.18	40.49	YES	YES				
041474	12.0	114.12	36.25	YES	YES				
041574	13.0	127.71	75.89	YES	YES				
041674	13.0	137.90	28.03	YES	YES				
041774	12.0	112.13	18.18	YES	YES				
041874	13.0	97.13	14.89	YES	YES				
041974	14.0	89.76	12.97	YES	YES				
042074	10.0	82.12	13.31	YES	YES				
042174	14.0	78.15	10.93	YES	YES				
042274	15.0	74.47	9.77	YES	YES				
042374	16.0	71.64	10.42	YES	YES				
042474	17.0	65.13	9.63	YES	YES				
042574	17.0	58.05	8.07	YES	YES				
042674	15.0	54.93	7.36	YES	YES				
042774	15.0	50.97	6.71	YES	YES				
042874	17.0	49.84	6.20			YES	YES		
042974	17.0	48.70	6.06			YES	YES		
043074	19.0	47.29	6.06			YES	YES		
050174	19.0	44.74	5.95			YES	YES		
050274	19.0	43.32	4.79					YES	YES
050374	19.0	43.04	5.80			YES			YES
050474	17.0	48.14	8.35			YES	YES		
050574	18.0	42.48	5.80			YES			YES
050674	17.0	40.78	5.24			YES			YES
050774	17.0	42.76	6.57			YES	YES		
050874	17.0	41.63	5.95			YES	YES		
050974	15.0	38.79	5.24	YES	YES				
051074	16.0	52.67	14.10	YES	YES				
051174	16.0	50.40	11.10			YES	YES		
051274	16.0	48.14	29.17			YES	YES		
051374	17.0	154.89	87.78	YES	YES				
051474	16.0	111.00	21.58	YES	YES				
051574	16.0	85.52	13.31	YES	YES				
051674	17.0	77.30	10.08	YES	YES				
051774	18.0	67.68	8.07	YES	YES				
051874	20.0	60.88	7.22	YES	YES				
051974	20.0	56.07	6.06	YES	YES				
052074	21.0	52.10	5.24	YES	YES				
052174	21.0	48.99	4.67					YES	YES
052274	21.0	44.74	4.59					YES	YES
052374	22.0	52.39	9.06	YES	YES				
052474	22.0	50.69	8.07			YES	YES		
052574	23.0	45.87	5.80			YES			YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
052674	21.0	40.78	4.59					YES	YES
052774	22.0	39.08	3.99					YES	YES
052874	20.0	39.08	4.11					YES	YES
052974	20.0	38.51	4.11					YES	YES
053074	20.0	40.49	5.13			YES			YES
053174	20.0	39.08	4.19					YES	YES
060174	20.0	39.64	5.95			YES	YES		
060274	20.0	44.17	6.71			YES	YES		
060374	20.0	39.08	6.06			YES	YES		
060474	21.0	36.53	4.67					YES	YES
060574	21.0	33.13	3.79					YES	YES
060674	22.0	31.43	3.37					YES	YES
060774	22.0	30.02	2.97					YES	YES
060874	20.0	28.88	2.97					YES	YES
060974	21.0	29.17	3.06					YES	YES
061074	24.0	28.60	3.14					YES	YES
061174	24.0	29.17	2.83					YES	YES
061274	24.0	28.15	2.35					YES	YES
061374	24.0	27.13	2.41					YES	YES
061474	24.0	25.46	2.21					YES	YES
061574	25.0	25.77	2.35					YES	YES
061674	25.0	37.66	8.35			YES	YES		
061774	25.0	38.51	11.95			YES	YES		
061874	24.0	33.70	4.59					YES	YES
061974	24.0	27.13	3.23					YES	YES
062074	24.0	23.90	2.69					YES	YES
062174	25.0	24.52	2.89					YES	YES
062274	25.0	27.13	5.35			YES			YES
062374	25.0	39.64	6.20			YES	YES		
062474	25.0	48.14	11.78			YES	YES		
062574	23.0	41.63	7.08			YES	YES		
062674	23.0	33.98	5.01					YES	YES
062774	24.0	32.00	4.67					YES	YES
062874	23.0	30.58	4.11					YES	YES
062974	22.0	32.00	6.97			YES	YES		
063074	22.0	23.79	5.47			YES			YES
070174	23.0	70.79	6.46			YES	YES		
070274	23.0	46.72	5.58			YES			YES
070374	23.0	38.23	3.71					YES	YES
070474	26.0	33.98	2.97					YES	YES
070574	26.0	31.15	2.49					YES	YES
070674	27.0	28.32	2.75					YES	YES
070774	27.0	26.90	2.49					YES	YES
070874	26.0	25.49	2.10					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
070974	27.0	24.07	1.93					YES	YES
071074	29.0	24.07	1.93					YES	YES
071174	28.0	28.32	2.10					YES	YES
071274	29.0	22.65	1.84					YES	YES
071374	28.0	21.24	1.73					YES	YES
071474	26.0	19.82	1.67					YES	YES
071574	27.0	18.41	1.61					YES	YES
071674	28.0	16.99	1.56					YES	YES
071774	28.0	16.00	1.53					YES	YES
071874	28.0	15.35	1.53					YES	YES
071974	28.0	15.18	1.61					YES	YES
072074	27.0	14.81	1.67					YES	YES
072174	27.0	13.68	1.61					YES	YES
072274	27.0	12.94	1.56					YES	YES
072374	27.0	12.71	1.56					YES	YES
072474	22.0	17.87	2.04					YES	YES
072574	25.0	18.89	2.69					YES	YES
072674	25.0	15.86	2.10					YES	YES
072774	26.0	15.29	1.73					YES	YES
072874	27.0	15.29	1.53					YES	YES
072974	26.0	16.99	1.61					YES	YES
073074	27.0	36.81	2.15					YES	YES
073174	27.0	25.49	2.27					YES	YES
080174	27.0	19.82	1.84					YES	YES
080274	27.0	16.99	1.67					YES	YES
080374	27.0	42.48	4.19					YES	YES
080474	27.0	31.15	3.31					YES	YES
080574	27.0	25.49	16.08			YES	YES		
080674	27.0	23.22	5.95			YES	YES		
080774	27.0	21.24	3.45					YES	YES
080874	26.0	19.82	2.61					YES	YES
080974	26.0	19.82	2.35					YES	YES
081074	26.0	28.32	2.61					YES	YES
081174	26.0	19.82	2.27					YES	YES
081274	26.0	18.69	1.93					YES	YES
081374	26.0	17.56	1.73					YES	YES
081474	26.0	16.42	1.73					YES	YES
081574	27.0	15.57	1.73					YES	YES
081674	27.0	14.72	1.61					YES	YES
081774	27.0	18.69	16.68			YES	YES		
081874	27.0	19.82	25.49			YES	YES		
081974	27.0	17.27	5.69			YES			YES
082074	27.0	15.29	3.37					YES	YES
082174	27.0	14.72	2.55					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
082274	27.0	14.72	2.10					YES	YES
082374	27.0	15.86	6.57			YES	YES		
082474	27.0	16.42	6.31			YES	YES		
082574	27.0	16.42	3.45					YES	YES
082674	28.0	14.72	2.55					YES	YES
082774	26.0	14.16	2.35					YES	YES
082874	27.0	15.06	2.35					YES	YES
082974	28.0	19.11	5.01					YES	YES
083074	27.0	28.29	3.62					YES	YES
083174	N/A	19.99	3.79	---	---	---	---	---	---
090174	27.0	52.67	3.06					YES	YES
090274	27.0	58.90	22.85			YES	YES		
090374	26.0	79.29	15.89			YES	YES		
090474	25.0	59.47	54.09			YES	YES		
090574	23.0	50.40	13.90			YES	YES		
090674	23.0	43.32	8.07			YES	YES		
090774	24.0	61.73	22.60			YES	YES		
090874	23.0	62.01	15.09			YES	YES		
090974	23.0	46.72	8.64			YES	YES		
091074	23.0	42.48	6.57			YES	YES		
091174	23.0	36.81	5.58			YES			YES
091274	23.0	33.98	5.24			YES			YES
091374	23.0	50.97	4.59					YES	YES
091474	24.0	56.63	9.77			YES	YES		
091574	24.0	42.48	6.82			YES	YES		
091674	23.0	36.81	4.47					YES	YES
091774	22.0	31.15	3.71					YES	YES
091874	22.0	28.32	3.37					YES	YES
091974	22.0	26.90	3.14					YES	YES
092074	23.0	26.33	2.89					YES	YES
092174	24.0	26.96	2.83					YES	YES
092274	24.0	32.00	4.67					YES	YES
092374	22.0	26.87	3.71					YES	YES
092474	21.0	23.05	2.69					YES	YES
092574	20.0	20.25	2.35					YES	YES
092674	20.0	19.94	2.27					YES	YES
092774	18.0	19.71	2.27					YES	YES
092874	16.0	35.96	7.79			YES	YES		
092974	20.0	72.77	85.80			YES	YES		
093074	20.0	50.40	18.63			YES	YES		
100174	20.0	34.26	9.49			YES	YES		
100274	19.0	29.73	7.22			YES	YES		
100374	18.0	26.65	5.69			YES			YES
100474	17.0	24.81	4.67					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
100574	17.0	23.45	4.11					YES	YES
100674	17.0	22.99	3.71					YES	YES
100774	18.0	22.77	3.54					YES	YES
100874	18.0	22.09	3.20					YES	YES
100974	18.0	20.76	2.89					YES	YES
101074	17.0	20.53	2.83					YES	YES
101174	17.0	20.08	2.83					YES	YES
101274	17.0	19.85	2.69					YES	YES
101374	18.0	19.65	2.61					YES	YES
101474	18.0	19.85	2.46					YES	YES
101574	18.0	19.85	2.55					YES	YES
101674	19.0	39.36	29.17			YES	YES		
101774	18.0	44.46	32.00			YES	YES		
101874	17.0	30.58	12.43			YES	YES		
101974	17.0	24.35	7.93			YES	YES		
102074	13.0	22.77	6.31	YES	YES				
102174	15.0	22.31	5.35	YES	YES				
102274	14.0	21.63	4.59	YES	YES				
102374	14.0	20.76	4.28	YES	YES				
102474	14.0	20.53	4.11	YES	YES				
102574	15.0	20.08	3.82	YES	YES				
102674	16.0	20.30	3.91					YES	YES
102774	16.0	19.85	3.62					YES	YES
102874	15.0	19.05	3.45	YES	YES				
102974	14.0	19.65	3.14	YES	YES				
103074	14.0	19.03	3.14	YES	YES				
103174	16.0	18.83	3.06					YES	YES
110174	16.0	18.63	2.83					YES	YES
110274	16.0	18.43	3.17					YES	YES
110374	17.0	18.43	3.06					YES	YES
110474	17.0	20.98	3.60					YES	YES
110574	17.0	21.18	3.71					YES	YES
110674	18.0	20.08	3.82					YES	YES
110774	17.0	19.23	3.54					YES	YES
110874	16.0	18.24	3.11					YES	YES
110974	14.0	17.44	2.69	YES	YES				
111074	15.0	16.88	2.49	YES	YES				
111174	15.0	16.68	2.49	YES	YES				
111274	13.0	17.44	2.66	YES	YES				
111374	15.0	27.84	9.77	YES	YES				
111474	15.0	30.58	6.85	YES	YES				
111574	15.0	25.71	5.24	YES	YES				
111674	13.0	25.49	4.50	YES	YES				
111774	13.0	22.77	3.85	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
111874	13.0	22.09	3.51	YES	YES				
111974	11.0	21.86	3.48	YES	YES				
112074	10.0	22.09	3.60	YES	YES				
112174	12.0	24.35	4.28	YES	YES				
112274	11.0	26.42	4.42	YES	YES				
112374	11.0	23.67	3.43	YES	YES				
112474	10.0	22.09	3.14	YES	YES				
112574	10.0	22.77	3.11	YES	YES				
112674	9.0	23.90	3.51	YES	YES				
112774	8.0	21.63	2.94	YES	YES				
112874	9.0	21.41	2.80	YES	YES				
112974	9.0	21.18	2.83	YES	YES				
113074	10.0	20.98	2.72	YES	YES				
120174	9.0	26.98	2.63	YES	YES				
120274	9.0	30.87	7.14	YES	YES				
120374	8.0	37.38	9.97	YES	YES				
120474	8.0	30.58	6.20	YES	YES				
120574	7.0	27.13	4.47	YES	YES				
120674	7.0	25.97	4.05	YES	YES				
120774	7.0	24.81	3.82	YES	YES				
120874	8.0	122.89	161.97	YES	YES				
120974	8.0	282.60	64.85	YES	YES				
121074	8.0	157.44	22.37	YES	YES				
121174	7.0	107.89	13.96	YES	YES				
121274	7.0	85.23	11.38	YES	YES				
121374	8.0	71.64	9.94	YES	YES				
121474	8.0	62.56	9.03	YES	YES				
121574	7.0	57.48	8.35	YES	YES				
121674	7.0	110.44	77.59	YES	YES				
121774	8.0	187.17	63.71	YES	YES				
121874	8.0	137.05	23.53	YES	YES				
121974	8.0	106.47	14.70	YES	YES				
122074	6.0	87.78	11.95	YES	YES				
122174	8.0	75.32	10.22	YES	YES				
122274	8.0	67.96	9.34	YES	YES				
122374	8.0	60.31	7.99	YES	YES				
122474	9.0	54.65	7.65	YES	YES				
122574	8.0	51.82	7.67	YES	YES				
122674	8.0	48.99	7.53	YES	YES				
122774	8.0	44.17	6.29	YES	YES				
122874	7.0	41.63	6.06	YES	YES				
122974	7.0	40.21	5.58	YES	YES				
123074	7.0	39.08	5.52	YES	YES				
123174	7.0	36.81	5.30	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
010175	7.0	41.63	7.93	YES	YES				
010275	7.0	44.74	15.77	YES	YES				
010375	7.0	40.21	9.17	YES	YES				
010475	7.0	36.81	8.10	YES	YES				
010575	8.0	36.25	7.84	YES	YES				
010675	7.0	35.11	6.71	YES	YES				
010775	7.0	39.93	20.50	YES	YES				
010875	8.0	39.64	18.92	YES	YES				
010975	6.0	92.03	71.92	YES	YES				
011075	12.0	157.44	32.28	YES	YES				
011175	7.0	127.71	21.55	YES	YES				
011275	8.0	122.89	17.70	YES	YES				
011375	11.0	119.78	29.17	YES	YES				
011475	9.0	120.35	30.02	YES	YES				
011575	7.0	96.56	15.09	YES	YES				
011675	7.0	85.80	12.29	YES	YES				
011775	6.0	74.76	9.97	YES	YES				
011875	6.0	72.21	15.46	YES	YES				
011975	5.0	80.99	49.84	YES	YES				
012075	6.0	96.84	77.59	YES	YES				
012175	4.0	67.11	24.15	YES	YES				
012275	5.0	60.03	17.19	YES	YES				
012375	7.0	56.92	14.81	YES	YES				
012475	5.0	53.52	13.96	YES	YES				
012575	6.0	73.62	56.07	YES	YES				
012675	7.0	127.14	60.88	YES	YES				
012775	7.0	107.04	23.67	YES	YES				
012875	5.0	91.18	16.28	YES	YES				
012975	6.0	106.47	35.96	YES	YES				
013075	5.0	154.89	28.09	YES	YES				
013175	6.0	140.73	16.51	YES	YES				
020175	6.0	117.51	13.82	YES	YES				
020275	6.0	99.11	12.12	YES	YES				
020375	6.0	84.95	10.42	YES	YES				
020475	5.0	74.19	8.95	YES	YES				
020575	5.0	70.51	9.43	YES	YES				
020675	6.0	71.36	10.36	YES	YES				
020775	6.0	69.38	12.63	YES	YES				
020875	5.0	59.75	10.14	YES	YES				
020975	4.0	54.93	8.72	YES	YES				
021075	4.0	49.55	7.22	YES	YES				
021175	3.0	47.01	6.88	YES	YES				
021275	4.0	46.44	6.60	YES	YES				
021375	4.0	45.87	8.64	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
021475	5.0	41.63	7.50	YES	YES				
021575	4.0	40.78	6.29	YES	YES				
021675	5.0	40.78	6.12	YES	YES				
021775	4.0	43.32	7.53	YES	YES				
021875	7.0	68.24	39.93	YES	YES				
021975	6.0	91.75	56.92	YES	YES				
022075	6.0	98.26	35.11	YES	YES				
022175	6.0	85.80	21.32	YES	YES				
022275	6.0	76.74	16.28	YES	YES				
022375	6.0	90.33	44.74	YES	YES				
022475	7.0	180.38	159.14	YES	YES				
022575	7.0	365.29	120.63	YES	YES				
022675	7.0	264.20	33.13	YES	YES				
022775	8.0	179.81	19.94	YES	YES				
022875	7.0	139.60	15.40	YES	YES				
030175	8.0	116.10	13.51	YES	YES				
030275	9.0	99.68	11.55	YES	YES				
030375	9.0	86.93	10.19	YES	YES				
030475	7.0	75.61	8.58	YES	YES				
030575	8.0	68.53	7.90	YES	YES				
030675	8.0	63.71	7.70	YES	YES				
030775	8.0	60.88	7.79	YES	YES				
030875	7.0	60.31	9.26	YES	YES				
030975	7.0	54.37	7.14	YES	YES				
031075	7.0	50.69	6.71	YES	YES				
031175	10.0	49.84	6.85	YES	YES				
031275	7.0	53.52	9.12	YES	YES				
031375	8.0	62.58	18.77	YES	YES				
031475	9.0	55.22	12.46	YES	YES				
031575	8.0	57.20	17.13	YES	YES				
031675	7.0	60.31	24.58	YES	YES				
031775	7.0	58.62	19.96	YES	YES				
031875	9.0	58.62	14.84	YES	YES				
031975	8.0	116.10	89.20	YES	YES				
032075	8.0	427.58	190.57	YES	YES				
032175	8.0	317.15	38.23	YES	YES				
032275	9.0	203.60	23.33	YES	YES				
032375	9.0	165.37	21.12	YES	YES				
032475	9.0	141.02	23.39	YES	YES				
032575	9.0	142.15	40.78	YES	YES				
032675	10.0	111.29	20.50	YES	YES				
032775	10.0	94.58	13.90	YES	YES				
032875	9.0	87.50	12.03	YES	YES				
032975	14.0	83.25	11.38	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
033075	10.0	91.18	18.77	YES	YES				
033175	9.0	90.05	16.51	YES	YES				
040175	9.0	35.80	11.55	YES	YES				
040275	9.0	79.85	10.05	YES	YES				
040375	10.0	137.34	34.55	YES	YES				
040475	10.0	228.23	25.49	YES	YES				
040575	9.0	107.07	12.74	YES	YES				
040675	8.0	136.49	11.33	YES	YES				
040775	8.0	117.23	9.91	YES	YES				
040875	8.0	103.07	8.78	YES	YES				
040975	9.0	92.03	7.93	YES	YES				
041075	9.0	84.95	7.36	YES	YES				
041175	10.0	79.29	7.08	YES	YES				
041275	10.0	73.62	6.80	YES	YES				
041375	10.0	67.96	6.23	YES	YES				
041475	10.0	65.13	5.95	YES	YES				
041575	10.0	59.47	5.95	YES	YES				
041675	11.0	65.13	7.93	YES	YES				
041775	11.0	59.47	6.23	YES	YES				
041875	12.0	53.80	5.66	YES	YES				
041975	14.0	50.97	5.95	YES	YES				
042075	13.0	49.55	6.51	YES	YES				
042175	13.0	48.14	4.53	YES	YES				
042275	12.0	45.31	4.25	YES	YES				
042375	13.0	42.48	4.25	YES	YES				
042475	14.0	45.31	6.37	YES	YES				
042575	13.0	141.58	40.49	YES	YES				
042675	14.0	283.17	80.99	YES	YES				
042775	14.0	99.11	21.38	YES	YES				
042875	14.0	70.79	13.39	YES	YES				
042975	14.0	65.13	10.82	YES	YES				
043075	14.0	62.30	9.29	YES	YES				
050175	14.0	62.30	9.15	YES	YES				
050275	14.0	61.45	11.30	YES	YES				
050375	13.0	55.78	9.85	YES	YES				
050475	13.0	55.23	27.18	YES	YES				
050575	14.0	177.83	36.25	YES	YES				
050675	13.0	143.57	17.24	YES	YES				
050775	14.0	125.73	17.08	YES	YES				
050875	13.0	102.51	12.54	YES	YES				
050975	15.0	86.65	9.94	YES	YES				
051075	15.0	77.30	8.81	YES	YES				
051175	15.0	72.21	8.69	YES	YES				
051275	15.0	67.11	7.79	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
051375	16.0	88.63	16.74	YES	YES				
051475	16.0	86.08	15.04	YES	YES				
051575	21.0	72.21	9.32	YES	YES				
051675	19.0	83.25	26.99	YES	YES				
051775	20.0	78.44	18.01	YES	YES				
051875	18.0	65.13	10.82	YES	YES				
051975	18.0	61.73	9.46	YES	YES				
052075	18.0	57.48	7.99	YES	YES				
052175	19.0	54.65	6.97	YES	YES				
052275	19.0	55.22	7.70	YES	YES				
052375	20.0	80.99	45.59	YES	YES				
052475	20.0	69.38	14.64	YES	YES				
052575	23.0	57.20	8.75	YES	YES				
052675	21.0	54.05	7.11	YES	YES				
052775	21.0	51.54	6.71	YES	YES				
052875	22.0	53.80	5.58	YES	YES				
052975	22.0	48.14	4.59					YES	YES
053075	22.0	41.34	4.39					YES	YES
053175	22.0	44.74	6.43			YES	YES		
060175	22.0	77.59	88.63	YES	YES				
060275	22.0	58.62	23.84	YES	YES				
060375	22.0	49.27	11.89			YES	YES		
060475	23.0	41.63	9.03			YES	YES		
060575	22.0	46.44	13.68			YES	YES		
060675	23.0	141.58	84.67	YES	YES				
060775	21.0	118.93	35.40	YES	YES				
060875	20.0	83.25	16.42	YES	YES				
060975	21.0	68.24	11.50	YES	YES				
061075	19.0	58.33	9.09	YES	YES				
061175	19.0	51.82	7.79	YES	YES				
061275	21.0	84.95	87.50	YES	YES				
061375	20.0	121.76	111.85	YES	YES				
061475	20.0	83.25	29.17	YES	YES				
061575	22.0	69.38	15.23	YES	YES				
061675	22.0	64.00	11.36	YES	YES				
061775	23.0	60.31	11.21	YES	YES				
061875	22.0	54.37	8.75	YES	YES				
061975	25.0	48.99	7.22			YES	YES		
062075	24.0	49.55	6.71			YES	YES		
062175	24.0	43.61	5.47			YES			
062275	24.0	39.64	4.47					YES	YES
062375	24.0	37.66	4.11					YES	YES
062475	24.0	35.96	3.99					YES	YES
062575	24.0	34.83	3.99					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

