

Pennsylvania Department of Environmental Protection

2 Public Square
Wilkes-Barre, PA 18711-0790

August 5, 2005

Northeast Regional Office

570-826-2511
Fax 570-830-3016

Mr. Britt T. McKinney
VP-Nuclear Site Operations
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467

Re: Industrial Waste
PPL Susquehanna, LLC
NPDES Permit No. PA-0047325
APS ID No. 542214
Authorization ID No. 578109
Salem Township, Luzerne County

Dear Mr. McKinney:

Your permit is enclosed.

As part of Pennsylvania's effort to prevent localized impairment, help restore impaired waters, and remove the Chesapeake Bay and its tidal tributaries from the list of impaired waters under the Clean Water Act by the year 2010, the Department of Environmental Protection (DEP) has begun to implement a strategy for reducing our nutrient and sediment loads from the Susquehanna and Potomac River watersheds. As such, the Department has placed monitoring requirements for Total Nitrogen (TN) and Total Phosphorus (TP) in your NPDES permit renewal. Monitoring of nutrient loads discharged from each point source facility is critical to documenting our progress in the restoration effort. Monitoring also helps identify the type of effort you may need to undertake to achieve any future nutrient load reductions.

Please be advised that under 25 Pa. Code §92.8a(a) of the Department's Rules and Regulations, we are notifying you that new cap load limits for TN and TP may change your existing treatment requirements. You will be advised once the cap load limits have been developed for your facility, and how those new limits will be incorporated into your NPDES permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please call Brian F. Busher, P.E. at 570-826-2306.

Sincerely



Kate Crowley
Program Manager
Water Management Program

Enclosures

cc: U.S. Environmental Protection Agency



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE REQUIREMENTS FOR INDUSTRIAL WASTEWATER FACILITIES**

NPDES PERMIT NO: PA-0047325

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*,

**PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467**

is authorized to discharge from a facility known as **Susquehanna Steam Electric Station**, located in **Salem Township, Luzerne County** to the **Susquehanna River** in Watershed **5B** in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts A, B and C hereof.

THIS PERMIT SHALL BECOME EFFECTIVE ON September 1, 2005

THIS PERMIT SHALL EXPIRE AT MIDNIGHT ON August 31, 2010

The authority granted by this permit is subject to the following further qualifications:

1. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions shall apply.
2. Failure to comply with the terms, conditions, or effluent limitations of this permit is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
3. A complete application for reissuance of this permit, or notice of intent to cease discharging by the expiration date, must be submitted to DEP at least 180 days prior to the above expiration date (unless permission has been granted by DEP for submission at a later date), using the appropriate NPDES permit application form.

In the event that a timely and complete application for reissuance has been submitted and DEP is unable, through no fault of the permittee, to reissue the permit before the above expiration date, the terms and conditions of this permit, including submission of the Discharge Monitoring Reports (DMRs), will be automatically continued and will remain fully effective and enforceable against the discharger until DEP takes final action on the pending permit application.

4. This NPDES permit does not constitute authorization to construct or make modifications to wastewater treatment facilities necessary to meet the terms and conditions of this permit.

DATE PERMIT ISSUED August 5, 2005

DATE PERMIT AMENDMENT ISSUED _____

ISSUED BY *Kate Crowley*
Water Management Program Manager

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 071, Latitude 41°05'30", Longitude 76°08'45", River Mile Index _____, Stream Code _____

which receives wastewater from Cooling tower blowdown

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | |
|-------------------------|--|-----------------------|-----------------|--|-------------------------|---------------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | Concentrations (mg/L) | | Minimum Measurement Frequency ⁽³⁾ | Required Sample Type | |
| | Average Monthly | Maximum Daily | Average Monthly | Instantaneous Maximum ⁽²⁾ | | |
| Flow (MGD) | | | | | Daily | Recording Instrumentation |
| Free Available Chlorine | | | 0.2 | 0.50 | Daily | Grab during Chlorination |
| Total Zinc | | | 1.0 | | 1/Year | 8 Hr. Composite |
| Total Chromium | | | 0.20 | | 1/Year | 8 Hr. Composite |
| pH | Not less than 6.0 standard units nor greater than 9.0 standard units at all times. | | | | Daily | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
At Outfall 071
See Other Requirements Part C - Special Condition Nos. 4, 5, and 6.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 073, Latitude 41°05'30", Longitude 76°08'45", River Mile Index, Stream Code

which receives wastewater from Unit #1 Turbine Building Low Volume Waste Sump

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | | | |
|------------------------|---|-----------------------|-----------------|---------------|-------------------------------|-------------------------------------|------------------------|------|
| | Mass Units (lbs/day) (1) | Concentrations (mg/L) | | | Minimum Measurement Frequency | Required Sample Type | | |
| | Average Monthly | Maximum Daily | Average Monthly | Maximum Daily | Instantaneous Maximum (2) | | | |
| Flow (MGD) | | | | | | Daily when Discharging Quarterly | Estimate | |
| Total Suspended Solids | | | 30.0 | 100.0 | | Quarterly | Grab | |
| Oil & Grease | | | 15.0 | 20.0 | 30.0 | Quarterly | Grab | |
| pH | Not less than 6.0 standard units nor greater than 9.0 standard units at all times | | | | | | Daily when Discharging | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

At Outfall 073 - Unit #1 Turbine Building Low Volume Waste Sump

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 074, Latitude 41°05'30", Longitude 76°08'45", River Mile Index, Stream Code

which receives wastewater from Unit #2 Turbine Building Low Volume Waste Sump

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|------------------------|--|---------------|-----------------------|-----------------|---------------|--|-------------------------|--------------------------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | | Minimum ⁽³⁾ Measurement Frequency | Required Sample Type | |
| | Average Monthly | Maximum Daily | Minimum | Average Monthly | Maximum Daily | | | Instantaneous Maximum ⁽²⁾ |
| Flow (MGD) | | | | | | | Daily when Discharging | Estimate |
| Total Suspended Solids | | | | 30.0 | 100.0 | | Quarterly | Grab |
| Oil & Grease | | | | 15.0 | 20.0 | 30.0 | Quarterly | Grab |
| pH | Not less than 6.0 standard units nor greater than 9.0 standard units at all times. | | | | | | Daily when Discharging | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

At Outfall 074 – Unit #2 Turbine Building Low Volume Waste Sump

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 079, Latitude 41°05'30", Longitude 76°08'30", River Mile Index, Stream Code

which receives wastewater from Sewage Treatment Plant

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | |
|-------------------------------|--|-----------------------|-----------------|---------------|-------------------------------|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | Concentrations (mg/L) | | | Minimum Measurement Frequency | Required Sample Type |
| | Average Monthly | Maximum Daily | Average Monthly | Maximum Daily | | |
| Flow (MGD) | See Page 12 | | | | | |
| CBOD ₅ | | | 25.0 | | 1/Month | Pump Rate or Weir |
| Total Suspended Solids | | | 30.0 | | 1/Month | 8 Hr. Composite |
| Total Residual Chlorine | | | 1.0 | | Daily | 8 Hr. Composite |
| pH | 6.0 to 9.0 Standard Units at all times | | | | | |
| Fecal Coliform (5/1 to 9/30) | | 200/100 ml | | | Daily | Grab |
| Fecal Coliform (10/1 to 4/30) | | 2,000/100 ml | | | 1/Month | Grab |
| | | | | | 1/Month | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

At Outfall 079 – Sewage Treatment Effluent

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 079, Latitude 41°05'30", Longitude 76°08'30", River Mile Index _____, Stream Code _____ which receives wastewater from _____

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | |
|-------------------------------|-------------------------------------|-----------------------|-----------------------|-----------------|-------------------------------|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | Minimum Measurement Frequency | Required Sample Type |
| | Monthly ⁽³⁾ | Annual ⁽⁴⁾ | Minimum | Average Monthly | | |
| Ammonia-N | Report | | Report | Report | 2/Month | 8 Hr. Comp. |
| Kjeldahl -N | Report | | Report | Report | 2/Month | 8 Hr. Comp. |
| Nitrite-N | Report | | Report | Report | 2/Month | 8 Hr. Comp. |
| Nitrate-N | Report | | Report | Report | 2/Month | 8 Hr. Comp. |
| Total Nitrogen ⁽⁵⁾ | Report | Report | Report | Report | 2/Month | Calculate |
| Total Phosphorus | Report | Report | Report | Report | 2/Month | 8 Hr. Comp. |