WILLAMETTE INDUSTRIES L.H. 02903

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
062675	25.0	35.96	4.39					YES	YES
062775	25.0	41.91	4.90					YES	YES
062875	25.0	126.58	11.21	YES	YES				
062975	22.0	180.38	18.41	YES	YES				
063075	23.0	114.68	9.63	YES	YES				
070175	22.0	86.93	5.47			YES			YES
070275	22.0	70.23	4.19					YES	YES
070375	23.0	61.16	4.39					YES	YES
070475	23.0	65.13	6.71			YES	YES		
070575	23.0	54.65	4.67					YES	YES
070675	24.0	47.57	3.91					YES	YES
070775	24.0	45.02	11.89			YES	YES		
070875	24.0	43.04	5.35			YES			YES
070975	24.0	43.89	4.19					YES	YES
071075	24.0	45.87	8.33			YES	YES		
071175	24.0	41.63	4.90					YES	YES
071275	26.0	40.21	4.67					YES	YES
071375	24.0	62.30	114.12			YES	YES		
071475	24.0	229.93	393.60			YES	YES		
071575	23.0	208.13	65.41			YES	YES		
071675	23.0	147.25	48.70			YES	YES		
071775	24.0	129.97	26.76			YES	YES		
071875	23.0	104.77	17.58			YES	YES		
071975	25.0	100.52	12.32			YES	YES		
072075	25.0	89.20	10.51			YES	YES		
072175	25.0	180.38	95.14			YES	YES		
072275	25.0	106.47	21.78			YES	YES		
072375	25.0	84.95	12.63			YES	YES		
072475	25.0	73.34	9.88			YES	YES		
072575	25.0	117.51	10.45			YES	YES		
072675	25.0	148.10	9.00			YES	YES		
072775	24.0	101.94	7.14			YES	YES		
072875	24.0	82.12	6.46			YES	YES		
072975	24.0	70.51	5.66			YES			YES
073075	24.0	61.45	4.81					YES	YES
073175	24.0	55.50	4.25					YES	YES
080175	26.0	51.25	3.94					YES	YES
080275	26.0	48.42	3.85					YES	YES
080375	26.0	45.87	3.60					YES	YES
080475	27.0	45.02	3.37					YES	YES
080575	28.0	59.47	12.57			YES	YES		
080675	28.0	53.80	6.57			YES	YES		
080775	28.0	60.31	9.00			YES	YES		
080875	26.0	47.86	5.78			YES			YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
080975	26.0	41.91	4.16					YES	YES
081075	26.0	39.36	3.54					YES	YES
081175	26.0	38.51	3.28					YES	YES
081275	26.0	40.49	3.17					YES	YES
081375	27.0	35.96	3.00					YES	YES
081475	27.0	41.34	4.76					YES	YES
081575	27.0	38.79	3.82					YES	YES
081675	27.0	43.32	6.34			YES	YES		
081775	26.0	47.57	7.31			YES	YES		
081875	26.0	39.64	4.76					YES	YES
081975	26.0	35.96	3.85					YES	YES
082075	26.0	34.83	4.11					YES	YES
082175	26.0	31.15	3.57					YES	YES
082275	26.0	29.17	3.00					YES	YES
082375	26.0	30.30	2.92					YES	YES
082475	26.0	29.17	6.94			YES	YES		
082575	26.0	30.87	12.23			YES	YES		
082675	26.0	33.41	4.19					YES	YES
082775	27.0	31.71	3.45					YES	YES
082875	26.0	28.88	3.14					YES	YES
082975	27.0	26.19	2.55					YES	YES
083075	26.0	29.45	2.41					YES	YES
083175	26.0	38.51	2.55					YES	YES
090175	26.0	32.00	2.41					YES	YES
090275	26.0	31.15	2.27					YES	YES
090375	24.0	30.02	2.27					YES	YES
090475	23.0	28.32	2.15					YES	YES
090575	23.0	26.42	2.10					YES	YES
090675	24.0	27.35	2.10					YES	YES
090775	24.0	28.88	2.27					YES	YES
090875	24.0	26.65	2.04					YES	YES
090975	24.0	25.26	1.98					YES	YES
091075	24.0	23.67	1.84					YES	YES
091175	23.0	23.22	1.78					YES	YES
091275	23.0	25.26	2.35					YES	YES
091375	23.0	46.72	4.47					YES	YES
091475	22.0	32.28	3.20					YES	YES
091575	21.0	27.84	2.27					YES	YES
091675	20.0	26.19	2.04					YES	YES
091775	20.0	25.26	2.04					YES	YES
091875	21.0	25.03	1.98					YES	YES
091975	20.0	28.09	2.27					YES	YES
092075	20.0	39.08	2.83					YES	YES
092175	21.0	41.63	7.22			YES	YES		

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
092275	21.0	35.40	6.31			YES	YES		
092375	20.0	72.77	56.07			YES	YES		
092475	20.0	229.37	155.74			YES	YES		
092575	19.0	526.69	104.77			YES	YES		
092675	18.0	453.07	48.70			YES	YES		
092775	18.0	433.25	36.81			YES	YES		
092875	18.0	247.21	16.88			YES	YES		
092975	17.0	165.94	10.73			YES	YES		
093075	17.0	131.96	8.33			YES	YES		
100175	15.0	110.44	7.65	YES	YES				
100275	17.0	97.98	6.82			YES	YES		
100375	14.0	87.50	5.58	YES	YES				
100475	N/A	79.57	5.01	---	---	---	---	---	---
100575	N/A	75.32	4.47	---	---	---	---	---	---
100675	15.0	71.36	4.28	YES	YES				
100775	15.0	66.83	3.99	YES	YES				
100875	15.0	63.43	3.82	YES	YES			YES	YES
100975	16.0	61.73	3.62						
101075	15.0	61.73	4.19	YES	YES				
101175	N/A	63.43	5.80	---	---	---	---	---	---
101275	N/A	70.51	9.49	---	---	---	---	---	---
101375	13.5	61.73	6.43	YES	YES				YES
101475	15.5	58.33	5.13			YES			YES
101575	16.0	55.50	4.47					YES	YES
101675	18.0	52.10	3.99					YES	YES
101775	16.5	50.69	3.82					---	---
101875	N/A	151.78	66.83	---	---	---	---	---	---
101975	N/A	252.87	125.44	---	---	---	---	---	---
102075	14.0	232.20	55.78	YES	YES				
102175	13.0	180.38	31.43	YES	YES				
102275	13.5	141.58	19.17	YES	YES				
102375	14.0	120.91	14.27	YES	YES				
102475	15.5	105.34	10.39			YES	YES		
102575	N/A	96.84	9.94	---	---	---	---	---	---
102675	N/A	92.60	9.94	---	---	---	---	---	---
102775	N/A	85.23	9.03	---	---	---	---	---	---
102875	14.0	79.29	8.04	YES	YES				
102975	14.0	75.32	7.36	YES	YES				
103075	14.0	70.51	6.97	YES	YES				
103175	11.0	66.26	5.80	YES	YES				
110175	N/A	64.00	5.35	---	---	---	---	---	---
110275	N/A	63.43	5.35	---	---	---	---	---	---
110375	11.0	61.73	5.24	YES	YES				
110475	13.0	59.75	5.13	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

WILLAMETTE INDUSTRIES

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
110575	14.0	57.48	4.90	YES	YES				
110675	14.0	55.78	4.47	YES	YES				
110775	14.0	54.93	4.28	YES	YES				
110875	N/A	58.90	5.69	---	---	---	---	---	---
110975	N/A	62.86	6.43	---	---	---	---	---	---
111075	16.0	2.86	6.71			YES	YES		
111175	14.5	11.75	16.68	YES	YES				
111275	13.0	90.33	17.24	YES	YES				
111375	11.5	279.49	91.75	YES	YES				
111475	11.0	238.43	37.94	YES	YES				
111575	N/A	164.80	19.17	---	---	---	---	---	---
111675	N/A	131.11	14.07	---	---	---	---	---	---
111775	8.0	112.42	10.25	YES	YES				
111875	9.0	98.83	9.34	YES	YES				
111975	10.0	90.05	8.61	YES	YES				
112075	10.0	84.10	7.93	YES	YES				
112175	11.5	84.10	8.75	YES	YES				
112275	N/A	104.21	13.51	---	---	---	---	---	---
112375	N/A	86.65	8.89	---	---	---	---	---	---
112475	6.0	80.42	7.65	YES	YES				
112575	8.0	77.30	6.97	YES	YES				
112675	7.0	74.76	6.43	YES	YES				
112775	N/A	72.77	6.71	---	---	---	---	---	---
112875	N/A	73.62	8.18	---	---	---	---	---	---
112975	N/A	68.53	6.43	---	---	---	---	---	---
113075	N/A	66.26	5.80	---	---	---	---	---	---
120175	9.0	67.96	6.43	YES	YES				
120275	7.5	67.96	6.71	YES	YES				
120375	6.5	62.58	5.80	YES	YES				
120475	5.5	60.03	5.13	YES	YES				
120575	5.0	58.90	4.90	YES	YES				
120675	N/A	58.05	4.90	---	---	---	---	---	---
120775	N/A	58.33	5.01	---	---	---	---	---	---
120875	4.0	56.63	4.47	YES	YES				
120975	5.0	55.50	4.39	YES	YES				
121075	5.0	56.63	5.01	YES	YES				
121175	6.0	56.35	4.90	YES	YES				
121275	6.0	51.54	4.39	YES	YES				
121375	N/A	48.42	4.11	---	---	---	---	---	---
121475	N/A	47.01	3.91	---	---	---	---	---	---
121575	6.5	47.57	4.11	YES	YES				
121675	9.0	48.99	4.47	YES	YES				
121775	7.0	45.02	4.28	YES	YES				
121875	6.0	41.06	4.19	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
121975	2.5	35.68	3.45	YES	YES				
122075	N/A	33.41	3.54	---	---	---	---	---	---
122175	N/A	32.85	3.37	---	---	---	---	---	---
122275	2.0	32.00	3.45	YES	YES				
122375	1.5	30.87	3.40	YES	YES				
122475	1.0	30.02	3.40	YES	YES				
122575	N/A	28.88	3.40	---	---	---	---	---	---
122675	N/A	74.19	49.84	---	---	---	---	---	---
122775	N/A	137.62	38.79	---	---	---	---	---	---
122875	N/A	96.84	16.37	---	---	---	---	---	---
122975	2.0	82.12	10.90	YES	YES				
123075	3.0	76.17	9.51	YES	YES				
123175	4.0	97.98	35.68	YES	YES				
010176	N/A	144.13	110.15	---	---	---	---	---	---
010276	N/A	116.95	42.19	---	---	---	---	---	---
010376	N/A	106.47	32.85	---	---	---	---	---	---
010476	N/A	108.45	30.30	---	---	---	---	---	---
010576	1.5	90.33	14.07	YES	YES				
010676	1.0	78.72	11.55	YES	YES				
010776	0.5	76.46	10.70	YES	YES				
010876	2.5	83.25	22.82	YES	YES				
010976	1.5	71.36	12.29	YES	YES				
011076	N/A	61.73	9.15	---	---	---	---	---	---
011176	N/A	63.71	8.86	---	---	---	---	---	---
011276	0.5	63.71	7.19	YES	YES				
011376	0.5	61.45	8.75	YES	YES				
011476	1.0	133.94	58.90	YES	YES				
011576	1.0	100.24	19.28	YES	YES				
011676	1.5	72.49	11.04	YES	YES				
011776	N/A	65.13	8.35	---	---	---	---	---	---
011876	N/A	52.95	8.10	---	---	---	---	---	---
011976	0.0	46.72	7.39	YES	YES				
012076	0.5	45.02	7.19	YES	YES				
012176	1.0	42.76	6.77	YES	YES				
012276	0.0	41.34	6.34	YES	YES				
012376	0.0	39.64	6.23	YES	YES				
012476	N/A	42.48	5.95	---	---	---	---	---	---
012576	N/A	43.61	5.66	---	---	---	---	---	---
012676	2.5	244.66	42.19	YES	YES				
012776	N/A	1059.05	175.28	---	---	---	---	---	---
012876	2.0	625.80	132.52	YES	YES				
012976	2.5	255.98	28.88	YES	YES				
013076	2.5	174.43	18.58	YES	YES				
013176	N/A	135.07	13.34	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
020176	N/A	125.73	19.23	---	---	---	---	---	---
020276	2.5	254.57	74.76	YES	YES				
020376	1.0	137.05	21.07	YES	YES				
020476	0.5	114.68	15.26	YES	YES				
020576	1.5	105.62	13.79	YES	YES				
020676	1.5	95.71	10.68	YES	YES				
020776	N/A	86.65	10.02	---	---	---	---	---	---
020876	N/A	82.40	10.19	---	---	---	---	---	---
020976	1.5	79.57	7.65	YES	YES				
021076	2.5	75.32	7.25	YES	YES				
021176	4.0	79.57	14.27	YES	YES				
021276	3.5	98.83	20.78	YES	YES				
021376	4.0	80.14	15.46	YES	YES				
021476	N/A	79.57	18.12	---	---	---	---	---	---
021576	N/A	74.47	10.96	---	---	---	---	---	---
021676	4.5	71.08	10.85	YES	YES				
021776	6.0	77.00	41.63	YES	YES				
021876	6.0	126.29	37.66	YES	YES				
021976	5.5	121.48	48.70	YES	YES				
022076	5.5	110.44	25.63	YES	YES				
022176	N/A	98.83	17.41	---	---	---	---	---	---
022276	N/A	113.27	39.36	---	---	---	---	---	---
022376	5.0	116.95	29.17	YES	YES				
022476	4.5	100.24	15.74	YES	YES				
022576	4.5	94.29	13.76	YES	YES				
022676	6.0	89.20	12.63	YES	YES				
022776	7.5	84.95	11.86	YES	YES				
022876	N/A	80.42	10.59	---	---	---	---	---	---
022976	N/A	76.46	9.20	---	---	---	---	---	---
030176	9.0	74.47	8.78	YES	YES				
030276	8.5	71.64	8.21	YES	YES				
030376	6.0	62.00	8.72	YES	YES				
030476	7.0	73.34	10.39	YES	YES				
030576	7.0	74.76	10.85	YES	YES				
030676	N/A	71.08	9.88	---	---	---	---	---	---
030776	N/A	67.96	8.07	---	---	---	---	---	---
030876	7.0	65.69	7.93	YES	YES				
030976	7.0	64.85	6.63	YES	YES				
031076	4.0	66.26	7.28	YES	YES				
031176	6.0	67.11	9.37	YES	YES				
031276	6.0	69.09	14.05	YES	YES				
031376	N/A	90.33	64.56	---	---	---	---	---	---
031476	N/A	103.36	33.13	---	---	---	---	---	---
031576	5.5	95.99	17.50	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
031676	6.0	90.33	14.78	YES	YES				
031776	4.0	83.00	20.33	YES	YES				
031876	3.0	81.55	11.61	YES	YES				
031976	5.0	77.59	10.82	YES	YES				
032076	N/A	74.76	9.97	---	---	---	---	---	---
032176	N/A	72.49	9.23	---	---	---	---	---	---
032276	10.0	73.62	9.49	YES	YES				
032376	8.0	68.24	7.73	YES	YES				
032476	9.5	65.69	7.14	YES	YES				
032576	11.0	64.00	6.85	YES	YES				
032676	10.5	62.58	6.48	YES	YES				
032776	N/A	61.45	6.14	---	---	---	---	---	---
032876	N/A	67.96	7.96	---	---	---	---	---	---
032976	11.0	67.39	6.60	YES	YES				
033076	11.5	62.58	5.89	YES	YES				
033176	11.5	60.88	5.52	YES	YES				
040176	8.0	147.00	107.89	YES	YES				
040276	10.0	184.91	38.23	YES	YES				
040376	N/A	141.58	21.04	YES	YES				
040476	N/A	121.48	16.88	YES	YES				
040576	8.0	107.04	14.84	YES	YES				
040676	9.0	93.45	11.72	YES	YES				
040776	10.0	85.80	10.08	YES	YES				
040876	10.0	79.57	8.89	YES	YES				
040976	10.0	74.76	8.33	YES	YES				
041076	N/A	70.51	7.50	YES	YES				
041176	N/A	68.24	6.97	YES	YES				
041276	8.0	66.26	6.57	YES	YES				
041376	9.0	62.86	5.69	YES	YES				
041476	10.5	61.16	5.58	YES	YES				
041576	11.0	41.00	5.47	YES	YES				
041676	13.0	58.05	5.24	YES	YES				
041776	N/A	57.20	5.13	YES	YES				
041876	N/A	56.35	4.90	YES	YES				
041976	18.5	52.95	4.67	YES	YES				
042076	20.0	49.55	4.39					YES	YES
042176	21.0	50.97	4.19	YES	YES				
042276	20.5	49.55	4.11					YES	YES
042376	19.0	43.04	4.28					YES	YES
042476	N/A	39.93	3.71	---	---	---	---	---	---
042576	N/A	39.93	3.62	---	---	---	---	---	---
042676	14.0	56.92	5.80	YES	YES				
042776	12.5	58.62	5.35	YES	YES				
042876	11.0	46.16	4.11	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
042976	12.5	32.00	3.62	YES	YES				
043076	14.5	37.66	3.45	YES	YES				
050176	N/A	44.17	5.24	---	---	---	---	---	---
050276	N/A	85.80	27.33	YES	YES				
050376	14.5	71.36	10.08	YES	YES				
050476	14.0	62.58	6.57	YES	YES				
050576	13.0	58.33	5.13	YES	YES				
050676	15.5	55.50	4.47	YES	YES				
050776	18.0	52.10	4.25	YES	YES				
050876	N/A	47.57	4.81	---	---	---	---	---	---
050976	N/A	43.04	4.19	---	---	---	---	---	---
051076	16.5	42.48	3.60					YES	YES
051176	18.0	38.79	3.14					YES	YES
051276	17.0	38.00	3.82					YES	YES
051376	16.0	47.86	3.82					YES	YES
051476	18.0	37.94	3.20					YES	YES
051576	N/A	35.11	3.14	---	---	---	---	---	---
051676	N/A	37.38	3.37	---	---	---	---	---	---
051776	19.5	64.56	5.35	YES	YES				
051876	20.0	75.61	6.71	YES	YES				
051976	16.0	71.64	9.77	YES	YES				
052076	15.0	65.69	6.06	YES	YES				
052176	16.5	71.36	7.93	YES	YES				
052276	N/A	77.59	9.94	YES	YES				
052376	N/A	69.66	5.58	YES	YES				
052476	12.0	65.69	4.19	YES	YES				
052576	18.0	61.73	3.71	YES	YES				
052676	17.0	58.62	3.45	YES	YES				
052776	16.0	57.20	3.28	YES	YES				
052876	16.0	51.82	3.14	YES	YES				
052976	N/A	46.16	2.83	---	---	---	---	---	---
053076	N/A	52.67	3.20	YES	YES				
053176	N/A	55.78	3.62	YES	YES				
060176	19.0	49.84	3.71					YES	YES
060276	19.0	53.00	11.21	YES	YES				
060376	17.0	61.73	6.97	YES	YES				
060476	17.5	47.86	4.47					YES	YES
060576	N/A	39.36	3.37	---	---	---	---	---	---
060676	N/A	35.11	2.89	---	---	---	---	---	---
060776	17.5	38.51	2.83					YES	YES
060876	20.5	36.81	2.75					YES	YES
060976	21.5	30.58	2.55					YES	YES
061076	23.5	27.13	2.41					YES	YES
061176	24.0	23.90	2.27					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
061276	N/A	22.54	2.15	---	---	---	---	---	---
061376	N/A	21.63	1.98	---	---	---	---	---	---
061476	28.0	21.86	1.93					YES	YES
061576	21.5	22.54	1.98					YES	YES
061676	27.0	24.00	2.35					YES	YES
061776	25.0	57.20	3.99	YES	YES				
061876	24.0	48.70	4.11					YES	YES
061976	N/A	27.58	2.75	---	---	---	---	---	---
062076	N/A	23.90	2.61	---	---	---	---	---	---
062176	25.0	57.48	2.75	YES	YES				
062276	23.5	102.79	4.19	YES	YES				
062376	22.0	104.77	6.57	YES	YES				
062476	23.0	80.42	4.28	YES	YES				
062576	24.0	88.24	3.06	YES	YES				
062676	N/A	61.45	2.69	YES	YES				
062776	N/A	56.92	2.27	YES	YES				
062876	24.0	49.55	2.69					YES	YES
062976	25.0	56.35	3.37	YES	YES				
063076	25.0	40.00	6.71			YES	YES		
070176	21.0	123.18	6.43			YES	YES		
070276	20.0	82.97	4.19					YES	YES
070376	N/A	67.39	2.89	---	---	---	---	---	---
070476	N/A	63.71	2.61	---	---	---	---	---	---
070576	N/A	59.47	2.61	---	---	---	---	---	---
070676	21.0	52.10	2.04					YES	YES
070776	23.0	52.10	2.10					YES	YES
070876	23.0	60.03	2.55					YES	YES
070976	22.0	57.48	2.61					YES	YES
071076	N/A	45.02	2.27	---	---	---	---	---	---
071176	N/A	64.56	7.50	---	---	---	---	---	---
071276	21.0	62.86	7.25			YES	YES		
071376	19.0	47.01	5.58			YES			YES
071476	19.0	30.00	4.90					YES	YES
071576	21.0	34.55	3.54					YES	YES
071676	21.0	35.11	2.49					YES	YES
071776	N/A	32.85	2.10	---	---	---	---	---	---
071876	N/A	27.58	1.84	---	---	---	---	---	---
071976	22.0	25.26	1.73					YES	YES
072076	20.0	24.81	1.67					YES	YES
072176	22.0	22.03	1.61					YES	YES
072276	22.0	21.80	1.56					YES	YES
072376	22.0	22.63	1.67					YES	YES
072476	N/A	33.70	2.15	---	---	---	---	---	---
072576	N/A	29.45	1.98	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
072676	20.0	22.80	1.78					YES	YES
072776	20.0	20.42	1.73					YES	YES
072876	23.0	19.00	1.73					YES	YES
072976	24.5	23.33	1.95					YES	YES
073076	22.5	58.90	2.35					YES	YES
073176	N/A	40.78	2.12	---	---	---	---	---	---
080176	N/A	28.32	1.98	---	---	---	---	---	---
080276	21.5	26.19	1.76					YES	YES
080376	21.0	23.73	1.67					YES	YES
080476	21.0	22.12	1.61					YES	YES
080576	21.0	21.01	1.56					YES	YES
080676	24.0	20.78	1.59					YES	YES
080776	N/A	30.58	1.87	---	---	---	---	---	---
080876	N/A	38.79	2.35	---	---	---	---	---	---
080976	20.0	52.10	4.30					YES	YES
081076	18.0	55.50	9.57			YES	YES		
081176	20.0	49.00	4.67					YES	YES
081276	21.0	37.10	2.78					YES	YES
081376	24.0	32.85	2.29					YES	YES
081476	N/A	52.39	7.08	---	---	---	---	---	---
081576	N/A	45.02	4.67	---	---	---	---	---	---
081676	20.0	52.10	5.78			YES			YES
081776	20.0	44.74	3.77					YES	YES
081876	19.0	36.53	2.55					YES	YES
081976	20.0	32.00	2.10					YES	YES
082076	20.0	28.88	1.95					YES	YES
082176	N/A	27.07	1.84	---	---	---	---	---	---
082276	N/A	25.91	1.78	---	---	---	---	---	---
082376	23.0	24.75	1.70					YES	YES
082476	24.0	23.84	1.78					YES	YES
082576	20.0	22.00	1.93					YES	YES
082676	21.0	22.37	1.90					YES	YES
082776	22.0	27.38	3.91					YES	YES
082876	N/A	23.64	3.40	---	---	---	---	---	---
082976	N/A	21.66	2.55	---	---	---	---	---	---
083076	20.0	20.16	2.12					YES	YES
083176	20.0	18.80	1.70					YES	YES
090176	19.0	18.24	1.81					YES	YES
090276	20.0	18.41	1.84					YES	YES
090376	21.5	19.11	1.84					YES	YES
090476	N/A	19.85	1.84	---	---	---	---	---	---
090576	N/A	18.38	1.78	---	---	---	---	---	---
090676	N/A	17.95	1.70	---	---	---	---	---	---
090776	18.0	16.99	1.50					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
090876	20.0	16.00	1.59					YES	YES
090976	23.0	16.91	1.59					YES	YES
091076	24.0	17.67	1.64					YES	YES
091176	N/A	20.87	1.70	---	---	---	---	---	---
091276	N/A	18.83	1.67	---	---	---	---	---	---
091376	20.5	17.30	1.61					YES	YES
091476	20.5	16.71	1.56					YES	YES
091576	23.0	16.31	1.56					YES	YES
091676	22.5	35.11	2.01					YES	YES
091776	20.0	88.63	7.48			YES	YES		
091876	N/A	72.49	3.88	---	---	---	---	---	---
091976	N/A	44.74	2.63	---	---	---	---	---	---
092076	19.5	35.11	2.27					YES	YES
092176	20.0	31.15	2.12					YES	YES
092276	N/A	29.00	2.01	---	---	---	---	---	---
092376	17.0	25.29	1.93					YES	YES
092476	17.0	23.13	1.87					YES	YES
092576	N/A	22.03	1.84	---	---	---	---	---	---
092676	N/A	22.03	1.87	---	---	---	---	---	---
092776	18.0	39.93	2.04					YES	YES
092876	17.5	55.22	2.44					YES	YES
092976	16.5	44.17	2.04					YES	YES
093076	17.0	39.36	2.01					YES	YES
100176	16.0	40.78	2.69					YES	YES
100276	N/A	39.93	2.75	---	---	---	---	---	---
100376	N/A	64.00	10.36	---	---	---	---	---	---
100476	16.0	91.18	9.15			YES	YES		
100576	16.0	71.36	4.36					YES	YES
100676	17.0	60.00	3.34					YES	YES
100776	17.0	52.67	3.00					YES	YES
100876	17.5	47.86	2.63					YES	YES
100976	N/A	187.46	34.55	---	---	---	---	---	---
101076	N/A	368.12	24.10	---	---	---	---	---	---
101176	N/A	210.96	9.97	---	---	---	---	---	---
101276	12.0	138.19	6.48	YES	YES				
101376	12.0	101.94	5.04	YES	YES				
101476	13.0	84.95	4.47	YES	YES				
101576	13.0	72.21	3.34	YES	YES				
101676	N/A	62.86	3.06	---	---	---	---	---	---
101776	N/A	55.78	2.69	---	---	---	---	---	---
101876	11.0	50.69	2.55	YES	YES				
101976	10.0	47.29	2.44	YES	YES				
102076	11.0	45.00	3.51	YES	YES				
102176	12.0	246.64	46.16	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
102276	11.0	208.13	14.36	YES	YES				
102376	N/A	141.58	8.18	---	---	---	---	---	---
102476	N/A	107.60	6.31	---	---	---	---	---	---
102576	10.5	108.74	8.47	YES	YES				
102676	12.0	145.55	35.11	YES	YES				
102776	9.5	133.37	15.97	YES	YES				
102876	6.0	111.57	9.74	YES	YES				
102976	7.5	95.43	7.62	YES	YES				
103076	N/A	83.25	6.40	---	---	---	---	---	---
103176	N/A	109.87	26.70	---	---	---	---	---	---
110176	9.0	129.69	20.56	YES	YES				
110276	8.0	102.79	10.87	YES	YES				
110376	9.0	89.00	8.52	YES	YES				
110476	9.5	82.12	8.16	YES	YES				
110576	9.5	73.34	7.42	YES	YES				
110676	N/A	67.68	6.57	---	---	---	---	---	---
110776	N/A	61.16	5.64	---	---	---	---	---	---
110876	7.0	56.63	5.21	YES	YES				
110976	6.0	52.10	4.56	YES	YES				
111076	7.0	48.14	4.45	YES	YES				
111176	7.0	45.31	3.99	YES	YES				
111276	7.0	43.04	3.85	YES	YES				
111376	N/A	40.78	3.60	---	---	---	---	---	---
111476	N/A	40.78	3.34	---	---	---	---	---	---
111576	7.0	39.64	3.20	YES	YES				
111676	4.0	38.23	3.26	YES	YES				
111776	4.0	36.00	3.00	YES	YES				
111876	5.0	35.11	3.17	YES	YES				
111976	5.5	34.55	3.06	YES	YES				
112076	N/A	33.70	2.97	---	---	---	---	---	---
112176	N/A	32.85	2.80	---	---	---	---	---	---
112276	5.0	32.00	2.75	YES	YES				
112376	3.0	30.58	2.72	YES	YES				
112476	3.0	29.45	2.58	YES	YES				
112576	N/A	28.88	2.55	---	---	---	---	---	---
112676	N/A	28.60	2.55	---	---	---	---	---	---
112776	N/A	28.32	2.52	---	---	---	---	---	---
112876	N/A	28.60	2.55	---	---	---	---	---	---
112976	7.0	32.28	3.03	YES	YES				
113076	3.0	34.26	3.60	YES	YES				
120176	1.5	27.00	2.92	YES	YES				
120276	3.0	26.19	2.69	YES	YES				
120376	1.5	24.61	2.55	YES	YES				
120476	N/A	23.76	2.55	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
120576	N/A	24.64	2.55	---	---	---	---	---	---
120676	2.0	24.01	3.11	YES	YES				
120776	4.0	72.21	58.62	YES	YES				
120876	2.5	145.83	39.08	YES	YES				
120976	1.5	83.53	12.49	YES	YES				
121076	3.0	66.54	9.29	YES	YES				
121176	N/A	58.05	7.62	---	---	---	---	---	---
121276	N/A	53.24	7.11	---	---	---	---	---	---
121376	3.5	48.70	7.02	YES	YES				
121476	2.0	41.34	5.10	YES	YES				
121576	4.0	40.00	6.03	YES	YES				
121676	1.5	39.64	4.42	YES	YES				
121776	3.5	38.23	4.45	YES	YES				
121876	N/A	36.53	4.22	---	---	---	---	---	---
121976	N/A	34.55	3.68	---	---	---	---	---	---
122076	4.5	33.41	3.68	YES	YES				
122176	4.5	35.40	5.35	YES	YES				
122276	1.0	30.02	5.21	YES	YES				
122376	1.5	30.58	5.66	YES	YES				
122476	N/A	28.88	5.18	---	---	---	---	---	---
122576	N/A	26.96	4.67	---	---	---	---	---	---
122676	N/A	28.32	3.60	---	---	---	---	---	---
122776	3.0	28.00	5.49	YES	YES				
122876	2.0	28.09	4.22	YES	YES				
122976	2.0	27.92	3.40	YES	YES				
123076	0.5	23.53	2.83	YES	YES				
123176	N/A	22.65	2.41	---	---	---	---	---	---
010177	N/A	22.65	2.12	---	---	---	---	---	---
010277	N/A	23.22	1.98	---	---	---	---	---	---
010377	N/A	23.81	1.84	---	---	---	---	---	---
010477	N/A	24.15	1.76	---	---	---	---	---	---
010577	2.0	23.70	1.70	YES	YES				
010677	1.0	22.23	1.64	YES	YES				
010777	1.5	23.28	2.55	YES	YES				
010877	N/A	21.24	2.27	---	---	---	---	---	---
010977	N/A	21.97	3.68	---	---	---	---	---	---
011077	1.5	25.26	5.64	YES	YES				
011177	0.5	23.87	9.60	YES	YES				
011277	N/A	21.86	10.22	---	---	---	---	---	---
011377	N/A	21.01	8.16	---	---	---	---	---	---
011477	-0.5	20.93	7.22	YES	YES				
011577	N/A	22.00	7.90	---	---	---	---	---	---
011677	N/A	21.89	5.66	---	---	---	---	---	---
011777	N/A	20.95	4.81	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
011877	N/A	20.39	3.96	---	---	---	---	---	---
011977	N/A	19.54	3.68	---	---	---	---	---	---
012077	N/A	19.26	3.40	---	---	---	---	---	---
012177	N/A	18.97	3.11	---	---	---	---	---	---
012277	N/A	18.69	2.83	---	---	---	---	---	---
012377	N/A	18.35	2.69	---	---	---	---	---	---
012477	N/A	18.18	2.55	---	---	---	---	---	---
012577	N/A	18.63	4.25	---	---	---	---	---	---
012677	4.0	18.94	2.83	YES	YES	---	---	---	---
012777	3.0	18.75	2.12	YES	YES	---	---	---	---
012877	2.0	17.75	1.98	YES	YES	---	---	---	---
012977	N/A	17.27	1.84	---	---	---	---	---	---
013077	N/A	16.71	1.76	---	---	---	---	---	---
013177	N/A	16.14	1.73	---	---	---	---	---	---
020177	N/A	15.86	1.70	---	---	---	---	---	---
020277	N/A	15.86	1.64	---	---	---	---	---	---
020377	N/A	16.42	1.64	---	---	---	---	---	---
020477	4.0	17.19	1.98	YES	YES	---	---	---	---
020577	N/A	17.53	2.83	---	---	---	---	---	---
020677	N/A	16.14	2.27	---	---	---	---	---	---
020777	N/A	15.86	2.12	---	---	---	---	---	---
020877	N/A	16.14	2.04	---	---	---	---	---	---
020977	N/A	16.23	1.98	---	---	---	---	---	---
021077	3.0	16.51	5.66	YES	YES	---	---	---	---
021177	5.0	17.98	12.06	YES	YES	---	---	---	---
021277	N/A	29.45	24.32	---	---	---	---	---	---
021377	N/A	40.21	46.44	---	---	---	---	---	---
021477	5.0	60.60	59.47	YES	YES	---	---	---	---
021577	4.0	60.03	32.28	YES	YES	---	---	---	---
021677	3.0	37.38	12.18	YES	YES	---	---	---	---
021777	2.0	30.02	8.55	YES	YES	---	---	---	---
021877	2.0	26.22	6.71	YES	YES	---	---	---	---
021977	N/A	25.94	4.93	---	---	---	---	---	---
022077	N/A	26.45	4.87	---	---	---	---	---	---
022177	N/A	25.15	4.50	---	---	---	---	---	---
022277	4.0	22.40	4.42	YES	YES	---	---	---	---
022377	5.0	24.00	5.32	YES	YES	---	---	---	---
022477	4.5	49.27	48.99	YES	YES	---	---	---	---
022577	3.0	201.62	183.78	YES	YES	---	---	---	---
022677	N/A	153.48	32.85	---	---	---	---	---	---
022777	N/A	102.79	21.04	---	---	---	---	---	---
022877	6.0	103.07	26.50	YES	YES	---	---	---	---
030177	4.5	95.71	16.23	YES	YES	---	---	---	---
030277	3.0	78.15	11.72	YES	YES	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
030377	4.5	66.26	9.34	YES	YES				
030477	6.5	78.15	39.93	YES	YES				
030577	N/A	348.30	86.65	---	---	---	---	---	---
030677	N/A	265.05	29.17	---	---	---	---	---	---
030777	6.0	179.25	17.90	YES	YES				
030877	6.0	132.81	13.56	YES	YES				
030977	7.0	104.00	10.93	YES	YES				
031077	8.0	86.08	9.51	YES	YES				
031177	9.0	74.76	8.61	YES	YES				
031277	N/A	66.54	7.87	---	---	---	---	---	---
031377	N/A	109.02	29.45	---	---	---	---	---	---
031477	10.0	342.63	196.80	YES	YES				
031577	10.0	260.51	46.16	YES	YES				
031677	10.0	189.72	24.58	YES	YES				
031777	8.0	144.70	16.45	YES	YES				
031877	7.0	118.93	13.22	YES	YES				
031977	N/A	115.82	23.79	---	---	---	---	---	---
032077	N/A	99.39	15.04	---	---	---	---	---	---
032177	6.5	90.33	15.46	YES	YES				
032277	8.0	173.58	36.81	YES	YES				
032377	N/A	444.57	267.31	---	---	---	---	---	---
032477	6.0	300.16	43.89	YES	YES				
032577	5.5	271.00	24.75	YES	YES				
032677	N/A	157.16	17.90	---	---	---	---	---	---
032777	N/A	126.29	13.42	---	---	---	---	---	---
032877	8.5	107.60	12.32	YES	YES				
032977	10.0	98.54	11.84	YES	YES				
033077	13.0	88.63	10.51	YES	YES				
033177	15.0	76.74	9.74	YES	YES				
040177	12.5	68.53	7.73	YES	YES				
040277	N/A	79.85	28.60	YES	YES				
040377	N/A	182.64	56.63	YES	YES				
040477	11.5	163.39	23.87	YES	YES				
040577	8.0	297.33	224.55	YES	YES				
040677	8.0	271.27	61.73	YES	YES				
040777	8.0	196.24	29.17	YES	YES				
040877	N/A	157.16	21.80	YES	YES				
040977	N/A	126.29	16.06	YES	YES				
041077	N/A	107.60	13.82	YES	YES				
041177	10.0	95.14	12.32	YES	YES				
041277	13.0	85.80	11.24	YES	YES				
041377	14.5	75.00	9.91	YES	YES				
041477	15.0	69.94	9.12	YES	YES				
041577	15.0	64.56	8.07	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
041677	N/A	60.31	7.50	YES	YES				
041777	N/A	56.92	6.85	YES	YES				
041877	15.0	53.80	6.57	YES	YES				
041977	16.0	51.54	6.48	YES	YES				
042077	15.5	49.27	6.14			YES	YES		
042177	15.5	47.29	5.86			YES			YES
042277	17.0	44.74	5.66			YES			YES
042377	N/A	43.32	5.47	---	---	---	---	---	---
042477	N/A	48.99	5.44	---	---	---	---	---	---
042577	16.0	99.68	10.28	YES	YES				
042677	14.5	89.76	22.94	YES	YES				
042777	13.0	83.00	30.87	YES	YES				
042877	13.0	81.27	14.87	YES	YES				
042977	12.0	79.29	15.09	YES	YES				
043077	N/A	69.09	10.90	YES	YES				
050177	N/A	61.45	8.72	YES	YES				
050277	16.0	55.78	7.67	YES	YES				
050377	17.0	55.78	7.73	YES	YES				
050477	16.5	51.82	6.82	YES	YES				
050577	15.0	63.43	19.74	YES	YES				
050677	16.5	63.15	17.08	YES	YES				
050777	N/A	71.64	28.15	YES	YES				
050877	N/A	64.00	12.43	YES	YES				
050977	16.0	57.20	9.80	YES	YES				
051077	13.0	55.00	9.17	YES	YES				
051177	13.0	51.25	7.42	YES	YES				
051277	14.0	47.29	6.03	YES	YES				
051377	17.0	43.61	5.52			YES			YES
051477	N/A	41.34	4.87	---	---	---	---	---	---
051577	N/A	39.36	4.25	---	---	---	---	---	---
051677	17.5	37.38	3.88					YES	YES
051777	19.0	36.25	3.79					YES	YES
051877	21.0	35.11	3.62					YES	YES
051977	22.0	36.53	3.96					YES	YES
052077	22.0	36.81	3.71					YES	YES
052177	N/A	34.26	3.34	---	---	---	---	---	---
052277	N/A	32.56	2.94	---	---	---	---	---	---
052377	23.0	30.58	2.69					YES	YES
052477	24.5	28.00	2.55					YES	YES
052577	23.0	27.18	2.49					YES	YES
052677	22.5	26.33	2.35					YES	YES
052777	23.0	25.20	2.24					YES	YES
052877	N/A	24.49	2.27	---	---	---	---	---	---
052977	N/A	23.79	2.15	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