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Outfall 001

1. When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.
2. Daily Discharge = Daily Flow * Daily Sample Concentration * 8.34
3. Monthly Mass Load = The sum of the Daily Discharge / n * (Number of Days In Month), where n is the number of samples per month.
4. Annual Mass Load = The sum of the Monthly Mass Loads, taken over the last 12 months.
5. Total Nitrogen = Kjeldahl-N + Nitrate-N + Nitrite-N
6. This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events required.
7. Test Methods:

Parameter 40CFR Part 136, Table 1B

- | | |
|----------------------------------|----|
| 1. Kjeldahl nitrogen as nitrogen | 31 |
| 2. Nitrate as nitrogen | 38 |
| 3. Nitrite as nitrogen | 40 |
| 4. Phosphorus | 50 |
| 5. Ammonia as nitrogen | 4 |

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 080, Latitude 41°05'30", Longitude 76°08'30", River Mile Index, Stream Code which receives wastewater from C-1 Pond (Stormwater)

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | | | Monitoring Requirements | |
|------------------------|-------------------------------------|---------------|-----------------------|------------------|---------------|--|-------------------------|--------------------------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | | Minimum Measurement Frequency ⁽³⁾ | Required Sample Type | |
| | Average Monthly | Maximum Daily | Minimum | Average Monthly | Maximum Daily | | | Instantaneous Maximum ⁽²⁾ |
| Oil and Grease | | | | Monitor & Report | | | 1/year | Grab |
| pH | | | | Monitor & Report | | | 1/year | Grab |
| Total Suspended Solids | | | | Monitor & Report | | | 1/year | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 080

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 171, Latitude N/A, Longitude N/A, River Mile Index _____, Stream Code _____
which receives wastewater from Radwaste treatment

- a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.
- b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | |
|------------------------|-------------------------------------|---------------|-----------------------|--------------------------------------|-------------------------------|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | Minimum Measurement Frequency | Required Sample Type |
| | Average Monthly | Maximum Daily | Average Monthly | Instantaneous Maximum ⁽²⁾ | | |
| Flow (MGD) | | | | | Daily When Discharging | Estimate |
| Total Suspended Solids | | | 30.0 | 100.0 | 1/Month | Grab |
| Oil & Grease | | | 15.0 | 20.0 | 1/Year | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

At Outfall 171 – Radwaste treatment plant effluent

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

I. For Outfall 371, Latitude N/A, Longitude N/A, River Mile Index, Stream Code

which receives wastewater from Demineralizer and building drains from raw water treatment plant building

a. The permittee is authorized to discharge during the period from September 1, 2005 through August 31, 2010.

b. Based on the production data and anticipated wastewater characteristics and flows described in the permit application and its supporting documents and/or amendments, the following effluent limitations and monitoring requirements apply (see also Additional Requirements, Footnotes and Supplemental Information).

| Discharge Parameter | Effluent Limitations | | | | Monitoring Requirements | |
|------------------------|-------------------------------------|---------------|-----------------------|--------------------------------------|-----------------------------------|----------------------|
| | Mass Units (lbs/day) ⁽¹⁾ | | Concentrations (mg/L) | | Minimum Measurement Frequency | Required Sample Type |
| | Average Monthly | Maximum Daily | Average Monthly | Instantaneous Maximum ⁽²⁾ | | |
| Flow (MGD) | | | | | Daily When Discharging 1/Month | Estimate |
| Total Suspended Solids | | | 30.0 | 100.0 | | |
| Oil & Grease | | | 15.0 | 20.0 | 1/Year | Grab |
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Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

At Outfall 371 - Neutralization basin discharge - prior to combining with circulating water system.

PART A - EFFLUENT LIMITATIONS, MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (Con't)

Additional Requirements

- c. All discharges of floating materials, oil, grease, scum, sheen and substances which produce color, tastes, odors, turbidity or settle to form deposits shall be controlled to levels which will not be inimical or harmful to the water uses to be protected or to human, animal, plant or aquatic life.

Footnotes

- (1) When sampling to determine compliance with mass effluent limitations, the discharge flow at the time of sampling must be measured and recorded.
- (2) The Instantaneous Maximum Discharge Limitations are for compliance use by DEP only. Do not report instantaneous maximums on DMRs or supplemental DMRs unless specifically required on those forms to do so.
- (3) This is the minimum number of sampling events required. Permittees are encouraged, and it may be advantageous in demonstrating compliance, to perform more than the minimum number of sampling events.

Supplemental Information

- (1) The effluent limitations for this outfall were determined using an effluent discharge of 12.09 million gallons per day for Outfall 071 and .080 million gallons per day for Outfall 079.

II. DEFINITIONS

At Outfall (XXX) means a sampling location in outfall line XXX below the last point at which wastes are added to outfall line (XXX), or where otherwise specified.

Average refers to the use of an arithmetic mean, unless otherwise specified in this permit.

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

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

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

Composite Sample (for all except GC/MS volatile organic analysis) means a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite.

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). The samples must be combined in the laboratory immediately before analysis and then one analysis is performed.

Daily Average Temperature means the average of all temperature measurements made, or the mean value plot of the record of a continuous automated temperature recording instrument, either during a calendar day or during the operating day if flows are of a shorter duration.

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

Discharge Monitoring Report ("DMR") means the form for the reporting of self-monitoring results by the permittee.

Estimated Flow means any method of liquid volume measurement based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters, and batch discharge volumes.

Geometric Average means the average of a set of n sample results given by the nth root of their product.

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

Hazardous Substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

Immersion Stabilization (i-s) means a calibrated device is immersed in the wastewater until the reading is stabilized.

Industrial User or Indirect Discharger means an establishment that discharges or introduces industrial wastes into a Publicly Owned Treatment Works (POTW).

Maximum Any Time or Instantaneous Maximum means the level not to be exceeded at any time in any grab sample.

Maximum Daily Discharge Limitation means the highest allowable "daily discharge."

Measured Flow means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

Non-contact Cooling Water means water used to reduce temperature which does not come in direct contact with any raw material, intermediate product, waste product (other than heat), or finished product.

Publicly Owned Treatment Works ("POTW") means a device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. The term includes sewers, pipes or other conveyances only if they convey wastewater to a POTW providing treatment.

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

Stormwater means the runoff from precipitation, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Industrial Activity means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing, or raw materials storage areas as defined at 40 CFR 122.26(b)(14).

Total Dissolved Solids means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR 136.

Toxic Pollutant means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, may, on the basis of information available to DEP cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in these organisms or their offspring.

III. SELF-MONITORING, REPORTING, AND RECORDS KEEPING

A. Representative Sampling

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. Records Retention

Except for records of monitoring information required by this permit related to the permittee's sludge use and disposal activities which shall be retained for a period of at least five years, all records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records), copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained by the permittee for three years from the date of the sample measurement, report, or application. The three-year period shall be extended as requested by DEP or the EPA Regional Administrator.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements.
- b. The person(s) who performed the sampling or measurements.
- c. The date(s) the analyses were performed.
- d. The person(s) who performed the analyses.
- e. The analytical techniques or methods used; and the associated detection level.
- f. The results of such analyses.

4. Test Procedures

Unless otherwise specified in this permit, the test procedures for the analysis of pollutants shall be those approved under 40 CFR 136 (or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503), or alternate test procedures approved pursuant to those parts, unless other test procedures have been specified in this permit.

5. Quality/Assurance/Control

In an effort to assure accurate self-monitoring analyses results:

- a. The permittee, or its designated laboratory, shall participate in the periodic scheduled quality assurance inspections conducted by DEP and EPA.
- b. The permittee, or its designated laboratory, shall develop and implement a program to assure the quality and accurateness of the analyses performed to satisfy the requirements of this permit, in accordance with 40 CFR 136.