WILLAMETTE INDUSTRIES L.H. 02903

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
053077	N/A	25.49	2.10	---	---	---	---	---	---
053177	20.5	24.35	2.18	---	---	---	---	YES	YES
060177	19.5	23.28	2.29	---	---	---	---	YES	YES
060277	21.0	24.55	2.66	---	---	---	---	YES	YES
060377	20.5	24.78	2.52	---	---	---	---	YES	YES
060477	N/A	21.75	2.24	---	---	---	---	---	---
060577	N/A	20.61	1.81	---	---	---	---	---	---
060677	21.0	21.89	2.01	---	---	---	---	YES	YES
060777	18.0	27.00	2.83	---	---	---	---	YES	YES
060877	16.5	25.15	2.49	---	---	---	---	YES	YES
060977	19.0	24.27	2.63	---	---	---	---	YES	YES
061077	12.5	37.38	7.42	YES	YES	---	---	---	---
061177	N/A	30.02	4.93	---	---	---	---	---	---
061277	N/A	24.18	3.11	---	---	---	---	---	---
061377	N/A	21.80	2.58	---	---	---	---	---	---
061477	22.5	20.47	2.29	---	---	---	---	YES	YES
061577	21.0	21.29	2.35	---	---	---	---	YES	YES
061677	22.5	20.53	2.24	---	---	---	---	YES	YES
061777	23.0	19.23	2.04	---	---	---	---	YES	YES
061877	N/A	20.90	2.10	---	---	---	---	---	---
061977	N/A	26.19	3.09	---	---	---	---	---	---
062077	25.0	21.69	2.38	---	---	---	---	YES	YES
062177	23.0	28.00	4.59	---	---	---	---	YES	YES
062277	21.0	23.36	3.43	---	---	---	---	YES	YES
062377	22.0	19.26	2.35	---	---	---	---	YES	YES
062477	23.5	17.95	2.04	---	---	---	---	YES	YES
062577	N/A	17.39	1.95	---	---	---	---	---	---
062677	N/A	31.43	2.24	---	---	---	---	---	---
062777	23.0	31.71	2.32	---	---	---	---	YES	YES
062877	24.0	23.81	2.24	---	---	---	---	YES	YES
062977	24.0	28.88	3.48	---	---	---	---	YES	YES
063077	23.5	26.25	2.92	---	---	---	---	YES	YES
070177	23.0	21.29	2.21	---	---	---	---	YES	YES
070277	N/A	19.26	2.04	---	---	---	---	---	---
070377	N/A	17.92	1.90	---	---	---	---	---	---
070477	N/A	16.93	1.61	---	---	---	---	---	---
070577	25.5	17.00	1.44	---	---	---	---	YES	YES
070677	27.0	16.79	1.67	---	---	---	---	YES	YES
070777	26.5	27.44	2.29	---	---	---	---	YES	YES
070877	25.0	28.88	2.38	---	---	---	---	YES	YES
070977	N/A	27.01	2.44	---	---	---	---	---	---
071077	N/A	22.80	2.04	---	---	---	---	---	---
071177	25.0	19.94	1.73	---	---	---	---	YES	YES
071277	25.0	27.33	4.96	---	---	---	---	YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
071377	24.0	38.79	15.15			YES	YES		
071477	26.5	32.00	5.30			YES			YES
071577	27.0	22.71	2.86					YES	YES
071677	N/A	19.77	2.18	---	---	---	---	---	---
071777	N/A	18.69	1.95	---	---	---	---	---	---
071877	29.5	19.82	1.78					YES	YES
071977	29.0	23.00	1.73					YES	YES
072077	29.0	31.43	2.12					YES	YES
072177	27.5	35.96	2.69					YES	YES
072277	27.0	25.80	2.15					YES	YES
072377	N/A	21.61	1.87	---	---	---	---	---	---
072477	N/A	18.60	1.70	---	---	---	---	---	---
072577	25.0	17.70	1.76					YES	YES
072677	23.5	21.66	1.78					YES	YES
072777	23.5	21.32	1.53					YES	YES
072877	22.5	17.78	1.50					YES	YES
072977	23.0	16.42	1.47					YES	YES
073077	N/A	15.97	1.44	---	---	---	---	---	---
073177	N/A	16.00	1.42	---	---	---	---	---	---
080177	24.5	19.06	2.10					YES	YES
080277	23.5	19.00	8.52			YES	YES		
080377	24.5	19.43	2.97					YES	YES
080477	23.5	32.00	4.25					YES	YES
080577	25.0	24.18	2.89					YES	YES
080677	N/A	19.88	2.35	---	---	---	---	---	---
080777	N/A	23.02	4.53	---	---	---	---	---	---
080877	26.5	23.67	2.69					YES	YES
080977	26.5	21.92	1.98					YES	YES
081077	27.0	27.72	1.78					YES	YES
081177	26.0	29.17	2.69					YES	YES
081277	27.0	30.87	2.97					YES	YES
081377	N/A	31.71	4.11	---	---	---	---	---	---
081477	N/A	38.51	8.92	---	---	---	---	---	---
081577	23.5	30.30	4.79					YES	YES
081677	25.0	24.47	3.14					YES	YES
081777	26.0	22.43	2.55					YES	YES
081877	23.5	25.26	3.45					YES	YES
081977	22.0	25.23	2.55					YES	YES
082077	N/A	20.67	1.98	---	---	---	---	---	---
082177	N/A	18.69	1.73	---	---	---	---	---	---
082277	22.0	19.11	2.10					YES	YES
082377	23.0	26.22	2.21					YES	YES
082477	22.0	23.28	2.15					YES	YES
082577	20.0	21.04	2.21					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
082677	21.0	19.31	1.93					YES	YES
082777	N/A	17.78	1.67	---	---	---	---	---	---
082877	N/A	17.16	1.56	---	---	---	---	---	---
082977	25.5	16.99	1.47					YES	YES
083077	28.0	16.00	1.42					YES	YES
083177	26.5	15.69	1.67					YES	YES
090177	25.0	16.54	1.67					YES	YES
090277	25.0	16.23	1.61					YES	YES
090377	N/A	15.55	1.61	---	---	---	---	---	---
090477	N/A	17.44	1.56	---	---	---	---	---	---
090577	N/A	16.00	1.08	---	---	---	---	---	---
090677	25.0	14.72	1.27					YES	YES
090777	24.5	14.64	1.33					YES	YES
090877	22.5	14.44	1.33					YES	YES
090977	22.0	14.10	1.33					YES	YES
091077	N/A	13.62	1.27	---	---	---	---	---	---
091177	N/A	13.08	1.22	---	---	---	---	---	---
091277	19.0	12.52	1.19					YES	YES
091377	21.0	17.00	1.22					YES	YES
091477	20.5	12.23	1.22					YES	YES
091577	19.0	12.57	1.67					YES	YES
091677	19.5	12.60	1.73					YES	YES
091777	N/A	15.12	1.61	---	---	---	---	---	---
091877	N/A	20.27	1.78	---	---	---	---	---	---
091977	22.0	16.42	1.78					YES	YES
092077	22.5	15.49	2.10					YES	YES
092177	21.5	15.60	1.84					YES	YES
092277	21.5	16.40	1.73					YES	YES
092377	19.0	15.66	1.73					YES	YES
092477	N/A	16.23	2.55	---	---	---	---	---	---
092577	N/A	30.30	6.23	---	---	---	---	---	---
092677	17.0	49.84	4.90					YES	YES
092777	18.0	64.00	3.11					YES	YES
092877	17.0	46.16	2.92					YES	YES
092977	16.0	37.38	2.52					YES	YES
093077	16.5	30.87	2.10					YES	YES
100177	N/A	27.50	2.01	---	---	---	---	---	---
100277	N/A	39.64	2.35	---	---	---	---	---	---
100377	16.5	44.74	2.38					YES	YES
100477	15.0	35.96	1.90	YES	YES				
100577	15.0	30.87	1.73	YES	YES				
100677	15.0	28.32	1.59	YES	YES				
100777	14.0	27.64	1.56	YES	YES				
100877	N/A	25.94	1.53	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
100977	N/A	31.15	4.02	---	---	---	---	---	---
101077	N/A	112.13	9.94	---	---	---	---	---	---
101177	13.0	79.00	4.67	YES	YES	---	---	---	---
101277	13.0	58.90	3.62	YES	YES	---	---	---	---
101377	13.0	46.16	2.94	YES	YES	---	---	---	---
101477	12.5	41.91	3.00	YES	YES	---	---	---	---
101577	N/A	70.79	21.38	---	---	---	---	---	---
101677	N/A	98.26	17.22	---	---	---	---	---	---
101777	10.0	151.49	62.86	YES	YES	---	---	---	---
101877	9.5	182.64	18.92	YES	YES	---	---	---	---
101977	9.5	127.71	12.77	YES	YES	---	---	---	---
102077	10.0	107.32	15.63	YES	YES	---	---	---	---
102177	10.0	84.95	9.63	YES	YES	---	---	---	---
102277	N/A	71.92	7.08	---	---	---	---	---	---
102377	N/A	62.58	5.75	---	---	---	---	---	---
102477	10.5	54.37	4.76	YES	YES	---	---	---	---
102577	N/A	N/A	4.30	---	---	---	---	---	---
102677	12.0	46.16	4.08	YES	YES	---	---	---	---
102777	12.5	48.14	4.36	YES	YES	---	---	---	---
102877	14.5	43.89	4.08	YES	YES	---	---	---	---
102977	N/A	38.79	3.62	---	---	---	---	---	---
103077	N/A	35.11	3.31	---	---	---	---	---	---
103177	12.0	33.13	2.97	YES	YES	---	---	---	---
110177	11.0	31.43	2.86	YES	YES	---	---	---	---
110277	13.0	30.30	2.89	YES	YES	---	---	---	---
110377	14.5	30.87	2.97	YES	YES	---	---	---	---
110477	15.5	41.63	3.28	---	---	---	---	YES	YES
110577	N/A	42.48	3.51	---	---	---	---	---	---
110677	N/A	36.53	3.23	---	---	---	---	---	---
110777	14.0	84.67	72.77	YES	YES	---	---	---	---
110877	12.5	294.49	144.42	YES	YES	---	---	---	---
110977	13.0	240.00	35.11	YES	YES	---	---	---	---
111077	13.0	147.81	19.68	YES	YES	---	---	---	---
111177	12.0	207.00	33.98	YES	YES	---	---	---	---
111277	N/A	177.83	17.50	---	---	---	---	---	---
111377	N/A	133.94	12.57	---	---	---	---	---	---
111477	6.0	103.92	9.71	YES	YES	---	---	---	---
111577	6.5	85.80	8.52	YES	YES	---	---	---	---
111677	8.0	74.47	7.76	YES	YES	---	---	---	---
111777	10.0	71.64	10.79	YES	YES	---	---	---	---
111877	9.5	79.00	27.47	YES	YES	---	---	---	---
111977	N/A	61.16	12.97	---	---	---	---	---	---
112077	N/A	53.52	9.43	---	---	---	---	---	---
112177	8.0	49.00	8.27	YES	YES	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
112277	8.5	50.40	9.34	YES	YES				
112377	8.0	61.45	26.96	YES	YES				
112477	N/A	57.77	22.00	---	---	---	---	---	---
112577	8.0	52.10	15.18	YES	YES				
112677	N/A	105.62	94.29	---	---	---	---	---	---
112777	N/A	95.14	28.06	---	---	---	---	---	---
112877	4.5	87.99	17.13	YES	YES				
112977	4.5	73.06	14.47	YES	YES				
113077	5.0	74.19	25.17	YES	YES				
120177	5.5	217.76	134.50	YES	YES				
120277	5.5	225.68	37.02	YES	YES				
120377	N/A	159.99	20.55	---	---	---	---	---	---
120477	N/A	125.44	15.25	---	---	---	---	---	---
120577	5.0	109.30	15.45	YES	YES				
120677	4.5	143.00	39.51	YES	YES				
120777	3.0	114.97	18.18	YES	YES				
120877	1.5	93.73	10.89	YES	YES				
120977	2.0	84.95	10.56	YES	YES				
121077	N/A	74.76	7.78	---	---	---	---	---	---
121177	N/A	64.00	8.19	---	---	---	---	---	---
121277	0.0	57.48	7.92	YES	YES				
121377	1.0	59.18	6.83	YES	YES				
121477	2.0	68.81	23.84	YES	YES				
121577	3.0	143.85	78.33	YES	YES				
121677	3.0	130.82	26.78	YES	YES				
121777	N/A	115.53	17.10	---	---	---	---	---	---
121877	N/A	197.65	145.50	---	---	---	---	---	---
121977	3.5	266.46	106.41	YES	YES				
122077	4.0	218.89	41.12	YES	YES				
122177	5.0	278.64	148.38	YES	YES				
122277	4.0	342.63	55.15	YES	YES				
122377	3.5	244.37	26.50	YES	YES				
122477	N/A	186.89	19.58	---	---	---	---	---	---
122577	N/A	173.58	42.42	---	---	---	---	---	---
122677	N/A	163.10	27.05	---	---	---	---	---	---
122777	1.0	130.82	13.88	YES	YES				
122877	1.0	116.00	13.31	YES	YES				
122977	0.0	98.83	10.56	YES	YES				
123077	0.5	90.61	10.40	YES	YES				
123177	N/A	82.69	8.33	---	---	---	---	---	---
010178	N/A	77.02	7.92	---	---	---	---	---	---
010278	N/A	71.92	7.65	---	---	---	---	---	---
010378	0.5	64.56	6.96	YES	YES				
010478	0.0	57.20	7.23	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
010578	0.5	56.35	7.78	YES	YES				
010678	2.0	54.93	6.70	YES	YES				
010778	N/A	53.80	6.83	---	---	---	---	---	---
010878	N/A	57.48	9.78	---	---	---	---	---	---
010978	5.0	385.11	179.22	YES	YES				
011078	0.5	359.62	33.41	YES	YES				
011178	0.0	198.22	17.31	YES	YES				
011278	0.0	156.59	12.95	YES	YES				
011378	0.0	121.48	11.39	YES	YES				
011478	N/A	146.11	42.09	---	---	---	---	---	---
011578	N/A	110.44	20.31	---	---	---	---	---	---
011678	0.0	86.08	12.77	YES	YES				
011778	0.0	80.42	10.73	YES	YES				
011878	0.0	112.13	45.62	YES	YES				
011978	0.0	89.48	27.88	YES	YES				
012078	N/A	77.30	14.65	---	---	---	---	---	---
012178	N/A	72.77	16.26	---	---	---	---	---	---
012278	N/A	69.38	13.69	---	---	---	---	---	---
012378	0.0	60.31	11.56	YES	YES				
012478	0.0	56.35	10.89	YES	YES				
012578	1.0	96.28	49.84	YES	YES				
012678	0.0	622.97	413.48	YES	YES				
012778	N/A	566.34	87.03	---	---	---	---	---	---
012878	N/A	270.43	34.30	---	---	---	---	---	---
012978	N/A	208.41	22.55	---	---	---	---	---	---
013078	0.0	156.31	16.89	YES	YES				
013178	0.0	160.56	14.26	YES	YES				
020178	0.0	136.77	12.07	YES	YES				
020278	0.0	111.29	11.22	YES	YES				
020378	0.0	82.69	9.63	YES	YES				
020478	N/A	72.21	9.78	---	---	---	---	---	---
020578	N/A	65.13	9.04	---	---	---	---	---	---
020678	N/A	64.28	7.51	---	---	---	---	---	---
020778	N/A	59.18	9.78	---	---	---	---	---	---
020878	N/A	63.71	10.56	---	---	---	---	---	---
020978	N/A	58.62	9.63	---	---	---	---	---	---
021078	N/A	54.09	9.04	---	---	---	---	---	---
021178	N/A	52.10	8.76	---	---	---	---	---	---
021278	N/A	51.25	8.76	---	---	---	---	---	---
021378	N/A	48.99	8.19	---	---	---	---	---	---
021478	N/A	48.99	6.96	---	---	---	---	---	---
021578	N/A	46.16	8.47	---	---	---	---	---	---
021678	2.0	43.04	7.37	YES	YES				
021778	2.0	42.48	6.31	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
021878	N/A	41.91	7.78	---	---	---	---	---	---
021978	N/A	40.73	6.83	---	---	---	---	---	---
022078	N/A	37.38	6.51	---	---	---	---	---	---
022178	0.5	37.10	6.23	YES	YES	---	---	---	---
022278	0.0	36.53	5.95	YES	YES	---	---	---	---
022378	0.0	34.55	5.80	YES	YES	---	---	---	---
022478	0.5	36.25	5.66	YES	YES	---	---	---	---
022578	N/A	35.68	5.46	---	---	---	---	---	---
022678	N/A	35.68	5.80	---	---	---	---	---	---
022778	1.0	34.26	5.57	YES	YES	---	---	---	---
022878	1.0	33.13	5.69	YES	YES	---	---	---	---
030178	1.0	32.85	5.46	YES	YES	---	---	---	---
030278	1.0	31.71	5.69	YES	YES	---	---	---	---
030378	N/A	31.71	5.80	---	---	---	---	---	---
030478	N/A	25.94	6.05	---	---	---	---	---	---
030578	N/A	29.45	5.35	---	---	---	---	---	---
030678	0.5	28.88	4.90	YES	YES	---	---	---	---
030778	1.0	28.32	5.01	YES	YES	---	---	---	---
030878	N/A	29.17	4.58	---	---	---	---	---	---
030978	1.5	28.60	4.38	YES	YES	---	---	---	---
031078	N/A	28.88	4.79	---	---	---	---	---	---
031178	N/A	30.58	6.18	---	---	---	---	---	---
031278	N/A	36.25	9.78	---	---	---	---	---	---
031378	4.0	55.78	30.15	YES	YES	---	---	---	---
031478	4.5	141.30	110.04	YES	YES	---	---	---	---
031578	3.0	362.45	153.38	YES	YES	---	---	---	---
031678	2.0	294.49	73.93	YES	YES	---	---	---	---
031778	2.5	184.91	33.41	YES	YES	---	---	---	---
031878	N/A	141.30	27.32	---	---	---	---	---	---
031978	N/A	131.11	41.12	---	---	---	---	---	---
032078	4.0	163.00	61.98	YES	YES	---	---	---	---
032178	4.0	164.52	58.65	YES	YES	---	---	---	---
032278	5.0	188.87	75.50	YES	YES	---	---	---	---
032378	6.0	185.76	46.22	YES	YES	---	---	---	---
032478	N/A	181.23	39.20	---	---	---	---	---	---
032578	N/A	156.59	24.90	---	---	---	---	---	---
032678	N/A	206.71	103.54	---	---	---	---	---	---
032778	4.5	583.33	252.59	YES	YES	---	---	---	---
032878	4.5	518.20	65.06	YES	YES	---	---	---	---
032978	5.5	331.31	33.71	YES	YES	---	---	---	---
033078	6.5	241.83	22.29	YES	YES	---	---	---	---
033178	7.0	192.84	17.74	YES	YES	---	---	---	---
040178	N/A	159.14	15.05	YES	YES	---	---	---	---
040278	N/A	134.50	12.07	YES	YES	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
040378	4.0	114.68	10.73	YES	YES				
040478	6.0	107.60	13.13	YES	YES				
040578	7.0	105.34	14.46	YES	YES				
040678	8.0	90.90	11.56	YES	YES				
040778	8.0	87.50	12.42	YES	YES				
040878	N/A	81.27	9.63	YES	YES				
040978	N/A	73.34	8.19	YES	YES				
041078	9.5	68.53	7.65	YES	YES				
041178	11.0	69.38	7.65	YES	YES				
041278	11.5	68.24	8.35	YES	YES				
041378	12.5	62.86	7.79	YES	YES				
041478	12.0	58.33	7.50	YES	YES				
041578	N/A	54.93	6.57	YES	YES				
041678	N/A	52.67	6.17	YES	YES				
041778	9.5	50.69	5.95	YES	YES				
041878	N/A	N/A	6.06	---	---	---	---	---	---
041978	11.0	54.65	6.82	YES	YES				
042078	10.5	76.74	35.96	YES	YES				
042178	10.5	71.64	19.31	YES	YES				
042278	N/A	61.16	11.78	YES	YES				
042378	N/A	55.50	7.79	YES	YES				
042478	12.5	52.67	7.65	YES	YES				
042578	13.0	51.82	7.22	YES	YES				
042678	13.0	49.84	6.82	YES	YES				
042778	11.5	48.42	6.57	YES	YES				
042878	12.0	46.72	6.31	YES	YES				
042978	N/A	44.17	5.80	---	---	---	---	---	---
043078	N/A	42.76	5.47	---	---	---	---	---	---
050178	12.5	40.78	5.13	YES	YES				
050278	14.5	37.00	4.67	YES	YES				
050378	13.0	38.79	4.59	YES	YES				
050478	13.0	37.94	4.59	YES	YES				
050578	12.5	43.04	5.92	YES	YES				
050678	N/A	45.87	6.71	---	---	---	---	---	---
050778	N/A	42.48	6.17	---	---	---	---	---	---
050878	12.5	39.36	5.47	YES	YES				
050978	15.0	57.48	15.04	YES	YES				
051078	13.5	57.48	12.80	YES	YES				
051178	14.5	46.72	7.51	YES	YES				
051278	15.0	43.32	6.57	YES	YES				
051378	N/A	43.04	6.18	---	---	---	---	---	---
051478	N/A	156.88	67.24	YES	YES				
051578	12.5	359.62	44.41	YES	YES				
051678	11.0	233.90	37.02	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

WILLAMETTE INDUSTRIES L.H. 02903

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
051778	12.0	245.79	79.92	YES	YES				
051878	12.5	251.17	87.03	YES	YES				
051978	13.0	214.07	35.49	YES	YES				
052078	N/A	171.32	20.31	YES	YES				
052178	N/A	139.04	14.65	YES	YES				
052278	17.0	117.00	10.56	YES	YES				
052378	15.5	97.98	8.76	YES	YES				
052478	15.0	128.28	107.86	YES	YES				
052578	14.0	152.34	71.69	YES	YES				
052678	15.0	111.85	25.69	YES	YES				
052778	N/A	94.58	16.06	YES	YES				
052878	N/A	85.80	12.77	YES	YES				
052978	N/A	78.44	10.56	YES	YES				
053078	19.0	73.62	9.19	YES	YES				
053178	22.0	69.09	7.92	YES	YES				
060178	22.0	63.71	7.23	YES	YES				
060278	22.5	59.47	6.57	YES	YES				
060378	N/A	57.48	6.70	YES	YES				
060478	N/A	67.11	13.69	YES	YES				
060578	19.0	55.50	7.65	YES	YES				
060678	20.0	46.00	6.31			YES	YES		
060778	21.0	46.16	5.35			YES		YES	
060878	20.0	53.80	6.83	YES	YES				
060978	20.0	53.80	6.70	YES	YES				
061078	N/A	70.51	5.57	YES	YES				
061178	N/A	52.67	4.38	YES	YES				
061278	20.5	46.72	3.81					YES	YES
061378	22.0	48.70	6.44			YES	YES		
061478	N/A	49.55	6.57	---	---	---	---		
061578	17.0	41.34	4.47					YES	YES
061678	19.0	37.94	3.72					YES	YES
061778	N/A	37.10	3.54	---	---	---	---		
061878	N/A	36.53	3.54	---	---	---	---		
061978	21.5	35.11	3.54					YES	YES
062078	24.5	31.00	3.21					YES	YES
062178	24.0	32.85	3.13					YES	YES
062278	22.0	42.48	8.61			YES	YES		
062378	22.5	37.94	7.37			YES	YES		
062478	N/A	32.28	4.79	---	---	---	---		
062578	N/A	29.45	3.63	---	---	---	---		
062678	22.5	28.09	3.29					YES	YES
062778	24.0	29.17	4.19					YES	YES
062878	25.0	28.32	4.19					YES	YES
062978	23.5	26.19	3.29					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
063078	26.0	24.58	3.72					YES	YES
070178	N/A	25.03	3.21						
070278	N/A	23.45	2.55						
070378	21.0	56.35	17.95			YES	YES		
070478	N/A	69.66	59.85						
070578	17.5	45.87	14.07			YES	YES		
070678	22.0	33.70	7.51			YES	YES		
070778	22.0	29.17	6.18			YES	YES		
070878	N/A	26.87	5.12						
070978	N/A	25.71	4.38						
071078	26.5	25.71	3.91					YES	YES
071178	26.0	28.00	3.91					YES	YES
071278	23.0	24.81	3.21					YES	YES
071378	23.0	22.77	2.82					YES	YES
071478	24.5	21.41	2.55					YES	YES
071578	N/A	36.25	3.81						
071678	N/A	41.34	4.58						
071778	22.0	30.87	5.35			YES			YES
071878	23.0	28.60	6.18			YES	YES		
071978	24.0	24.81	3.81					YES	YES
072078	27.0	23.22	3.05					YES	YES
072178	27.0	22.09	2.61					YES	YES
072278	N/A	21.18	2.41						
072378	N/A	20.53	2.28						
072478	28.0	20.08	1.15					YES	YES
072578	27.0	19.00	2.09					YES	YES
072678	25.0	21.41	1.97					YES	YES
072778	25.0	21.18	1.74					YES	YES
072878	26.0	24.13	2.15					YES	YES
072978	N/A	21.41	2.28						
073078	N/A	19.85	1.97						
073178	24.0	30.02	6.05			YES	YES		
080178	22.0	33.70	7.78			YES	YES		
080278	22.0	28.32	5.35			YES			YES
080378	25.0	24.13	3.72					YES	YES
080478	25.0	27.13	3.81					YES	YES
080578	N/A	30.87	4.38						
080678	N/A	28.32	5.46						
080778	24.0	97.98	29.29			YES	YES		
080878	24.5	143.00	12.07			YES	YES		
080978	24.0	120.35	6.70			YES	YES		
081078	25.0	78.44	4.79					YES	YES
081178	24.0	61.73	5.23			YES			YES
081278	N/A	65.98	17.95						