B. Reporting of Monitoring Results

1. The permittee shall effectively monitor the operation and efficiency of all wastewater treatment and control facilities, and the quantity and quality of the discharge(s) as specified in this permit.
2. Unless instructed otherwise in PART C of this permit, a properly completed DMR must be received at the following addresses within 28 days after the end of each monthly report period:

Department of Environmental Protection
Northeast Regional Office
Water Management Program
2 Public Square
Wilkes-Barre, PA 18711-0790

Programs Management Section (3WP30)
Permits Enforcement Branch
Water Protection Division
U.S. EPA – Region III
NPDES Discharge Monitoring Reports
1650 Arch Street
Philadelphia, PA 19103-2029

3. The completed DMR Form shall be signed and certified either by the following applicable person, as defined in 40 CFR 122.22(a), or by that person's duly authorized representative, as defined in 40 CFR 122.22(b):
 - For a corporation - by a principal executive officer of at least the level of vice president, or an authorized representative if the representative is responsible for the overall operation of the facility from which the discharge described in the NPDES form originates.
 - For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
 - For a municipality, state, federal or other public agency - by a principal executive officer or ranking elected official.

If signed by a person other than the above, written notification of delegation of DMR signatory authority must be submitted to DEP in advance of or along with the relevant DMR form.

4. If the permittee monitors any pollutant, using analytical methods described in PART A III.A.4 herein, more frequently than the permit requires, the results of this monitoring shall be incorporated, as appropriate, into the calculations used to report self-monitoring data on the DMR.

C. Reporting Requirements

1. Planned Changes - The permittee shall give notice to DEP as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b).
- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this permit, nor to notification requirements under 40 CFR 122.42(a)(1).
- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. Anticipated Noncompliance

The permittee shall give advance notice to DEP of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Unanticipated Noncompliance or Potential Pollution Reporting

- a. The permittee shall report any noncompliance or incidents causing or threatening pollution pursuant to 25 Pa. Code § 91.33 to DEP by telephone immediately giving the location and nature of the danger and, if reasonably possible to do so, to notify known downstream users of the waters.
- b. The permittee shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution and, in addition, within 15 days from the incident, shall remove from the ground and from the affected waters to the extent required by the residual substances.
- c. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances pursuant to 40 CFR 122.41(1)(6). The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including the exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- d. Information that must be reported under this paragraph includes, but is not limited to:
 - (1) Any unanticipated bypass that exceeds any effluent limitation in this permit.
 - (2) Any catastrophic event which causes the discharge to exceed any effluent limitation in this permit.
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed in this permit.
- e. DEP may waive the written report on a case-by-case basis for reports under paragraph C.3.c of this section.

4. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under paragraph C.3.a of this section, at the time DMRs are submitted. The reports shall contain the information listed in paragraph C.3.a of this section.

D. Specific Toxic Pollutant Notification Levels (for Manufacturing, Commercial, Mining, and Silvicultural Direct Dischargers) - The permittee shall notify DEP as soon as it knows or has reason to believe the following:

1. That any activity has occurred, or will occur, which would result in the discharge of any toxic pollutant which is not limited in this permit, if that discharge on a routine or frequent basis will exceed the highest of the following "notification levels."
 - a. One hundred micrograms per liter.

- b. Two hundred micrograms per liter for acrolein and acrylonitrile.
 - c. Five hundred micrograms per liter for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol.
 - d. One milligram per liter for antimony.
 - e. Five times the maximum concentration value reported for that pollutant in this permit application.
 - f. Any other notification level established by DEP.
2. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following "notification levels":
- a. Five hundred micrograms per liter.
 - b. One milligram per liter for antimony.
 - c. Ten times the maximum concentration value reported for that pollutant in the permit application.
 - d. Any other notification level established by DEP.

PART B

I. MANAGEMENT REQUIREMENTS

A. Compliance Schedules

1. The permittee shall achieve compliance with the terms and conditions of this permit within the time frames specified in this permit.
2. The permittee shall submit reports of compliance or noncompliance, or progress reports as applicable, for any interim and final requirements contained in this permit. Such reports shall be submitted no later than 14 days following the applicable schedule date or compliance deadline.

B. Permit Modification, Termination, or Revocation and Reissuance

1. This permit may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code, Chapter 92.
2. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
3. In the absence of DEP action to modify or revoke and reissue this permit, the permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time specified in the regulations that establish those standards or prohibitions.

C. Duty to Provide Information

1. The permittee shall furnish to DEP, within a reasonable time, any information which DEP may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
2. The permittee shall furnish to DEP, upon request, copies of records required to be kept by this permit.
3. Other Information - Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to DEP, it shall promptly submit the correct and complete facts or information.

D. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, adequate laboratory controls including appropriate quality assurance procedures. This provision also includes the operation of backup or auxiliary facilities or similar systems that are installed by the permittee, only when necessary to achieve compliance with the terms and conditions of this permit.

E. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge, sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

F. Bypassing

1. Bypassing Not Exceeding Permit Limitations - The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the reporting and notification requirements of 4.a. and b. below.
2. Other Bypassing – In all other situations, bypassing is prohibited and DEP may take enforcement action against the permittee for bypass unless:
 - a. A bypass is unavoidable to prevent loss of life, personal injury, or "severe property damage."
 - b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance.
 - c. The permittee submitted the necessary reports required under 4.a. and b. below.
3. DEP may approve an anticipated bypass, after considering its adverse effects, if DEP determines that it will meet the conditions listed in F.2 above.
4. Notice
 - a. Anticipated Bypass – If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the bypass.
 - b. Unanticipated Bypass – The permittee shall submit notice of an unanticipated bypass as required in PART A.III.C.3. (Unanticipated Noncompliance or Potential Pollution Reporting).

II. PENALTIES AND LIABILITY

A. Violations of Permit Conditions

Any person violating Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act or any permit condition or limitation implementing such sections in a permit issued under Section 402 of the Act is subject to civil, administrative, and/or criminal penalties as set forth in 40 CFR 122.41(a)(2).

Any person or municipality who violates any provision of this permit; any rule, regulation, or order of DEP; or any condition or limitation of any permit issued pursuant to the Clean Streams Law, is subject to criminal and/or civil penalties as set forth in Sections 602, 603, and 605 of the Clean Streams Law.

B. Falsifying Information

The Clean Water Act provides that any person who does any of the following:

- Falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, or
- Knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit (including monitoring reports or reports of compliance or noncompliance),

shall, upon conviction, be punished by a fine and/or imprisonment as set forth in 18 P.S. § 4904 and 40 CFR 122.41(j)(5) and (k) (2).

C. Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance pursuant to Section 309 of the Clean Water Act or Sections 602, 603, or 605 of the Clean Streams Law.

Nothing in this permit shall be construed to preclude the institution of any legal action or to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under the Clean Water Act and the Clean Streams Law.

D. Need to Halt or Reduce Activity Not a Defense

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

III. OTHER RESPONSIBILITIES

A. Right of Entry

Pursuant to Sections 5(b) and 305 of Pennsylvania's Clean Streams Law, 25 Pa. Code, Chapter 92 and 40 CFR 122.41(i), the permittee shall allow authorized representatives of DEP and EPA, upon the presentation of credentials and other documents as may be required by law;

1. To enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. To have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. To inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
4. To sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act or the Clean Streams Law, any substances or parameters at any location.

B. Transfer of Permits

1. Transfers by modification. Except as provided in paragraph 2 of this section, a permit may be transferred by the permittee to a new owner or operator only if this permit has been modified or revoked and reissued, or a minor modification made to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
2. Automatic transfers. As an alternative to transfers under paragraph 1 of this section, any NPDES permit may be automatically transferred to a new permittee if:
 - a. The current permittee notifies DEP at least 30 days in advance of the proposed transfer date in paragraph 2.b of this section;
 - b. The notice includes the appropriate DEP transfer form signed by the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - c. If DEP does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue this permit, the transfer is effective on the date specified in the agreement mentioned in paragraph 2.b of this section.
3. In the event DEP does not approve transfer of this permit, the new owner or controller must submit a new permit application.

C. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

D. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

E. Other Laws

The issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

PART C

I. OTHER REQUIREMENTS

SPECIAL CONDITIONS

1) For Outfall 071, except for Total Zinc and Total Chromium, there shall be no detectable level of the remaining priority pollutants in this discharge due to the addition of chemicals for cooling tower maintenance.

2) There shall be no discharge of Polychlorinated Biphenyl compounds such as those commonly used for transformer fluid.

3) Waterborne releases of radioactive material to unrestricted areas shall conform to criteria set forth in Title 10 Code of Federal Regulations Part 50 Appendix I - "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion as Low as is Reasonably Achievable for Radioactive Material in Light - Water - Cooled Nuclear Reactor Effluents", as implemented through the Technical Specifications for the facility.

The facility operator shall provide the Department with copies of reports specifying the quantities of radioactive materials released to unrestricted areas in liquid/gaseous effluents.

The facility operator shall provide the Department with copies of reports of the results of environmental surveillance activities and other such reports as necessary for the estimation of the dose consequential to facility operation.

The above reports are to be forwarded to the following address:

Pennsylvania Department of Environmental Resources
Bureau of Radiation Protection and Toxicology
P.O. Box 2063
Harrisburg, PA 17120

4) The term "Daily Maximum Concentration" as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

5) The term "Free Available Chlorine" shall mean the value obtained using the amperometric titration or DPD method described in "Standard Methods for Examination of Water and Wastewater".

6) Neither Free Available Chlorine nor Total Residual Chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge Free Available or Total Residual Chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State that the units in a particular location cannot operate at or below this level of chlorination.

7) The term "Total Residual Chlorine" or "Total Residual Oxidants for Intake Water with Bromides" means the value obtained using the amperometric or DPD method for total residual chlorine described in 40 CFR Part 136.

8) In no case shall the arithmetic means of the effluent values of the Carbonaceous Biochemical Oxygen Demand (five days) and Suspended Solids discharged during a period of 30 consecutive days exceed 15 percent of respective arithmetic means of the influent values for these parameters during the same time period, except as specifically authorized by the permitting authority.

9) The pH of all discharges, except once through cooling water, shall be within the range of 6.0 to 9.0.

10) From October 1 through April 30, the fecal coliform concentration shall not exceed a geometric mean of 2000 per 100 milliliters.

11) Effective disinfection to control disease producing organisms during the swimming season (May 1 through September 30) shall be the production of an effluent which will contain a fecal coliform concentration not greater than 200 per 100 ml as a geometric average value, not greater than 1000 per 100 ml in more than 10% of the samples tested.

12) The terms "pump rate or weir" and "estimate", as they relate to "flow measurement sample type" shall mean any method used to calculate/measure flow other than continuous recording instrumentation.

13) Special Condition for Controlling Chemical Additives Usage Rates: Chemical additives to control corrosion, scaling, algae, slime, fouling, oxygen, etc., and blow down discharge rates shall be managed by the permittee to ensure that toxic effects in the receiving stream are prevented. Usage rates shall be limited to the minimum amount necessary to accomplish the intended purposes of chemical addition and approval is limited to the chemicals and usage rates contained in the application.

Whenever a change in chemical additive or increase in usage rates is desired by the permittee, a written notification in the format specified by the Department, shall be submitted at least sixty (60) days prior to the proposed use of the chemical. For each proposed chemical or usage rate, the written notification, as a minimum, shall include the following:

- (a) Trade names of additive.
- (b) Name and address of additive manufacturer.
- (c) Material Safety Data Sheet (MSDS) or other available information or mammalian or aquatic toxicological effects.
- (d) Bioassay data including the 96-hour LC50 on the whole product.
- (e) Proposed average and maximum additive usage rates in lbs/day.
- (f) A flow diagram showing the point of chemical addition and the affected outfalls.
- (g) The expected concentration of the product at the final outfall.
- (h) The product density for liquids (lb/gal) used to convert usage rate (gpd) to in-system concentrations (mg/l).
- (i) The analytical test method that could be used to verify final discharge concentrations when the product is in use and the associated minimum analytical detection level (mg/l).
- (j) Conditioned water discharge rate (blowdown rate) and duration (hours).
- (k) Available data on the degradation of or decomposition of the additive in the aquatic environment.
- (l) Any other data or information the permittee believes would be helpful to the Department in completing its review.

Use of products or chemicals that contain one or more ingredients that are carcinogens is generally prohibited. Before proposing limited use of such products or chemicals, the permittee must first thoroughly investigate use of alternative products or chemicals to avoid the use of the carcinogens. If no suitable alternatives are available, the permittee must submit written documentation as part of the information required above, that demonstrates to the satisfaction of the Department that no suitable alternatives are available and that any carcinogen in the proposed chemical or product will not be detectable in the final effluent using the most sensitive analytical method available.

Based on the information presented, the Department will determine within 60 days whether the existing NDPES permit must be amended to include specific effluent limitations for active ingredients or other control measures. When so required, the permittee will be advised within 60 days that a formal request for a permit amendment is required including a filing fee and Act 14 notices.

If a permit amendment application is not requested within 60 days, the permittee may proceed with the use of the proposed chemical additive or usage rate.

Accurate records of usage (name of additive, quantity added, date added, of any approved chemical additive and blow down discharge volumes) must be maintained and kept on site by the permittee. All correspondence and notifications related to the chemical additives and usage rates must also be kept on site with the required daily chemical usage records. If the notification is incomplete or the Department notifies the permittee that the proposed usage rate will cause violations of water quality standards, then use of the requested chemical additive or requested change in its usage rate will be denied.

Treatment and Control of Zebra Mussels

Zebra mussels (*Dreissena polymorpha*) are non-indigenous mollusks that are capable of extremely rapid reproduction. Since their accidental introduction into Lake St. Claire around 1986 zebra mussels have spread quickly into Pennsylvania and other Great Lakes states. With their potential for explosive reproduction, zebra mussels can cause plugging and serious physical damage to water intake pipes and pumping systems, and hence, represent a serious threat to many of the Commonwealth's water users.

In anticipation of the zebra mussels' inevitable spread throughout Pennsylvania, the Division of Water Quality (DWQ) initiated a monitoring program in 1991. As part of this monitoring program, the Department will be providing water users with an early warning of the zebra mussels advance. If and when zebra mussels are sighted in a particular basin, it is expected that many of the water users within that basin will seek approval from the Department for the use of molluscicides or other chemicals, including chlorine. Use of these chemicals, if not carefully evaluated and controlled, could pose a potential risk to the aquatic life. Given the zebra mussels' rapid reproduction and its potential to disrupt and damage the operations of municipal and industrial facilities, it is incumbent upon the Department to review all such requests in a timely fashion. As the routine 60-day review/approval period normally used for other chemical products and additives is not appropriate for handling requests for the treatment of zebra mussels, the Department will: 1) give those requests that involve the use of molluscicides priority over those requests that do not and 2) endeavor to review all such requests and notify the permittee of the results within 15 days after the requests are received. In cases where the permittee seeks immediate treatment the Department may, if circumstances warrant, grant emergency approval (by a letter) for the use of the requested molluscicide. Any requests for approval of chlorine to control the zebra mussels should be handled following the Department's chlorine policy.

To facilitate the approval process for the use of molluscicides, the DWQ will compile a list of all chemical additives currently being marketed for the control of zebra mussels and will collect toxicity data and other information on each product including: trade names, names and addresses of manufacturers, Material Safety Data Sheets or any other available information on mammalian or aquatic toxicological effects, bioassay data on whole product and active ingredients, recommended dosage rates, maximum allowable effluent concentration as a function of dilution ratio, analytical methods and detection levels, and pollutant fate and transportation rates if any. The DWQ expects to evaluate this information and determine the need for specific dosages or effluent limitations or other control requirements and provide guidance to the field permit writers before any requests for the use of these products are received from permittees.

In an effort to minimize the use of biocides, the Department will approve the short-term use of molluscicides only in those cases where it deems a zebra mussel invasion to be imminent. Moreover, the Department will strictly limit usage rates of all approved molluscicides to the minimum amount necessary to attain effective treatment. The Department does not view the use of molluscicides alone as an acceptable long-term solution to the zebra mussel problem. The Department will encourage permittees to develop and implement long-term comprehensive control strategy that consider physical, mechanical, and other types of controls in addition to molluscicides. The DWQ will keep the field offices informed of any new developments concerning the spread and control of zebra mussels as the information becomes available.