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
081378	N/A	62.58	48.02	---	---	---	---	---	---
081478	25.0	51.54	10.56	---	---	YES	YES	---	---
081578	26.0	44.74	6.70	---	---	YES	YES	---	---
081678	26.0	39.64	5.35	---	---	YES	---	---	YES
081778	27.0	36.53	4.47	---	---	---	---	YES	YES
081878	26.5	33.70	3.72	---	---	---	---	YES	YES
081978	N/A	31.71	3.13	---	---	---	---	---	---
082078	N/A	29.73	2.82	---	---	---	---	---	---
082178	25.0	28.09	2.61	---	---	---	---	YES	YES
082278	24.5	26.87	2.41	---	---	---	---	YES	YES
082378	27.0	26.42	2.28	---	---	---	---	YES	YES
082478	N/A	25.49	2.28	---	---	---	---	---	---
082578	26.0	25.03	2.15	---	---	---	---	YES	YES
082678	N/A	25.71	2.31	---	---	---	---	---	---
082778	N/A	33.98	2.15	---	---	---	---	---	---
082878	24.0	59.47	6.70	---	---	YES	YES	---	---
082978	25.0	64.56	13.50	---	---	YES	YES	---	---
083078	N/A	39.64	6.44	---	---	---	---	---	---
083178	N/A	34.83	5.57	---	---	---	---	---	---
090178	24.0	44.46	21.29	---	---	YES	YES	---	---
090278	N/A	34.83	5.19	---	---	---	---	---	---
090378	N/A	30.30	5.41	---	---	---	---	---	---
090478	N/A	27.84	4.13	---	---	---	---	---	---
090578	22.5	22.00	3.31	---	---	---	---	YES	YES
090678	23.0	25.03	2.86	---	---	---	---	YES	YES
090778	25.0	24.81	2.63	---	---	---	---	YES	YES
090878	21.0	24.58	2.41	---	---	---	---	YES	YES
090978	N/A	24.81	2.58	---	---	---	---	---	---
091078	N/A	24.13	2.52	---	---	---	---	---	---
091178	22.0	23.22	2.38	---	---	---	---	YES	YES
091278	26.0	23.45	2.46	---	---	---	---	YES	YES
091378	21.0	26.42	4.67	---	---	---	---	YES	YES
091478	22.0	24.35	2.92	---	---	---	---	YES	YES
091578	21.0	24.13	2.69	---	---	---	---	YES	YES
091678	N/A	25.49	3.14	---	---	---	---	---	---
091778	N/A	25.03	2.66	---	---	---	---	---	---
091878	26.0	24.58	2.35	---	---	---	---	YES	YES
091978	22.5	20.00	4.64	---	---	---	---	YES	YES
092078	23.0	36.53	5.92	---	---	YES	---	---	YES
092178	23.0	29.17	3.62	---	---	---	---	YES	YES
092278	24.0	26.65	2.92	---	---	---	---	YES	YES
092378	N/A	33.13	2.63	---	---	---	---	---	---
092478	N/A	28.09	2.38	---	---	---	---	---	---
092578	N/A	25.49	2.21	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
092678	21.0	24.35	2.10					YES	YES
092778	19.0	23.90	2.01					YES	YES
092878	19.0	23.90	1.95					YES	YES
092978	17.0	22.99	1.93					YES	YES
093078	N/A	22.09	1.87	---	---	---	---	---	---
100178	N/A	21.86	1.84	---	---	---	---	---	---
100278	19.0	21.86	1.81					YES	YES
100378	17.0	18.00	1.98					YES	YES
100478	18.0	22.09	2.04					YES	YES
100578	18.0	23.67	2.12					YES	YES
100678	19.0	32.00	5.95			YES	YES		
100778	N/A	34.55	4.28	---	---	---	---	---	---
100878	N/A	25.71	2.69	---	---	---	---	---	---
100978	16.0	23.67	2.24					YES	YES
101078	14.0	22.99	2.21	YES	YES				
101178	18.0	22.31	2.27					YES	YES
101278	16.5	21.86	2.21					YES	YES
101378	17.0	21.41	2.18					YES	YES
101478	N/A	26.42	2.46	---	---	---	---	---	---
101578	N/A	41.06	3.68	---	---	---	---	---	---
101678	13.5	28.00	2.94	YES	YES				
101778	13.0	32.56	3.99	YES	YES				
101878	14.0	30.02	4.42	YES	YES				
101978	14.0	27.13	3.11	YES	YES				
102078	13.5	26.42	2.92	YES	YES				
102178	N/A	25.49	2.78	---	---	---	---	---	---
102278	N/A	24.58	2.61	---	---	---	---	---	---
102378	17.0	23.67	2.52					YES	YES
102478	13.0	23.45	2.35	YES	YES				
102578	11.0	22.31	2.41	YES	YES				
102678	13.0	22.09	2.46	YES	YES				
102778	10.0	25.26	4.98	YES	YES				
102878	N/A	26.42	4.81	---	---	---	---	---	---
102978	N/A	23.90	3.40	---	---	---	---	---	---
103078	12.0	18.00	3.06	YES	YES				
103178	16.5	22.54	2.75					YES	YES
110178	12.0	22.31	2.61	YES	YES				
110278	12.0	22.09	2.58	YES	YES				
110378	12.0	21.63	2.46	YES	YES				
110478	N/A	21.18	2.55	---	---	---	---	---	---
110578	N/A	21.63	2.41	---	---	---	---	---	---
110678	8.0	21.41	2.38	YES	YES				
110778	9.0	20.98	2.29	YES	YES				
110878	8.0	20.98	2.46	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIAMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIAMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
110978	13.0	20.98	2.46	YES	YES				
111078	N/A	20.76	2.46	---	---	---	---	---	---
111178	N/A	20.53	2.21	---	---	---	---	---	---
111278	N/A	20.53	2.15	---	---	---	---	---	---
111378	9.0	16.00	2.07	YES	YES				
111478	13.0	20.08	2.07	YES	YES				
111578	15.0	20.30	2.07	YES	YES				
111678	9.0	20.53	2.18	YES	YES				
111778	11.5	21.63	2.12	YES	YES				
111878	N/A	30.58	5.21	---	---	---	---	---	---
111978	N/A	34.83	5.35	---	---	---	---	---	---
112078	N/A	26.42	3.34	---	---	---	---	---	---
112178	N/A	24.13	2.86	---	---	---	---	---	---
112278	N/A	23.45	2.66	---	---	---	---	---	---
112378	N/A	23.22	2.58	---	---	---	---	---	---
112478	N/A	25.49	3.37	---	---	---	---	---	---
112578	N/A	27.58	3.94	---	---	---	---	---	---
112678	N/A	25.26	3.11	---	---	---	---	---	---
112778	N/A	24.81	2.83	---	---	---	---	---	---
112878	N/A	25.71	3.17	---	---	---	---	---	---
112978	6.0	27.13	3.74	YES	YES				
113078	6.0	34.26	18.66	YES	YES				
120178	6.0	34.26	13.31	YES	YES				
120278	N/A	31.71	8.07	---	---	---	---	---	---
120378	N/A	30.58	6.94	---	---	---	---	---	---
120478	8.5	31.00	24.38	YES	YES				
120578	8.0	56.35	35.40	YES	YES				
120678	7.0	48.42	17.27	YES	YES				
120778	N/A	43.61	9.63	---	---	---	---	---	---
120878	8.0	41.34	8.21	YES	YES				
120978	N/A	109.02	120.91	---	---	---	---	---	---
121078	N/A	147.81	64.28	---	---	---	---	---	---
121178	4.0	105.62	21.07	YES	YES				
121278	4.0	82.40	13.31	YES	YES				
121378	N/A	70.23	10.08	---	---	---	---	---	---
121478	4.0	61.45	8.78	YES	YES				
121578	4.0	54.65	7.22	YES	YES				
121678	N/A	49.55	6.68	---	---	---	---	---	---
121778	N/A	46.16	7.22	---	---	---	---	---	---
121878	3.5	39.00	6.68	YES	YES				
121978	3.0	39.36	5.80	YES	YES				
122078	3.0	36.81	5.01	YES	YES				
122178	N/A	46.64	22.85	---	---	---	---	---	---
122278	N/A	48.99	17.08	---	---	---	---	---	---

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
122378	N/A	41.06	9.06	---	---	---	---	---	---
122478	N/A	39.36	8.21	---	---	---	---	---	---
122578	N/A	124.31	86.37	---	---	---	---	---	---
122678	N/A	109.30	26.62	---	---	---	---	---	---
122778	N/A	83.82	15.69	---	---	---	---	---	---
122878	N/A	67.96	8.78	---	---	---	---	---	---
122978	N/A	58.05	8.21	---	---	---	---	---	---
123078	N/A	53.52	7.93	---	---	---	---	---	---
123178	N/A	51.25	6.94	---	---	---	---	---	---
010179	7.0	69.09	31.71	YES	YES				
010279	8.0	185.48	182.36	YES	YES				
010379	10.0	311.48	91.75	YES	YES				
010479	8.0	197.65	23.36	YES	YES				
010579	7.0	140.17	15.89	YES	YES				
010679	6.0	113.27	12.12	YES	YES				
010779	7.0	105.34	14.50	YES	YES				
010879	8.0	322.81	201.33	YES	YES				
010979	6.0	265.05	51.25	YES	YES				
011079	5.0	176.70	22.60	YES	YES				
011179	4.0	137.62	15.49	YES	YES				
011279	5.0	109.87	11.61	YES	YES				
011379	5.0	96.56	10.93	YES	YES				
011479	6.0	103.36	22.09	YES	YES				
011579	5.0	91.75	16.68	YES	YES				
011679	5.0	75.61	11.27	YES	YES				
011779	5.0	67.96	7.65	YES	YES				
011879	6.0	62.30	7.65	YES	YES				
011979	5.0	52.95	7.65	YES	YES				
012079	5.0	54.93	10.93	YES	YES				
012179	5.0	294.49	255.98	YES	YES				
012279	5.0	430.42	85.23	YES	YES				
012379	5.0	201.33	30.30	YES	YES				
012479	6.0	385.11	258.82	YES	YES				
012579	7.0	1070.37	258.53	YES	YES				
012679	5.0	348.30	42.48	YES	YES				
012779	7.0	268.44	31.71	YES	YES				
012879	5.0	232.20	26.99	YES	YES				
012979	6.0	193.12	22.96	YES	YES				
013079	5.0	169.62	19.43	YES	YES				
013179	5.0	147.25	16.34	YES	YES				
020179	5.0	124.31	14.10	YES	YES				
020279	5.0	96.84	10.08	YES	YES				
020379	6.0	81.55	10.76	YES	YES				
020479	6.0	72.77	8.78	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
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CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
020579	6.0	64.00	7.79	YES	YES				
020679	5.0	53.80	7.79	YES	YES				
020779	6.0	60.31	8.07	YES	YES				
020879	5.0	58.33	8.21	YES	YES				
020979	5.0	54.37	8.21	YES	YES				
021079	4.0	47.86	7.65	YES	YES				
021179	4.0	46.72	7.65	YES	YES				
021279	0.0	44.74	7.65	YES	YES				
021379	0.0	45.59	8.21	YES	YES				
021479	0.0	43.89	7.65	YES	YES				
021579	0.0	45.59	6.94	YES	YES				
021679	0.0	46.16	7.36	YES	YES				
021779	0.0	40.49	6.94	YES	YES				
021879	0.0	36.53	6.37	YES	YES				
021979	0.0	33.93	5.95	YES	YES				
022079	0.0	38.23	7.08	YES	YES				
022179	0.0	42.76	8.50	YES	YES				
022279	0.0	47.86	11.33	YES	YES				
022379	0.0	53.24	23.47	YES	YES				
022479	0.0	210.96	114.97	YES	YES				
022579	0.0	521.03	219.74	YES	YES				
022679	0.0	696.59	283.17	YES	YES				
022779	0.0	317.15	72.49	YES	YES				
022879	0.0	222.57	43.32	YES	YES				
030179	0.0	196.80	36.53	YES	YES				
030279	0.0	177.83	32.56	YES	YES				
030379	0.0	165.94	29.17	YES	YES				
030479	0.0	155.46	22.99	YES	YES				
030579	0.0	164.80	33.98	YES	YES				
030679	0.0	291.66	71.92	YES	YES				
030779	0.0	276.66	50.69	YES	YES				
030879	0.0	208.69	28.15	YES	YES				
030979	0.0	166.50	20.61	YES	YES				
031079	0.0	139.04	17.92	YES	YES				
031179	0.0	160.56	57.48	YES	YES				
031279	8.0	141.02	26.53	YES	YES				
031379	9.0	129.69	17.75	YES	YES				
031479	10.0	113.83	16.37	YES	YES				
031579	9.0	102.79	14.70	YES	YES				
031679	8.0	87.50	9.49	YES	YES				
031779	8.0	80.42	8.78	YES	YES				
031879	9.0	75.61	8.50	YES	YES				
031979	8.0	71.08	7.79	YES	YES				
032079	9.0	66.83	7.93	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
032179	10.0	62.58	7.50	YES	YES				
032279	11.0	59.75	6.82	YES	YES				
032379	12.0	57.20	6.57	YES	YES				
032479	12.0	58.90	10.76	YES	YES				
032579	12.0	71.36	44.46	YES	YES				
032679	13.0	67.39	19.09	YES	YES				
032779	12.0	61.45	11.61	YES	YES				
032879	11.0	58.05	8.64	YES	YES				
032979	11.0	56.92	8.50	YES	YES				
033079	12.0	56.92	8.64	YES	YES				
033179	14.0	54.65	7.93	YES	YES				
040179	16.0	54.93	7.65	YES	YES				
040279	16.0	54.93	7.65	YES	YES				
040379	15.0	58.33	9.06	YES	YES				
040479	15.0	65.69	13.31	YES	YES				
040579	12.0	90.33	25.49	YES	YES				
040679	11.0	98.26	15.89	YES	YES				
040779	10.0	87.50	9.49	YES	YES				
040879	10.0	78.72	7.93	YES	YES				
040979	12.0	78.15	12.46	YES	YES				
041079	12.0	119.78	42.76	YES	YES				
041179	11.0	97.98	17.95	YES	YES				
041279	12.0	87.50	12.80	YES	YES				
041379	13.0	82.97	10.59	YES	YES				
041479	13.0	100.24	39.08	YES	YES				
041579	12.0	107.89	32.00	YES	YES				
041679	13.0	92.60	18.63	YES	YES				
041779	12.0	86.65	14.50	YES	YES				
041879	12.0	79.57	10.93	YES	YES				
041979	12.0	72.49	8.64	YES	YES				
042079	13.0	67.11	7.93	YES	YES				
042179	15.0	62.86	7.36	YES	YES				
042279	13.0	60.03	6.94	YES	YES				
042379	14.0	56.92	6.82	YES	YES				
042479	16.0	50.97	6.43	YES	YES				
042579	19.0	53.80	6.17	YES	YES				
042679	18.0	52.95	6.43	YES	YES				
042779	19.0	65.13	25.49	YES	YES				
042879	17.0	100.24	31.15	YES	YES				
042979	16.0	78.44	15.89	YES	YES				
043079	17.0	67.96	10.08	YES	YES				
050179	17.0	62.86	8.21	YES	YES				
050279	17.0	55.50	7.08	YES	YES				
050379	18.0	52.95	6.94	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
050479	18.0	60.03	7.93	YES	YES				
050579	17.0	60.03	7.36	YES	YES				
050679	16.0	51.82	6.31	YES	YES				
050779	17.0	47.29	5.80			YES			YES
050879	18.0	44.74	5.58			YES			YES
050979	19.0	43.89	5.35			YES			YES
051079	21.0	42.76	5.01					YES	YES
051179	22.0	42.48	4.59					YES	YES
051279	22.0	43.04	4.19					YES	YES
051379	21.0	42.48	4.59					YES	YES
051479	22.0	48.42	6.82			YES	YES		
051579	22.0	45.87	7.08			YES	YES		
051679	20.0	42.48	5.80			YES			YES
051779	20.0	40.21	4.59					YES	YES
051879	20.0	39.08	4.19					YES	YES
051979	20.0	53.24	15.29	YES	YES				
052079	20.0	53.80	18.86	YES	YES				
052179	20.0	46.72	9.49			YES	YES		
052279	20.0	45.02	7.65			YES	YES		
052379	20.0	76.74	22.85	YES	YES				
052479	20.0	236.16	196.24	YES	YES				
052579	20.0	196.24	99.96	YES	YES				
052679	19.0	177.83	61.73	YES	YES				
052779	18.0	142.15	28.60	YES	YES				
052879	19.0	118.93	19.79	YES	YES				
052979	18.0	102.51	17.73	YES	YES				
053079	18.0	95.71	21.32	YES	YES				
053179	17.0	89.48	16.08	YES	YES				
060179	19.0	70.23	11.44	YES	YES				
060279	19.0	65.13	11.61	YES	YES				
060379	20.0	61.45	18.18	YES	YES				
060479	20.0	65.13	26.05	YES	YES				
060579	19.0	57.77	17.08	YES	YES				
060679	20.0	55.22	13.71	YES	YES				
060779	20.0	49.84	9.20			YES	YES		
060879	21.0	45.02	7.79			YES	YES		
060979	23.0	41.63	6.94			YES	YES		
061079	23.0	39.93	6.57			YES	YES		
061179	23.0	42.48	15.89			YES	YES		
061279	22.0	41.63	17.95			YES	YES		
061379	20.0	35.96	7.93			YES	YES		
061479	21.0	32.85	6.43			YES	YES		
061579	21.0	31.15	5.69			YES			YES
061679	22.0	30.02	4.90					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
061779	23.0	29.73	4.39					YES	YES
061879	23.0	28.88	4.39					YES	YES
061979	24.0	27.35	4.11					YES	YES
062079	23.0	26.19	3.54					YES	YES
062179	23.0	25.71	3.28					YES	YES
062279	24.0	24.58	3.23					YES	YES
062379	25.0	42.48	10.25			YES	YES		
062479	25.0	31.15	6.17			YES	YES		
062579	24.0	26.19	4.19					YES	YES
062679	23.0	24.13	3.45					YES	YES
062779	22.0	22.77	3.06					YES	YES
062879	22.0	23.90	2.97					YES	YES
062979	23.0	54.65	7.93	YES	YES				
063079	24.0	35.68	4.59					YES	YES
070179	24.0	37.66	6.94			YES	YES		
070279	24.0	32.00	11.61			YES	YES		
070379	23.0	26.84	5.58			YES			YES
070479	23.0	26.42	4.11					YES	YES
070579	22.0	29.17	5.24			YES			YES
070679	20.0	26.19	3.91					YES	YES
070779	22.0	23.67	3.14					YES	YES
070879	23.0	22.77	2.75					YES	YES
070979	22.0	22.09	2.55					YES	YES
071079	23.0	21.41	2.41					YES	YES
071179	23.0	21.41	2.41					YES	YES
071279	24.0	20.98	2.35					YES	YES
071379	24.0	20.08	2.10					YES	YES
071479	27.0	31.15	2.61					YES	YES
071579	27.0	31.43	7.36			YES	YES		
071679	26.0	22.54	3.54					YES	YES
071779	27.0	35.96	28.60			YES	YES		
071879	27.0	27.58	6.06			YES	YES		
071979	27.0	27.58	6.17			YES	YES		
072079	27.0	24.81	4.11					YES	YES
072179	27.0	36.25	6.68			YES	YES		
072279	27.0	25.97	6.68			YES	YES		
072379	28.0	24.35	4.47					YES	YES
072479	26.0	29.17	4.19					YES	YES
072579	26.0	26.42	3.28					YES	YES
072679	27.0	22.77	3.14					YES	YES
072779	27.0	24.81	3.06					YES	YES
072879	27.0	22.09	2.61					YES	YES
072979	28.0	20.98	2.35					YES	YES
073079	28.0	62.30	7.36			YES	YES		

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
073179	24.0	43.32	5.80			YES			YES
080179	27.0	32.00	3.71					YES	YES
080279	28.0	30.02	3.37					YES	YES
080379	28.0	30.30	3.71					YES	YES
080479	28.0	26.65	2.89					YES	YES
080579	29.0	23.67	2.41					YES	YES
080679	28.0	21.86	2.15					YES	YES
080779	28.0	20.76	2.49					YES	YES
080879	27.0	19.85	2.27					YES	YES
080979	28.0	19.43	1.90					YES	YES
081079	29.0	18.63	1.84					YES	YES
081179	28.0	21.41	2.49					YES	YES
081279	27.0	38.79	13.31			YES	YES		
081379	26.0	43.89	27.18			YES	YES		
081479	24.0	29.73	7.50			YES	YES		
081579	23.0	23.45	5.24			YES			YES
081679	23.0	21.41	3.79					YES	YES
081779	22.0	19.65	2.97					YES	YES
081879	22.0	19.23	2.75					YES	YES
081979	23.0	22.77	3.91					YES	YES
082079	24.0	23.22	3.62					YES	YES
082179	24.0	20.08	2.89					YES	YES
082279	24.0	19.03	2.97					YES	YES
082379	24.0	18.04	2.55					YES	YES
082479	25.0	17.84	2.41					YES	YES
082579	26.0	19.65	1.98					YES	YES
082679	26.0	22.54	2.21					YES	YES
082779	27.0	19.85	2.41					YES	YES
082879	26.0	18.43	2.35					YES	YES
082979	27.0	18.04	2.10					YES	YES
083079	27.0	17.44	2.21					YES	YES
083179	27.0	17.08	2.15					YES	YES
090179	27.0	16.48	1.84					YES	YES
090279	27.0	16.11	1.67					YES	YES
090379	28.0	18.04	1.61					YES	YES
090479	27.0	18.43	1.78					YES	YES
090579	27.0	17.44	5.92			YES			YES
090679	27.2	184.91	99.39			YES	YES		
090779	26.1	186.04	16.99			YES	YES		
090879	26.1	92.60	7.08			YES	YES		
090979	25.6	65.69	5.66			YES			YES
091079	25.6	52.10	4.81					YES	YES
091179	24.4	43.89	3.91					YES	YES
091279	23.9	38.23	3.54					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