The use of chemicals for the control of mollusks may be permitted based upon the data submitted by the applicant and any information available to the Department. For approval of a new (first time use approval) chemical, the permittee generally be expected to follow the procedure outlined under Alternative 1 and submit the required data. Upon review by the Department, an approval of the chemical use with necessary monitoring and reporting requirements should be sent to the permittee. As a minimum, use of the permitted chemicals should be evaluated once every five years or at the next permit renewal whichever occurs first.

14) REQUIREMENTS APPLICABLE TO STORMWATER OUTFALLS

A. Prohibition of Non-stormwater Discharges

1. Except as provided in A.2, all discharges to stormwater outfalls (list) shall be composed entirely of non-polluting stormwater.
2. The following non-polluting water discharges may be authorized, provided the discharge is in compliance with D.2.b: discharges from fire fighting activities; fire hydrant flushings, potable water sources including waterline flushings, irrigation drainage, lawn watering, routine external building washdown which does not use detergents or other compounds, pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, springs, uncontaminated groundwater, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

B. Spills

This permit does not authorize the discharge of any polluting substances resulting from an on-site spill. Such spills shall be controlled through proper implementation of a PPC Plan as stated in Section D below.

C. This permit does not authorize any discharge (storm water or non-storm water) containing any pollutant that may cause or contribute to an impact on aquatic life or pose a substantial hazard to human health or the environment due to its quantity or concentration.

D. Preparedness, Prevention and Contingency Plans

1. Development of Plan

Operators of facilities shall have developed a Preparedness, Prevention and Contingency (PPC) Plan in accordance with 25 Pa. Code § 91.34 and the "Guidelines for the Development and Implementation of Environmental Emergency Response Plans". The PPC Plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the facility. In addition, the PPC Plan shall describe the BMPs that are to be used to reduce the pollutants in stormwater discharges at the facility ensuring compliance with the terms and conditions of this permit.

2. Non-stormwater Discharges

- a. The PPC Plan shall contain a certification that the discharge has been tested or evaluated for the presence of non-stormwater discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-stormwater discharges, the evaluation criteria or testing methods used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Such certification may not be feasible if the facility operating the stormwater discharge does not have access to an outfall, manhole, or other point of access to the ultimate conduit that receives the discharge. In such cases, the source identification section of the PPC Plan shall indicate why the certification was not feasible. A discharger that is unable to provide the certification must notify the Department within 180 days of the effective date of this permit.
- b. Except for flows from fire fighting activities, sources of non-storm water listed in A.2. (authorized non-stormwater discharges) that are combined with stormwater discharges must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge.

3. Comprehensive Site Compliance Evaluations and Record Keeping

Qualified personnel shall conduct site compliance evaluations at least once a year. Such evaluations shall include:

- a. Visual inspection and evaluation of areas contributing to a stormwater discharge for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

- b. Based on the results of the inspection, the description of potential pollutant sources identified in the PPC plan, and pollution prevention measures and controls identified in the plan shall be revised as appropriate within 15 days of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 90 days after the inspection.
- c. A report summarizing the scope of the inspection shall be completed and made available upon request and retained as part of the PPC Plan for at least one year after coverage under this permit terminates.

E. Stormwater Management Best Management Practices(BMPs)

The permittee shall implement at least the following BMPs:

- 1. Ensure that all fuel tanks have secondary containment and leak detection; run-off from tank areas should be inspected and/or treated for oil and grease before discharge.
- 2. Develop and implement measures, including run-off controls, oil/water separation, etc., to minimize potential oil and grease contamination in runoff from rail transfer/switchyard areas.

F. Stormwater Sampling and Reporting

- 1. If stormwater samples are required by this permit, they shall be collected as grab samples during the first 30 minutes but no later than 1 hour of the discharge resulting from a storm event that occurs at least 72 hours from the previously measurable storm event.
- 2. When the discharger is unable to collect samples due to adverse climatic conditions, the discharger must submit, in lieu of sampling data, a description of why samples could not be collected, including available documentation of the event. This sampling waiver may not be used more than once during a two-year period.
- 3. Stormwater monitoring results shall be summarized on a DMR form and the Department's "Additional Information for the Reporting of Storm Water Monitoring" form.
- 4. When a facility has two or more outfalls that may reasonably be believed to discharge substantially identical effluents, based on a consideration of features and activities within the area drained by the outfall, the permittee may sample one such outfall and report that the quantitative data also applies to the substantially identical outfalls.

INSTRUCTIONS FOR UTILIZING
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

The original DMR form(s) included with your permit are provided to serve as a master. Copies of this form must be used when reporting the results of the monitoring requirements in your permit. Do not write on or send the original master. If you receive computer generated preprinted DMR forms, they should be used in place of the enclosed forms.

Please make a note of your permit expiration date on the master DMR so that you will be reminded to submit your renewal application 180 days prior to expiration.

A "Monitor/Report" requirement contained in a permit requirement block indicates that the parameter is monitored and the test result reported in the appropriate block. Any test methods specified in Part A or Part C of the permit must be used.

An "Average Weekly" value is defined as the highest weekly arithmetic average value observed during the monthly monitoring period.

Loading or mass units shall be reported as the average of the calculated daily loadings during the monthly, weekly, or daily measurement period.

For parameters for which the effluent limit is lower than the Method Detection Limit (MDL) of the most sensitive existing EPA approved (40 CFR Part 136) test method or DEP approved method, the parameters should be analyzed using the test method specified in Part C of the permit. The sample results must be specified on the DMR form as either the measured (quantified) value or as "less than" the detection limit used in the test (e.g. < x.x). Results SHALL NOT be reported as "Not Detectable" or "ND". For computing monthly averages, all "less than" sample results may be counted as zero values. All sample results used in computing monthly average values must be reported on the DMR form in the DMR comment section.

You should also note the other special instructions or definitions contained on the front and back of the DMR as well as in the permit.

Submit the completed forms to: DEP, EPA and the County Health Department as required in the permit. Unless otherwise specified in the permit, the DMR form must be submitted each month. If there is no discharge during the month, the DMR must be submitted with "NO DISCHARGE" written across the front.

To Calculate Mass of Pollutants For a Sampling Event

Use the sampling event reported concentration and perform the appropriate calculation as follows:

$$\text{_____ concentration (}\mu\text{g/l} \times 0.00834 \times \text{_____ flow (million gallons/day)} = \text{_____ lb./day}$$

or

$$\text{_____ concentration (mg/l)} \times 8.34 \times \text{_____ flow (million gallons/day)} = \text{_____ lb./day}$$

The value assigned to "flow (million gallons/day)" should be the 24-hour average flow for the outfall on the day the sample was taken. Where an outfall discharges for only part of a day (x hours), the daily mass value should be determined by using the x-hour average flow.

To Calculate an Arithmetic Average or Mean

Use the following equation:

$$\frac{X_1 + X_2 + X_3 + X_4 + \dots X_N}{n}$$

n = number of results

X = value of each analytical results

For example,

five samples were analyzed, their results were 75, 82, 90, 70, and 85.

$$\frac{75 + 82 + 90 + 70 + 85}{5} = 80.4$$

To Calculate a Geometric Mean or Geometric Average (For Fecal Coliform Only)

Use the following equation:

$$n\sqrt{X_1 \times X_2 \times X_3 \times X_4 \times \dots X_N}$$

n = number of analysis results

X = value of each analytical result

Note: If any value of X is zero, substitute a 1.0 for the calculation.

For example,

five samples were analyzed, their results were 75, 82, 90, 70, and 85.

$$5\sqrt{75 \times 82 \times 90 \times 70 \times 85} = 5\sqrt{3,293,325,000} = 80.1$$

Paperwork Reduction Act Notice

Public reporting burden for this collection of information is estimated to vary from a range of 10 hours as an average per response for some minor facilities, to 110 hours as an average per response for some major facilities, with a weighted average for major and minor facilities of 18 hours per response, including time for reviewing instructions; searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

General Instructions

1. If form has been partially completed by preprinting, disregard instructions directed at entry of that information already preprinted.
2. Enter "*Permittee Name/Mailing Address* (and facility name/location, if *different*)", "*Permit Number*," and "*Discharge Number*" where indicated. (A separate form is required for each discharge.)
3. Enter dates beginning and ending "*Monitoring Period*" covered by form where indicated.
4. Enter each "*Parameter*" as specified in monitoring requirements of permit.
5. Enter "*Sample Measurement*" data for each parameter under "*Quantity*" and "*Quality*" in units specified in permit. "*Average*" is normally arithmetic average (geometric average for bacterial parameters) of all sample measurements for each parameter obtained during "*Monitoring Period*"; "*Maximum*" and "*Minimum*" are normally extreme high and low measurements obtained during "*Monitoring Period*" (Note to municipals with secondary treatment requirement: Enter 30-day average of sample measurement under "*Average*", and enter maximum 7-day average of sample measurements obtained during monitoring period under "*Maximum*").
6. Enter "*Permit Requirement*" for each parameter under "*Quantity*" and "*Quality*" as specified in permit.
7. Under "*No Ex*" enter number of sample measurements during monitoring period that exceed maximum (and/or minimum or 7-day average as appropriate) permit requirement for each parameter. If none, enter "0".
8. Enter "*Frequency of Analysis*" both as "*Sample Measurement*" (actual frequency of sampling and analysis used during monitoring period) and as "*Permit Requirement*" specified in permit. (e.g., Enter "*Cont*," for continuous monitoring, "*1/7*" for one day per week, "*1/30*" for one day per month, "*1/90*" for one day per quarter, etc.).
9. Enter "*Sample Type*" both as "*Sample Measurement*" (actual sample type used during monitoring period) and as "*Permit Requirement*," (e.g., Enter "*Grab*" for individual sample, "*24HC*" for 24-hour composite, "*N/A*" continuous monitoring, etc.).
10. Where violations of permit requirements are reported, attach a brief explanation to describe cause and corrective actions taken, and reference each violation by date.
11. If "no discharge" occurs during monitoring period, enter "*No Discharge*" across form in place of data entry.
12. Enter "*Name/Title of Principal Executive Officer*" with "*Signature of Principal Executive Officer of Authorized Agent*", "*Telephone Number*," and "*Date*" at bottom of form.
13. Mail signed Report to Office(s) by date(s) specified in permit. Retain Copy for your records.
14. More detailed instructions for use of this *Discharge Monitoring Report* (DMR) form may be obtained from Office(s) specified in permit.

Legal Notice

This report is required by law (33 U.S.C. 1318; 40 C.F.R. 125.27). Failure to report or failure to report truthfully can result in civil penalties not to exceed \$10,000 per day of violation; or in criminal penalties not to exceed \$25,000 per day of violation, or by imprisonment for not more than one year, or by both.

MONTHLY FACILITY REPORT

Date Prepared _____

Facility Name _____ PWS ID No. _____
Facility Address _____ NPDES Permit No. _____
Municipality _____ Incinerator Permit Number (s) _____
County _____ Telephone Number _____

Person Completing Form _____
(Print Name)

Signature _____

Title _____

1. Total Hours Incinerator Operated _____

2. Type of Fuel _____

3. Total Fuel Usage _____

4. Supplier of Fuel _____

5. Estimated Amount of Sludge Incinerated _____

6. Incinerator Ash Disposal _____ 7. Sludge Disposal _____

(a) How Much (Tons) _____ (a) How Much (Tons) _____

(b) Where _____ (b) Where _____

(c) When (Last Occurrence) _____ (c) When (Last Occurrence) _____

(d) Hauler _____ (d) Hauler _____

(e) Receipts: Yes _____ No _____ (e) Receipts: Yes _____ No _____

8. Other Wastes (Grits, Barscreening, etc.)

(a) How Much (Tons) _____

(b) Where _____

(c) When (Last Occurrence) _____

(d) Hauler _____

(e) Receipts: Yes _____ No _____

9. Septic Tank Waste Accepted: Yes _____ No _____

10. If Yes:

(a) Volume _____

(b) Hauler(s) _____ Percent (%) Hauled _____

11. Analysis Performed to ensure tank waste contains no industrial waste

(a) Yes _____ No _____

(b) If yes, frequency _____

12. Additional Comments: _____

I&P GAS ISOTOPIC SAMPLE REPORT

Release Type...: 2 Gaseous
 Release Mode...: 1 Continuous
 Release ID.....: 5 Turbine Building Vent Unit 1
 Isotopic Sample: 2005075
 File (Iodine)...: chem1_05_5261.doc
 File (Part)....: chem3_05_5257.doc

=== SAMPLE DATA =====

Sample Start Date/Time..... 07/27/2005 21:20
 Sample End Date/Time..... 07/28/2005 21:20

Sample Flowrate (cc/min)..... 3.613E+04
 Sample Volume (cc)..... 5.203E+07

Vent Flowrate (cc/min)..... 5.794E+09
 Vent Volume (cc)..... 8.344E+12

Iodine Release Rate (uCi/min)..... 0.000E+00
 Iodine Release Rate Limit (uCi/min)..... 2.080E+01
 Iodine Release Rate Percent of Limit..... 0.000E+00

Particulate Release Rate (uCi/min)..... 0.000E+00
 Particulate Release Rate Limit (uCi/min)..... 1.542E+02
 Particulate Release Rate Percent of Limit..... 0.000E+00

Max Organ Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Max T.Body Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Sample Comments:
 UNIT 1 TURBINE BUILDING VENT IODINE CARTRIDGE

=== NUCLIDE DATA =====

| Nuclide | uCi/cc | Ratio |
|---------|----------|----------|
| H-3 | 0.00E+00 | 0.00E+00 |
| H-3 | 0.00E+00 | 0.00E+00 |
| SR-89 | 0.00E+00 | 0.00E+00 |
| SR-90 | 0.00E+00 | 0.00E+00 |
| P>=8 | 0.00E+00 | 0.00E+00 |
| ALPHA | 0.00E+00 | 0.00E+00 |

I&P GAS ISOTOPIC SAMPLE REPORT

Release Type...: 2 Gaseous
 Release Mode...: 1 Continuous
 Release ID.....: 5 Turbine Building Vent Unit 1
 Isotopic Sample: 2005076
 File (Iodine)...: chem2_05_5285.doc
 File (Part)....: chem3_05_5284.doc

=== SAMPLE DATA =====
 Sample Start Date/Time..... 07/28/2005 21:20
 Sample End Date/Time..... 07/29/2005 21:20

Sample Flowrate (cc/min)..... 3.610E+04
 Sample Volume (cc)..... 5.198E+07

Vent Flowrate (cc/min)..... 5.728E+09
 Vent Volume (cc)..... 8.248E+12

Iodine Release Rate (uCi/min)..... 0.000E+00
 Iodine Release Rate Limit (uCi/min)..... 2.080E+01
 Iodine Release Rate Percent of Limit..... 0.000E+00

Particulate Release Rate (uCi/min)..... 0.000E+00
 Particulate Release Rate Limit (uCi/min)..... 1.542E+02
 Particulate Release Rate Percent of Limit..... 0.000E+00

Max Organ Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Max T.Body Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Sample Comments:
 UNIT 1 TURBINE BUILDING VENT IODINE CARTRIDGE

=== NUCLIDE DATA =====

| Nuclide | uCi/cc | Ratio |
|---------|----------|----------|
| H-3 | 0.00E+00 | 0.00E+00 |
| H-3 | 0.00E+00 | 0.00E+00 |
| SR-89 | 0.00E+00 | 0.00E+00 |
| SR-90 | 0.00E+00 | 0.00E+00 |
| P>=8 | 0.00E+00 | 0.00E+00 |
| ALPHA | 0.00E+00 | 0.00E+00 |

I&P GAS ISOTOPIC SAMPLE REPORT

Release Type...: 2 Gaseous
 Release Mode...: 1 Continuous
 Release ID.....: 5 Turbine Building Vent Unit 1
 Isotopic Sample: 2005077
 File (Iodine)...: chem3_05_5298.doc
 File (Part)....: chem3_05_5294.doc