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DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
091379	22.2	33.41	06					YES	YES
091479	23.3	32.28	07					YES	YES
091579	22.8	43.89	7.36			YES	YES		
091679	21.7	35.68	4.47					YES	YES
091779	21.7	28.88	3.14					YES	YES
091879	21.1	26.87	2.83					YES	YES
091979	22.2	25.71	2.69					YES	YES
092079	20.6	24.13	2.27					YES	YES
092179	20.6	29.73	7.36			YES	YES		
092279	21.1	185.48	264.76			YES	YES		
092379	21.1	142.72	34.83			YES	YES		
092479	20.6	96.56	15.77			YES	YES		
092579	20.6	77.59	10.70			YES	YES		
092679	20.0	72.21	8.61			YES	YES		
092779	19.4	53.80	7.02			YES	YES		
092879	20.0	45.87	6.03			YES	YES		
092979	21.7	44.74	5.66			YES			YES
093079	21.1	44.46	6.74			YES	YES		
100179	21.1	101.94	49.33			YES	YES		
100279	21.7	237.29	35.93			YES	YES		
100379	18.3	171.32	39.98			YES	YES		
100479	19.4	183.21	26.05			YES	YES		
100579	19.4	159.99	23.62			YES	YES		
100679	19.4	184.91	39.36			YES	YES		
100779	19.4	151.78	15.49			YES	YES		
100879	18.9	133.94	11.95			YES	YES		
100979	16.7	116.95	9.91			YES	YES		
101079	15.6	120.91	74.25			YES	YES		
101179	15.0	102.79	48.08	YES	YES				
101279	14.4	89.48	25.49	YES	YES				
101379	15.0	89.20	28.88	YES	YES				
101479	15.6	76.74	15.69			YES	YES		
101579	15.0	69.66	11.61	YES	YES				
101679	15.0	64.85	9.77	YES	YES				
101779	14.4	55.50	8.50	YES	YES				
101879	14.4	51.25	7.79	YES	YES				
101979	16.1	48.42	6.95			YES	YES		
102079	16.7	45.59	6.57			YES	YES		
102179	17.2	43.32	6.19			YES	YES		
102279	17.2	41.34	5.69			YES			YES
102379	18.3	51.25	5.35			YES			YES
102479	17.2	78.44	14.70			YES	YES		
102579	17.8	62.30	9.63			YES	YES		
102679	17.2	52.95	6.57			YES	YES		

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
102779	16.7	49.84	5.69			YES			YES
102879	15.0	51.25	8.50	YES	YES				
102979	15.0	61.45	7.79	YES	YES				
103079	14.4	52.67	6.31	YES	YES				
103179	13.9	39.08	5.47	YES	YES				
110179	14.4	36.53	5.24	YES	YES				
110279	13.9	35.68	5.24	YES	YES				
110379	15.6	71.08	53.07			YES	YES		
110479	15.0	75.61	26.62	YES	YES				
110579	13.3	66.26	13.90	YES	YES				
110679	12.8	60.31	10.93	YES	YES				
110779	12.8	57.20	9.63	YES	YES				
110879	12.8	54.93	8.50	YES	YES				
110979	12.8	51.25	7.65	YES	YES				
111079	14.4	55.78	12.46	YES	YES				
111179	13.3	60.03	17.08	YES	YES				
111279	13.9	61.45	38.11	YES	YES				
111379	12.8	54.93	18.18	YES	YES				
111479	12.2	54.65	14.10	YES	YES				
111579	14.4	48.99	11.10	YES	YES				
111679	12.2	46.16	9.91	YES	YES				
111779	11.1	45.02	8.50	YES	YES				
111879	11.7	43.04	7.79	YES	YES				
111979	11.7	41.34	6.95	YES	YES				
112079	11.1	39.64	6.70	YES	YES				
112179	11.1	38.51	6.19	YES	YES				
112279	11.1	37.66	5.80	YES	YES				
112379	11.1	36.25	5.58	YES	YES				
112479	13.3	35.40	5.35	YES	YES				
112579	13.3	35.40	5.24	YES	YES				
112679	13.9	49.55	118.82	YES	YES				
112779	13.3	108.45	71.44	YES	YES				
112879	13.9	95.14	24.38	YES	YES				
112979	13.3	85.23	15.49	YES	YES				
113079	12.2	83.25	11.78	YES	YES				
120179	9.4	65.69	9.91	YES	YES				
120279	8.9	59.75	8.92	YES	YES				
120379	9.4	54.37	7.65	YES	YES				
120479	8.3	53.24	7.08	YES	YES				
120579	7.8	53.52	6.82	YES	YES				
120679	8.3	48.42	6.82	YES	YES				
120779	8.9	51.25	12.97	YES	YES				
120879	8.9	45.02	10.25	YES	YES				
120979	7.8	40.78	7.36	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
121079	7.2	38.51	6.44	YES	YES				
121179	7.8	35.96	6.06	YES	YES				
121279	8.3	34.55	6.82	YES	YES				
121379	11.1	39.93	20.30	YES	YES				
121479	11.1	53.24	11.61	YES	YES				
121579	7.8	44.74	8.78	YES	YES				
121679	8.3	39.93	9.06	YES	YES				
121779	8.3	41.63	9.06	YES	YES				
121879	6.7	36.53	6.70	YES	YES				
121979	5.6	34.83	6.57	YES	YES				
122079	4.4	35.11	6.82	YES	YES				
122179	3.9	33.98	6.82	YES	YES				
122279	7.2	34.83	6.70	YES	YES				
122379	6.7	35.68	7.79	YES	YES				
122479	7.8	38.23	13.82	YES	YES				
122579	7.8	99.68	58.05	YES	YES				
122679	7.8	139.04	26.05	YES	YES				
122779	7.2	110.15	15.09	YES	YES				
122879	6.7	89.20	11.78	YES	YES				
122979	7.8	77.02	10.08	YES	YES				
123079	6.7	68.53	9.06	YES	YES				
123179	6.7	62.30	8.21	YES	YES				
010180	6.7	56.92	7.36	YES	YES				
010280	6.1	52.95	6.95	YES	YES				
010380	6.1	49.84	6.70	YES	YES				
010480	5.6	44.17	5.93	YES	YES				
010580	6.7	41.91	5.80	YES	YES				
010680	4.4	39.64	5.24	YES	YES				
010780	4.4	37.38	5.10	YES	YES				
010880	7.2	36.25	4.96	YES	YES				
010980	4.4	34.83	4.79	YES	YES				
011080	5.0	32.85	4.67	YES	YES				
011180	5.0	37.10	8.50	YES	YES				
011280	6.1	63.71	59.30	YES	YES				
011380	5.6	50.12	16.68	YES	YES				
011480	4.4	42.76	11.78	YES	YES				
011580	5.0	47.29	11.78	YES	YES				
011680	6.1	44.17	9.91	YES	YES				
011780	6.7	40.21	8.50	YES	YES				
011880	6.7	39.36	8.21	YES	YES				
011980	6.7	45.59	29.73	YES	YES				
012080	6.7	39.93	14.50	YES	YES				
012180	6.1	37.38	10.42	YES	YES				
012280	5.0	36.53	9.06	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
012380	6.1	35.68	8.92	YES	YES				
012480	4.4	33.13	7.36	YES	YES				
012580	3.9	32.00	6.57	YES	YES				
012680	5.0	31.43	6.31	YES	YES				
012780	5.0	30.02	6.06	YES	YES				
012880	5.0	29.73	5.35	YES	YES				
012980	5.0	29.17	5.01	YES	YES				
013080	4.4	25.26	4.67	YES	YES				
013180	3.9	26.16	4.25	YES	YES				
020180	3.3	25.34	4.11	YES	YES				
020280	2.2	24.35	3.68	YES	YES				
020380	2.2	23.22	3.54	YES	YES				
020480	1.7	24.07	4.25	YES	YES				
020580	2.2	23.79	3.68	YES	YES				
020680	2.8	22.65	3.54	YES	YES				
020780	4.4	22.65	3.55	YES	YES				
020880	5.0	24.07	4.38	YES	YES				
020980	4.4	23.70	4.00	YES	YES				
021080	5.0	22.57	3.81	YES	YES				
021180	4.4	21.55	3.71	YES	YES				
021280	4.4	20.95	3.38	YES	YES				
021380	4.4	20.02	3.05	YES	YES				
021480	4.4	18.94	2.97	YES	YES				
021580	5.6	19.48	2.97	YES	YES				
021680	5.0	20.78	3.46	YES	YES				
021780	4.4	20.25	3.90	YES	YES				
021880	5.6	18.63	3.30	YES	YES				
021980	5.0	17.92	3.22	YES	YES				
022080	5.6	23.96	3.05	YES	YES				
022180	5.6	23.56	3.38	YES	YES				
022280	5.6	25.51	5.01	YES	YES				
022380	9.4	32.85	12.97	YES	YES				
022480	5.6	33.98	10.42	YES	YES				
022580	6.1	31.15	6.82	YES	YES				
022680	6.1	28.60	5.80	YES	YES				
022780	5.0	25.74	4.38	YES	YES				
022880	5.0	23.05	4.00	YES	YES				
022980	4.4	21.72	3.68	YES	YES				
030180	3.3	19.48	3.40	YES	YES				
030280	N/A	18.92	3.11	---	---	---	---	---	---
030380	3.3	18.77	2.83	YES	YES				
030480	3.9	18.72	2.97	YES	YES				
030580	5.0	20.19	3.05	YES	YES				
030680	4.4	19.85	3.55	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR TH.  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
030780	6.7	19.34	3.22	YES	YES				
030880	6.1	19.91	3.81	YES	YES				
030980	7.2	33.70	18.86	YES	YES				
031080	6.1	27.01	10.25	YES	YES				
031180	6.1	30.58	12.46	YES	YES				
031280	4.4	29.45	8.35	YES	YES				
031380	5.6	26.02	6.31	YES	YES				
031480	5.0	32.85	13.90	YES	YES				
031580	5.6	35.11	17.50	YES	YES				
031680	6.1	37.94	23.11	YES	YES				
031780	6.7	49.55	49.02	YES	YES				
031880	6.7	163.95	101.88	YES	YES				
031980	7.2	171.32	34.07	YES	YES				
032080	8.9	135.64	20.30	YES	YES				
032180	10.0	175.28	160.70	YES	YES				
032280	10.0	342.63	88.12	YES	YES				
032380	6.1	233.05	33.75	YES	YES				
032480	6.7	153.48	21.32	YES	YES				
032580	6.1	157.44	70.82	YES	YES				
032680	7.2	131.67	29.17	YES	YES				
032780	7.8	112.13	18.18	YES	YES				
032880	7.8	98.83	13.90	YES	YES				
032980	8.9	104.77	39.67	YES	YES				
033080	8.9	110.44	34.38	YES	YES				
033180	8.9	110.72	63.97	YES	YES				
040180	8.9	149.23	95.94	YES	YES				
040280	8.9	134.79	47.77	YES	YES				
040380	8.9	120.91	24.64	YES	YES				
040480	8.9	130.54	57.43	YES	YES				
040580	8.9	111.29	33.75	YES	YES				
040680	8.3	92.03	18.18	YES	YES				
040780	7.8	78.72	13.90	YES	YES				
040880	8.9	70.23	11.95	YES	YES				
040980	9.4	88.35	37.18	YES	YES				
041080	10.0	159.42	44.03	YES	YES				
041180	12.2	126.86	20.56	YES	YES				
041280	12.2	107.89	14.10	YES	YES				
041380	13.3	98.54	12.46	YES	YES				
041480	13.3	94.01	11.61	YES	YES				
041580	13.9	128.56	20.05	YES	YES				
041680	13.3	115.25	13.90	YES	YES				
041780	12.2	103.07	10.25	YES	YES				
041880	11.7	91.46	9.06	YES	YES				
041980	12.2	80.99	8.21	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
042080	12.8	74.19	7.50	YES	YES				
042180	13.3	67.68	7.08	YES	YES				
042280	13.9	60.03	6.44	YES	YES				
042380	13.9	56.35	5.69	YES	YES				
042480	13.9	53.24	5.69	YES	YES				
042580	14.4	50.97	5.47	YES	YES				
042680	15.6	43.89	5.24			YES			YES
042780	15.0	47.57	6.44	YES	YES				
042880	15.0	115.53	49.02	YES	YES				
042980	14.4	161.97	63.03	YES	YES				
043080	12.8	156.88	26.62	YES	YES				
050180	12.2	153.76	31.43	YES	YES				
050280	13.3	119.78	17.95	YES	YES				
050380	13.3	112.42	14.89	YES	YES				
050480	14.4	95.43	11.61	YES	YES				
050580	15.0	81.55	9.34	YES	YES				
050680	15.6	69.66	8.50	YES	YES				
050780	16.7	66.54	7.79	YES	YES				
050880	16.7	64.56	9.77	YES	YES				
050980	16.1	58.33	8.92	YES	YES				
051080	16.1	54.09	6.95	YES	YES				
051180	16.7	52.10	6.44	YES	YES				
051280	16.1	55.22	7.65	YES	YES				
051380	16.1	117.51	67.08	YES	YES				
051480	16.7	107.89	10.25	YES	YES				
051580	16.1	85.80	10.93	YES	YES				
051680	15.6	70.51	8.35	YES	YES				
051780	16.1	62.58	6.82	YES	YES				
051880	16.1	60.88	6.82	YES	YES				
051980	16.1	58.90	7.93	YES	YES				
052080	16.7	55.22	6.82	YES	YES				
052180	16.7	63.71	10.42	YES	YES				
052280	17.2	69.38	12.97	YES	YES				
052380	17.8	55.22	8.07	YES	YES				
052480	18.9	49.84	6.19			YES	YES		
052580	18.9	47.29	5.58			YES			YES
052680	20.0	41.91	4.79					YES	YES
052780	18.9	36.81	4.00					YES	YES
052880	18.9	37.38	3.63					YES	YES
052980	18.9	37.38	3.38					YES	YES
053080	18.9	38.23	3.38					YES	YES
053180	18.9	37.66	3.63					YES	YES
060180	20.0	44.46	4.38					YES	YES
060280	20.0	42.48	4.79					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
060380	20.6	41.06	6.19			YES	YES		
060480	20.6	41.34	5.58			YES			YES
060580	20.0	36.53	3.81					YES	YES
060680	20.0	31.71	3.13					YES	YES
060780	21.1	30.30	3.22					YES	YES
060880	21.1	33.41	3.55					YES	YES
060980	20.6	33.70	3.22					YES	YES
061080	19.4	36.53	4.19					YES	YES
061180	18.9	35.68	4.09					YES	YES
061280	17.8	33.13	3.22					YES	YES
061380	17.8	30.87	2.82					YES	YES
061480	18.9	28.60	2.62					YES	YES
061580	20.0	27.84	2.55					YES	YES
061680	20.0	27.84	2.62					YES	YES
061780	20.6	24.81	2.62					YES	YES
061880	20.0	23.22	2.41					YES	YES
061980	20.0	22.54	2.34					YES	YES
062080	20.0	22.99	2.48					YES	YES
062180	20.0	22.77	2.41					YES	YES
062280	20.0	21.86	2.34					YES	YES
062380	21.1	20.53	2.21					YES	YES
062480	22.2	19.85	2.28					YES	YES
062580	22.2	19.23	2.21					YES	YES
062680	23.3	18.63	2.21					YES	YES
062780	24.4	18.24	2.15					YES	YES
062880	25.0	18.04	2.21					YES	YES
062980	25.6	19.43	2.41					YES	YES
063080	25.0	27.84	5.24			YES			YES
070180	23.9	22.31	3.30					YES	YES
070280	22.8	18.63	2.62					YES	YES
070380	24.4	17.84	2.41					YES	YES
070480	25.0	17.64	2.34					YES	YES
070580	25.0	17.64	2.48					YES	YES
070680	25.6	20.76	3.90					YES	YES
070780	22.8	20.30	2.75					YES	YES
070880	23.9	17.44	2.35					YES	YES
070980	23.3	17.08	2.21					YES	YES
071080	23.3	18.68	2.15					YES	YES
071180	24.4	16.11	2.04					YES	YES
071280	25.6	16.11	2.04					YES	YES
071380	24.4	15.35	1.98					YES	YES
071480	24.4	14.44	1.93					YES	YES
071580	25.0	14.24	1.93					YES	YES
071680	25.6	14.81	1.98					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
071780	25.6	26.87	6.31			YES	YES		
071880	26.1	20.30	3.54					YES	YES
071980	26.1	16.28	2.55					YES	YES
072080	25.6	14.61	2.27					YES	YES
072180	26.7	14.05	2.15					YES	YES
072280	27.8	14.44	2.35					YES	YES
072380	27.2	18.83	3.20					YES	YES
072480	26.7	20.98	2.69					YES	YES
072580	25.6	21.41	2.27					YES	YES
072680	25.6	17.64	2.15					YES	YES
072780	26.7	15.91	2.10					YES	YES
072880	26.7	14.44	2.15					YES	YES
072980	26.7	14.05	3.91					YES	YES
073080	26.7	14.81	2.83					YES	YES
073180	25.6	14.61	2.69					YES	YES
080180	26.7	15.18	2.41					YES	YES
080280	26.7	15.18	2.35					YES	YES
080380	26.7	14.05	2.15					YES	YES
080480	27.2	16.28	2.10					YES	YES
080580	27.8	14.61	2.46					YES	YES
080680	28.3	18.29	2.69					YES	YES
080780	28.3	13.90	2.27					YES	YES
080880	27.8	13.45	2.10					YES	YES
080980	28.3	13.48	2.04					YES	YES
081080	27.8	13.31	1.98					YES	YES
081180	27.8	13.96	2.10					YES	YES
081280	28.3	16.14	2.04					YES	YES
081380	27.2	15.04	2.04					YES	YES
081480	26.7	13.85	2.04					YES	YES
081580	27.2	13.37	2.04					YES	YES
081680	26.7	14.05	1.93					YES	YES
081780	26.1	13.31	1.98					YES	YES
081880	25.0	12.91	1.98					YES	YES
081980	22.8	12.97	1.98					YES	YES
082080	26.1	13.00	1.98					YES	YES
082180	25.6	12.71	1.98					YES	YES
082280	24.4	12.32	2.15					YES	YES
082380	23.9	12.80	2.15					YES	YES
082480	24.4	12.88	2.10					YES	YES
082580	25.0	12.63	2.10					YES	YES
082680	25.6	12.57	2.04					YES	YES
082780	26.1	12.20	2.04					YES	YES
082880	26.7	12.20	2.04					YES	YES
082980	26.7	11.98	1.98					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
083080	27.2	12.20	1.98					YES	YES
083180	27.2	12.83	2.04					YES	YES
090180	26.7	12.97	2.04					YES	YES
090280	27.2	12.35	2.04					YES	YES
090380	27.8	13.22	1.98					YES	YES
090480	27.2	11.61	1.93					YES	YES
090580	26.7	11.19	1.98					YES	YES
090680	26.7	12.23	2.04					YES	YES
090780	26.1	11.27	1.98					YES	YES
090880	25.6	10.82	1.98					YES	YES
090980	25.6	10.65	2.04					YES	YES
091080	25.0	10.34	1.98					YES	YES
091180	24.4	10.96	1.93					YES	YES
091280	24.4	11.81	1.93					YES	YES
091380	23.3	10.82	1.93					YES	YES
091480	24.4	10.65	1.98					YES	YES
091580	24.4	14.27	2.69					YES	YES
091680	23.9	12.71	2.75					YES	YES
091780	22.8	14.72	2.35					YES	YES
091880	22.8	32.00	5.13			YES			YES
091980	21.1	16.23	3.28					YES	YES
092080	22.2	12.97	2.49					YES	YES
092180	21.7	11.52	2.21					YES	YES
092280	22.2	11.50	2.10					YES	YES
092380	23.3	10.96	2.10					YES	YES
092480	22.8	10.51	2.10					YES	YES
092580	21.7	11.27	2.10					YES	YES
092680	21.1	14.87	2.41					YES	YES
092780	23.3	14.61	2.27					YES	YES
092880	22.2	14.05	2.15					YES	YES
092980	20.0	13.65	2.10					YES	YES
093080	19.4	11.75	2.10					YES	YES
100180	17.8	10.34	2.15					YES	YES
100280	20.0	11.13	2.15					YES	YES
100380	20.0	15.69	2.29					YES	YES
100480	20.0	15.26	2.41					YES	YES
100580	18.9	13.05	2.89					YES	YES
100680	17.8	11.89	2.44					YES	YES
100780	15.6	11.67	2.29					YES	YES
100880	16.7	11.67	2.27					YES	YES
100980	17.2	11.78	2.24					YES	YES
101080	17.8	11.69	2.21					YES	YES
101180	16.7	12.15	2.24					YES	YES
101280	16.7	12.03	2.24					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
101380	15.6	11.61	2.18					YES	YES
101480	15.0	11.30	2.10					YES	YES
101580	14.4	10.34	2.10					YES	YES
101680	13.3	11.92	2.12					YES	YES
101780	14.4	13.96	2.15					YES	YES
101880	14.4	14.19	2.24					YES	YES
101980	13.9	17.13	2.55	YES	YES				
102080	15.6	14.98	2.61					YES	YES
102180	15.6	12.37	1.78					YES	YES
102280	16.1	10.65	1.78					YES	YES
102380	15.6	10.82	1.50					YES	YES
102480	15.0	10.65	1.44					YES	YES
102580	15.6	28.88	8.01			YES	YES		
102680	15.6	30.87	16.11			YES	YES		
102780	14.4	20.19	4.64	YES	YES				
102880	13.9	14.24	3.03					YES	YES
102980	13.9	12.52	2.55					YES	YES
103080	12.8	11.41	2.24					YES	YES
103180	11.7	10.82	2.01					YES	YES
110180	13.9	10.34	1.81					YES	YES
110280	12.2	10.05	1.81					YES	YES
110380	12.2	10.05	1.76					YES	YES
110480	12.8	10.34	1.87					YES	YES
110580	11.7	10.82	2.18					YES	YES
110680	11.1	10.51	2.15					YES	YES
110780	11.7	10.05	1.98					YES	YES
110880	12.2	9.91	1.90					YES	YES
110980	11.7	9.91	1.73					YES	YES
111080	12.8	10.51	1.73					YES	YES
111180	11.1	10.19	1.76					YES	YES
111280	10.0	9.91	1.44					YES	YES
111380	11.1	9.60	1.36					YES	YES
111480	11.1	9.46	1.33					YES	YES
111580	10.0	9.74	1.33					YES	YES
111680	10.0	9.60	1.33					YES	YES
111780	9.4	9.46	1.36					YES	YES
111880	8.3	13.88	2.75					YES	YES
111980	8.3	15.12	4.28	YES					YES
112080	7.8	13.37	3.11					YES	YES
112180	7.2	11.78	2.44					YES	YES
112280	10.0	11.30	2.21					YES	YES
112380	9.4	11.10	2.18					YES	YES
112480	8.9	23.50	10.36	YES	YES				
112580	8.3	66.54	33.98	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
112680	8.3	32.56	8.92	YES	YES				
112780	7.8	22.14	5.47	YES	YES				
112880	7.8	19.60	5.04	YES	YES				
112980	9.4	18.46	5.47	YES	YES				
113080	8.9	16.37	4.02	YES	YES				
120180	7.2	14.64	3.31					YES	YES
120280	7.8	13.76	3.40					YES	YES
120380	7.8	13.51	3.14					YES	YES
120480	6.7	13.73	2.58					YES	YES
120580	6.1	12.88	2.38					YES	YES
120680	7.2	12.37	2.46					YES	YES
120780	6.7	12.37	2.27					YES	YES
120880	7.2	12.40	2.32					YES	YES
120980	7.8	12.15	2.61					YES	YES
121080	8.9	12.46	2.35					YES	YES
121180	7.2	12.32	2.04					YES	YES
121280	6.7	11.50	1.98					YES	YES
121380	6.1	11.13	1.98					YES	YES
121480	5.6	11.41	1.93					YES	YES
121580	4.4	10.96	1.98					YES	YES
121680	5.0	10.82	2.15					YES	YES
121780	5.0	10.96	N/A			---	---	---	---
121880	4.4	10.82	2.97					YES	YES
121980	4.4	10.82	2.21					YES	YES
122080	5.0	13.34	3.96					YES	YES
122180	5.0	16.96	2.61	YES	YES				
122280	3.9	15.83	2.32	YES					YES
122380	3.3	14.55	2.15					YES	YES
122480	3.9	12.35	2.58					YES	YES
122580	3.9	13.45	3.00					YES	YES
122680	3.9	14.22	3.68					YES	YES
122780	3.3	14.13	3.68					YES	YES
122880	4.4	13.00	3.79					YES	YES
122980	4.4	13.73	3.74					YES	YES
123080	3.9	14.47	3.34					YES	YES
123180	3.3	14.16	3.45					YES	YES
010181	3.9	13.71	3.00					YES	YES
010281	5.6	12.86	2.89					YES	YES
010381	4.4	11.75	3.23					YES	YES
010481	2.8	10.19	3.40					YES	YES
010581	2.8	10.96	3.77					YES	YES
010681	3.3	14.70	3.65					YES	YES
010781	2.2	14.38	4.36					YES	YES
010881	3.9	14.41	4.56					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
010981	5.9	14.27	4.42					YES	YES
011081	3.3	15.77	4.90	YES					YES
011181	1.7	13.85	5.21			YES			YES
011281	1.7	14.70	5.61			YES			YES
011381	2.2	14.58	6.09			YES	YES		
011481	2.8	15.01	6.57	YES			YES		
011581	3.3	16.03	6.77	YES	YES				
011681	3.9	17.24	7.39	YES	YES				
011781	3.9	23.93	7.87	YES	YES				
011881	4.4	28.32	7.82	YES	YES				
011981	4.4	28.60	8.01	YES	YES				
012081	3.3	20.67	8.13	YES	YES				
012181	3.9	15.55	8.07	YES			YES		
012281	3.9	15.35	8.07	YES			YES		
012381	3.3	15.43	7.96	YES			YES		
012481	3.3	15.46	7.70	YES			YES		
012581	4.4	15.15	7.33	YES			YES		
012681	2.8	14.84	6.60			YES	YES		
012781	3.9	14.30	6.51			YES	YES		
012881	3.9	12.57	6.57			YES	YES		
012981	4.4	13.31	6.63			YES	YES		
013081	3.3	13.79	6.65			YES	YES		
013181	3.3	13.28	6.74			YES	YES		
020181	3.3	12.97	5.66			YES			YES
020281	3.9	34.83	27.44	YES	YES				
020381	3.3	108.17	19.37	YES	YES				
020481	2.2	64.85	8.35	YES	YES				
020581	3.3	40.78	6.46	YES	YES				
020681	2.2	20.60	5.41	YES	YES				
020781	3.9	26.02	4.28	YES	YES				
020881	4.4	23.84	3.17	YES	YES				
020981	3.3	22.34	7.53	YES	YES				
021081	3.9	18.26	7.53	YES	YES				
021181	8.9	64.85	29.45	YES	YES				
021281	3.9	231.07	30.58	YES	YES				
021381	3.3	120.06	9.77	YES	YES				
021481	5.0	77.87	7.79	YES	YES				
021581	5.6	59.75	6.17	YES	YES				
021681	5.6	52.10	4.64	YES	YES				
021781	5.6	46.72	4.62	YES	YES				
021881	6.1	43.89	4.70	YES	YES				
021981	6.7	39.08	5.01	YES	YES				
022081	6.7	54.37	29.45	YES	YES				
022181	6.1	131.96	42.19	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
022281	8.9	148.10	24.78	YES	YES				
022381	7.8	129.12	25.54	YES	YES				
022481	7.2	254.00	79.29	YES	YES				
022581	6.7	206.43	23.79	YES	YES				
022681	7.2	136.20	15.40	YES	YES				
022781	7.2	100.52	12.35	YES	YES				
022881	7.0	80.99	10.08	YES	YES				
030181	10.0	71.08	10.87	YES	YES				
030281	7.2	61.45	9.20	YES	YES				
030381	6.7	49.55	8.13	YES	YES				
030481	6.7	43.32	6.51	YES	YES				
030581	6.7	43.04	7.19	YES	YES				
030681	6.7	42.76	7.93	YES	YES				
030781	6.7	37.94	7.50	YES	YES				
030881	6.1	35.68	8.44	YES	YES				
030981	6.1	36.25	16.71	YES	YES				
031081	7.2	35.68	16.96	YES	YES				
031181	6.7	33.70	11.89	YES	YES				
031281	7.0	32.85	10.48	YES	YES				
031381	8.3	32.28	8.61	YES	YES				
031481	8.3	30.30	7.67	YES	YES				
031581	8.3	28.32	5.66	YES	YES				
031681	8.9	27.86	5.66	YES	YES				
031781	7.2	28.09	6.03	YES	YES				
031881	7.2	23.90	4.96	YES	YES				
031981	6.1	23.13	4.39	YES	YES				
032081	5.6	22.54	3.94	YES	YES				
032181	5.6	22.46	3.99	YES	YES				
032281	5.6	22.12	3.57	YES	YES				
032381	6.7	20.61	3.40	YES	YES				
032481	7.8	20.05	3.65	YES	YES				
032581	8.9	20.53	3.43	YES	YES				
032681	8.3	20.13	3.28	YES	YES				
032781	9.4	19.74	3.23	YES	YES				
032881	10.0	19.28	3.09	YES	YES				
032981	11.1	18.63	2.83	YES	YES				
033081	10.0	18.72	2.94	YES	YES				
033181	11.1	24.85	7.05	YES	YES				
040181	13.3	24.18	6.71	YES	YES				
040281	14.4	29.17	25.26	YES	YES				
040381	13.3	27.95	11.75	YES	YES				
040481	13.9	24.18	8.33	YES	YES				
040581	13.3	25.46	8.95	YES	YES				
040681	13.9	37.94	33.98	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION

CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER  
WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE  
PERKIONEN CREEK WITHOUT DELAWARE AUGMENTATION,  
ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIONEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
040781	11.1	34.83	15.01	YES	YES				
040881	11.7	29.45	10.25	YES	YES				
040981	12.2	28.88	8.83	YES	YES				
041081	12.2	30.87	9.77	YES	YES				
041181	13.9	36.81	13.68	YES	YES				
041281	13.9	96.28	64.00	YES	YES				
041381	13.9	70.51	33.41	YES	YES				
041481	13.3	93.73	54.65	YES	YES				
041581	13.9	99.39	50.40	YES	YES				
041681	11.7	82.97	24.35	YES	YES				
041781	11.1	70.23	17.39	YES	YES				
041881	12.2	65.98	14.30	YES	YES				
041981	13.3	58.62	10.73	YES	YES				
042081	13.3	52.95	9.12	YES	YES				
042181	13.9	43.32	7.67	YES	YES				
042281	13.9	38.51	6.63	YES	YES				
042381	14.4	37.10	6.57	YES	YES				
042481	13.9	46.44	8.24	YES	YES				
042581	13.3	47.57	7.99	YES	YES				
042681	13.3	40.78	6.12	YES	YES				
042781	12.2	37.38	5.32	YES	YES				
042881	12.8	34.83	5.07	YES	YES				
042981	14.4	37.94	5.80	YES	YES				
043081	14.4	39.08	6.37	YES	YES				
050181	15.0	35.96	5.30	YES	YES				
050281	14.4	36.25	7.22	YES	YES				
050381	13.9	32.85	7.42	YES	YES				
050481	13.9	N/A	5.41	---	---	---	---	---	---
050581	15.6	N/A	4.50	---	---	---	---	---	---
050681	16.1	27.78	4.30					YES	YES
050781	15.6	27.47	4.28					YES	YES
050881	15.0	25.74	3.88	YES	YES				
050981	16.7	24.58	3.60					YES	YES
051081	16.7	23.96	3.51					YES	YES
051181	16.1	31.15	43.04			YES	YES		
051281	16.7	67.68	89.76	YES	YES				
051381	15.6	74.47	25.82	YES	YES				
051481	16.1	61.16	13.93	YES	YES				
051581	16.7	66.63	17.98	YES	YES				
051681	17.8	149.80	83.53	YES	YES				
051781	16.7	103.64	24.24	YES	YES				
051881	16.1	82.12	13.62	YES	YES				
051981	15.6	75.32	10.00	YES	YES				
052081	15.6	66.26	8.07	YES	YES				

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE  
ON WHICH TO BASE A DECISION

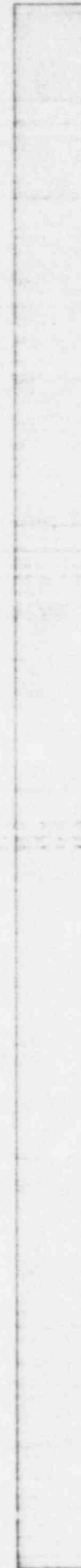
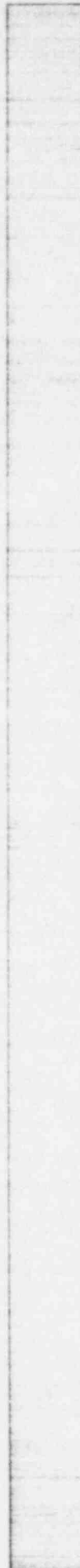
CONSUMPTIVE COOLING WATER USE - INDICATION OF WHETHER WATER IS AVAILABLE FROM THE SCHUYLKILL RIVER OR THE PERKIOMEN CREEK WITHOUT DELAWARE AUGMENTATION, ACCORDING TO ONE OR TWO UNITS IN OPERATION.

DATE	SCHU TEMP	SCHU FLOW	PERK FLOW	SCHUYLKILL AVAILABLE		PERKIOMEN AVAILABLE		WATER UNAVAILABLE	
				1 UNIT	2 UNITS	1 UNIT	2 UNITS	1 UNIT	2 UNITS
052181	16.1	56.07	6.43	YES	YES				
052281	16.7	45.02	5.47			YES			YES
052381	17.8	40.21	4.53					YES	YES
052481	18.9	36.25	3.74					YES	YES
052581	18.9	33.13	3.37					YES	YES
052681	20.0	31.15	3.17					YES	YES
052781	21.1	34.55	3.06					YES	YES
052881	21.7	35.68	3.03					YES	YES
052981	21.7	35.96	5.86			YES			YES
053081	21.1	33.70	6.26			YES	YES		
053181	21.7	29.73	4.02					YES	YES

DASHES INDICATE NO TEMPERATURE OR FLOW DATA AVAILABLE ON WHICH TO BASE A DECISION



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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
Philadelphia Electric Company ) Docket Nos. 50-352  
(Limerick Generating Station, ) 50-353  
Units 1 and 2) )

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney herewith enters an appearance on behalf of the Applicant in the captioned matter. In accordance with §2.713, 10 C.F.R. Part 2, the following information is provided:

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Telephone Number - 202/833-3500  
Admission - District of Columbia Court of Appeals  
United States District Court  
for the District of Columbia  
Name of Party - Philadelphia Electric Company

Ingrid M. Olson  
Ingrid M. Olson

Dated at Washington, D.C.,  
this 9th day of November, 1982.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
Philadelphia Electric Company ) Docket Nos. 50-352  
 ) 50-353  
(Limerick Generating Station, )  
Units 1 and 2) )

CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicant's Proposed Findings of Fact and Conclusions of Law in the Form of a Partial Initial Decision," Applicant's Response to Licensing Board's Request for Information Regarding Historical Record of Flows for the Schuylkill River and East Branch Perkiomen Creek" and "Notice of Appearance" for Ingrid M. Olson all dated November 9, 1982 in the captioned matter have been served upon the following by deposit in the United States mail this 9th day of November, 1982:

* Judge Lawrence Brenner (2) Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555	Docketing and Service Section Office of the Secretary U.S. Nuclear Regulatory Commission Washington, D.C. 20555
* Judge Richard F. Cole Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555	* Ann P. Hodgdon, Esq. Elaine I. Chan, Esq. Counsel for NRC Staff Office of the Executive Legal Director U.S. Nuclear Regulatory Commission Washington, D.C. 20555
* Judge Peter A. Morris Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555	Atomic Safety and Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, D.C. 20555
Atomic Safety and Licensing Appeal Panel U.S. Nuclear Regulatory Commission Washington, D.C. 20555	Philadelphia Electric Company ATTN: Edward G. Bauer, Jr. Vice President & General Counsel 2301 Market Street Philadelphia, PA 19101

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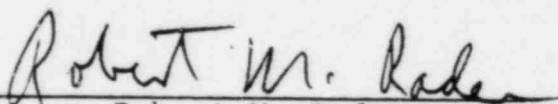
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