=== SAMPLE DATA =====

Sample Start Date/Time..... 07/29/2005 21:20
 Sample End Date/Time..... 07/30/2005 21:20

Sample Flowrate (cc/min)..... 3.663E+04
 Sample Volume (cc)..... 5.275E+07

Vent Flowrate (cc/min)..... 5.818E+09
 Vent Volume (cc)..... 8.378E+12

Iodine Release Rate (uCi/min)..... 0.000E+00
 Iodine Release Rate Limit (uCi/min)..... 2.080E+01
 Iodine Release Rate Percent of Limit..... 0.000E+00

Particulate Release Rate (uCi/min)..... 0.000E+00
 Particulate Release Rate Limit (uCi/min)..... 1.542E+02
 Particulate Release Rate Percent of Limit..... 0.000E+00

Max Organ Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Max T.Body Dose Rate..... 0.000E+00
 Dose Rate Limit..... 1.125E+03
 Dose Rate Percent of Limit..... 0.000E+00

Sample Comments:
 UNIT 1 TURBINE BUILDING VENT IODINE CARTRIDGE

=== NUCLIDE DATA =====

| Nuclide | uCi/cc | Ratio |
|---------|----------|----------|
| H-3 | 0.00E+00 | 0.00E+00 |
| H-3 | 0.00E+00 | 0.00E+00 |
| SR-89 | 0.00E+00 | 0.00E+00 |
| SR-90 | 0.00E+00 | 0.00E+00 |
| P>=8 | 0.00E+00 | 0.00E+00 |
| ALPHA | 0.00E+00 | 0.00E+00 |

NAME PPL Susquehanna, LLC
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18603-0467

(2-16) PA-0047325 PERMIT NUMBER
 (17-19) 070 DISCHARGE NUMBER

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |
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FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (3 Card Only) QUANTITY OR LOADING (46-53) | | | (4 Card Only) QUANTITY OR CONCENTRATION (54-61) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) |
|------------------------|---|---------|-------|---|------------------|---------|----------------|-------------------------------|---------------------|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | | | |
| Oil and Grease | MEASUREMENT | ***** | | ***** | | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | Monitor & Report | Mg/L | | 1/year | Grab |
| | MEASUREMENT | ***** | | ***** | | | | | |
| pH | PERMIT REQUIREMENT | ***** | ***** | ***** | Monitor & Report | S.U. | | 1/year | Grab |
| | MEASUREMENT | ***** | | ***** | | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | Monitor & Report | Mg/L | | 1/year | Grab |
| Total Suspended Solids | MEASUREMENT | ***** | | ***** | | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | Monitor & Report | Mg/L | | 1/year | Grab |
| | MEASUREMENT | ***** | | ***** | | | | | |
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PERMITTEE NAME/ADDRESS (include Facility Name/Location if different)

NAME PPL Susquehanna, LLC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18603-0467

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)
 (17-19)

PA-0047325 PERMIT NUMBER
 071 DISCHARGE NUMBER

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

Permit Approved
 OMB No. 2040-0004
 Approval expires 9-30-85

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |
| | | | | | |

FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (3 Carrd Only) (46-53) | | | (20-21) (22-23) (24-25) | | | (4 Carrd Only) (38-45) | | | (26-27) (28-29) (30-31) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) | | |
|-------------------------|------------------------|-------------------|------------------|-------------------------|---------|-------|------------------------|---------|---------|-------------------------|---------|---------|----------------|-------------------------------|---------------------|-------------------------|-------|
| | AVERAGE | MAXIMUM | UNITS | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | | | | MAXIMUM | UNITS |
| Flow | MEASUREMENT | | | | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | | | |
| | PERMIT REQUIREMENT | Report 30 Day Avg | Report Daily Max | MGD | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | Daily | ecording instrumentatio | |
| | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | | | |
| Free Available Chlorine | PERMIT REQUIREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | Daily | Grab During Chlorinatio | |
| | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| Total Zinc | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| Total Chromium | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | 1/Year | Comp - 8 Hr. | |
| pH | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | Daily | Grab | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | Daily | Grab | |
| | MEASUREMENT | ***** | ***** | ***** | | | ***** | ***** | ***** | ***** | ***** | ***** | ***** | | Daily | Grab | |

NOTE: Read instructions before completing this form.

(3 Carrd Only) (46-53) QUANTITY OR LOADING (20-21) (22-23) (24-25) QUANTITY OR CONCENTRATION (26-27) (28-29) (30-31) QUANTITY OR CONCENTRATION (34-61)

TELEPHONE DATE

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT AREA CODE NUMBER YEAR MO DAY

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) (2-16)

Form Approved OMB No. 2040-0004 Approval expires 9-30-85

NAME PPL Susquehanna, LLC.
ADDRESS 769 Salem Boulevard
Berwick, PA 18603-0467

PA-0047325
PERMIT NUMBER

072
DISCHARGE NUMBER

Permit Issued/Effective Date: September 1, 2005
Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |

FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (3 Card Only) (46-53) QUANTITY OR LOADING (54-61) | | | (4 Card Only) (38-45) QUANTITY OR CONCENTRATION (54-61) | | | UNITS | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-69) | SAMPLE TYPE (69-70) |
|--|--|-------------------|------------------|---|---------|-----------------|------------|----------------|-------------------------------|---------------------|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | | | | |
| Flow | MEASUREMENT | | | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | Report 30 Day Avg | Report Daily Max | ***** | ***** | MGD | ***** | | Daily When Discharging | Estimate |
| | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 100.0 Daily Max | Mg/L | | Quarterly | Grab |
| Total Suspended Solids | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 30 Day Avg | Mg/L | | Quarterly | Grab |
| | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 20.0 Daily Max | Mg/L | | Quarterly | Grab |
| Oil and Grease | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 15.0 30 Day Avg | Mg/L | | Quarterly | Grab |
| | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 9.0 Maximum | Std. Units | | Daily When Discharging | Grab |
| pH | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 6.0 Minimum | Std. Units | | Daily When Discharging | Grab |
| | MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | | ***** | | | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | MEASUREMENT | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | |
| | MEASUREMENT | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | |
| COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 3 years.) | | | | | | TELEPHONE | | DATE | |
| | TYPED OR PRINTED | | | | | | AREA CODE | NUMBER | YEAR | MO |

NAME PPL Susquehanna, LCC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18603-0467

PA-0047325 PERMIT NUMBER
 073 DISCHARGE NUMBER

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |

FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (3 Card Only) QUANTITY OR LOADING (46-53) | | | (4 Card Only) QUANTITY OR CONCENTRATION (54-61) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) | |
|--|--|-------------------|------------------|---|-----------------|-----------------|--|-------------------------------|---------------------|-------|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | | | | UNITS |
| Flow | SAMPLE MEASUREMENT | | | | ***** | ***** | | | | |
| | PERMIT REQUIREMENT | Report 30 Day Avg | Report Daily Max | MGD | ***** | ***** | | Daily When Discharging | Estimate | |
| | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | | | | |
| Total Suspended Solids | PERMIT REQUIREMENT | ***** | ***** | ***** | 30.0 30 Day Avg | 100.0 Daily Max | | Quarterly | Grab | |
| | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | 15.0 30 Day Avg | 20.0 Daily Max | | Quarterly | Grab | |
| Oil and Grease | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | 6.0 Minimum | 9.0 Maximum | | Daily When Discharging | Grab | |
| | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | | | | |
| pH | PERMIT REQUIREMENT | ***** | ***** | ***** | | | | | | |
| | SAMPLE MEASUREMENT | ***** | ***** | | | | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | | | | | | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | SAMPLE MEASUREMENT | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | |
| COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) | PERMIT REQUIREMENT | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | |
| TYPED OR PRINTED | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.) | | | | | | SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | TELEPHONE | DATE | |
| | | | | | | | AREA CODE | NUMBER | YEAR | MO |

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME PPL Susquehanna, LLC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18603-0467

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) (17-19)

PA-0047325 PERMIT NUMBER
 074 DISCHARGE NUMBER

Form Approved.
 OMB No. 2040-0004
 Approval expires 9-30-85

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|------|----|------|----|
| YEAR | | MO | | DAY | |
| FROM | TO | FROM | TO | FROM | TO |
| | | | | | |

| PARAMETER (32-37) | (3 Card Only) (46-53) QUANTITY OR LOADING (54-61) | | | (4 Card Only) (26-27) QUANTITY OR CONCENTRATION (46-53) (54-61) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) |
|------------------------|---|--------------------|-------|---|-----------------|-----------------|----------------|-------------------------------|---------------------|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | | | |
| Flow | Report 30 Day Avg | Report Daily Max | MGD | ***** | ***** | ***** | ***** | ***** | ***** |
| | PERMIT REQUIREMENT | PERMIT REQUIREMENT | | ***** | ***** | ***** | ***** | Daily When Discharging | Estimate |
| Total Suspended Solids | Report 30 Day Avg | Report Daily Max | ***** | ***** | 30.0 30 Day Avg | 100.0 Daily Max | Mg/L | Quarterly | Grab |
| | PERMIT REQUIREMENT | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| Oil and Grease | Report 30 Day Avg | Report Daily Max | ***** | ***** | 15.0 30 Day Avg | 20.0 Daily Max | Mg/L | Quarterly | Grab |
| | PERMIT REQUIREMENT | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | ***** |
| pH | Report 30 Day Avg | Report Daily Max | ***** | 6.0 Minimum | 9.0 Maximum | Std. Units | | Daily When Discharging | Grab |
| | PERMIT REQUIREMENT | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | ***** |

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 TYPED OR PRINTED
 COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
 I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

| | |
|-----------|--------|
| TELEPHONE | DATE |
| AREA CODE | NUMBER |
| YEAR | MO |
| DAY | DAY |

PERMITTEE NAME/ADDRESS (include Facility Name/Location if different)

NAME PPL Susquehanna, LLC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18063-0467

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) (2-16)

PA-0047325
 PERMIT NUMBER

079
 DISCHARGE NUMBER

Form Approved
 OMB No. 2040-0004
 Approval expires 9-30-85

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | |
|-------------------|----|-----|----|
| YEAR | MO | DAY | TO |
| | | | |

| PARAMETER (32-37) | (3 Card Only) (46-53) | | QUANTITY OR LOADING (20-21) (22-23) (24-25) | | (4 Card Only) (26-27) (28-29) (30-31) | | QUANTITY OR CONCENTRATION (54-61) | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) |
|------------------------------------|-----------------------|--------------------|---|-------|---------------------------------------|---------|-----------------------------------|------------|----------------|-------------------------------|---------------------|
| | AVERAGE | PERMIT REQUIREMENT | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | UNITS | | | |
| Flow (MGD) | SAMPLE MEASUREMENT | | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | 0.08 30 Day Avg | ***** | MGD | ***** | ***** | ***** | ***** | | Daily | Pump Rate or Weir |
| CBOD ₅ | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | Mg/l | | 1/Month | Comp - 8 Hr. |
| Total Suspended Solids | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | Mg/l | | 1/Month | Comp - 8 Hr. |
| pH | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | Std. Units | | Daily | Grab |
| Fecal Coliform (May 1 To Sept. 30) | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | #/ | | 1/Month | Grab |
| Fecal Coliform (Oct. 1 To Apr. 30) | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | 100 ML | | 1/Month | Grab |
| Total Residual Chlorine | SAMPLE MEASUREMENT | ***** | ***** | | ***** | ***** | ***** | ***** | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | ***** | ***** | Mg/l | | Daily | Grab |

NOTE: Read instructions before completing this form.

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
 I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

TYPED OR PRINTED

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA CODE NUMBER YEAR MO DAY

TELEPHONE DATE

PERMITTEE NAME/ADDRESS (include Facility Name/Location if different)

NAME PPL Susquehanna, LLC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18063-0467

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

PA-0047325 PERMIT NUMBER
 079 DISCHARGE NUMBER

Form Approved
 OMB No. 2040-0004
 Approval expires 9-30-85

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |
| | | | | | |

FROM LOCATION Salem Township, Luzerne County

| PARAMETER (32-37) | MEASUREMENT PERMIT REQUIREMENT | MONTHLY (46-53) | QUANTITY OR LOADING (20-21) (22-23) (24-25) | | | QUANTITY OR CONCENTRATION (46-53) | | | UNITS | NO. EX (62-65) | FREQUENCY OF ANALYSIS (64-69) | SAMPLE TYPE (69-70) |
|--|--|---------------------|---|-----------------|--------------------|-----------------------------------|--|------|-------|----------------|-------------------------------|---------------------|
| | | | ANNUAL | MINIMUM (36-45) | AVERAGE (30-31) | MAXIMUM (54-61) | | | | | | |
| Ammonia-N | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| Nitrite-N | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| Nitrate-N | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | ***** | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| Total Nitrogen | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | Calculate | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | Calculate | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | Calculate | |
| Total Phosphorus | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| | MEASUREMENT PERMIT REQUIREMENT | Report Monthly Load | Report An Ms Load | Report | Report 30 Day Avg. | Report Daily Max. | | Mg/L | | 2/Month | 8 Hr. Comp. | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or maximum Imprisonment of between 6 months and 5 years.) | | | | | | | | | | | |
| TYPED OR PRINTED | SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT | | | | | | | | | | | |
| | TELEPHONE | | | | | | | | | | | |
| | DATE | | | | | | | | | | | |

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

NAME PPL Susquehanna, LLC.
ADDRESS 769 Salem Boulevard
Berwick, PA 18603-0467

PA-0047325 PERMIT NUMBER
171 DISCHARGE NUMBER

Permit Issued/Effective Date: September 1, 2005
Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |
| | | | | | |

FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (1 Card Only) (46-53) | | | (20-21) (22-23) (24-25) | | | (4 Card Only) (38-45) | | | (28-29) (30-31) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) |
|--|-----------------------|---|------------------|-------------------------|---------|------------|-----------------------|---------|---------|-----------------|-------|--|------------------------|-------------------------------|---------------------|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | UNITS | | | | |
| Flow | SAMPLE MEASUREMENT | | | | | | ***** | ***** | ***** | ***** | | | | | |
| | PERMIT REQUIREMENT | Report 30 Day Avg | Report Daily Max | MGD | | | ***** | ***** | ***** | ***** | | | Daily When Discharging | Estimate | |
| Total Suspended Solids | SAMPLE MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | ***** | ***** | 100.0 | Mg/l | | 1/Month | Grab | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 30 Day Avg | ***** | ***** | ***** | Daily Max | | | | | |
| Oil and Grease | SAMPLE MEASUREMENT | ***** | ***** | ***** | ***** | | ***** | ***** | ***** | 20.0 | Mg/l | | 1/Year | Grab | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | ***** | 30 Day Avg | ***** | ***** | ***** | Daily Max | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| COMMENT AND EXPLANATION OF ANY VIOLATIONS (reference all attachments here) | SAMPLE MEASUREMENT | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and or minimum imprisonment of between 6 months and 5 years) | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| TYPED OR PRINTED | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| TELEPHONE | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| DATE | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| AREA CODE | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| NUMBER | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| YEAR | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| MO | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |
| DAY | SAMPLE MEASUREMENT | | | | | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | | | | | |

PERMITTEE NAME/ADDRESS (include Facility Name/Location if different)

NAME PPL Susquehanna, LLC.
 ADDRESS 769 Salem Boulevard
 Berwick, PA 18603-0467

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR) (2-16)

PA-0047325 PERMIT NUMBER
 371 DISCHARGE NUMBER

Form Approved
 OMB No. 2040-0004
 Approval expires 9-30-85

Permit Issued/Effective Date: September 1, 2005
 Permit Expiration Date: August 31, 2010

| MONITORING PERIOD | | | | | |
|-------------------|----|-----|------|----|-----|
| YEAR | MO | DAY | YEAR | MO | DAY |
| | | | | | |

FACILITY LOCATION Salem Township, Luzerne County FROM

| PARAMETER (32-37) | (3 Card Only) QUANTITY OR LOADING (46-53) | | | (4 Card Only) QUANTITY OR CONCENTRATION (54-61) | | | NO. EX (62-63) | FREQUENCY OF ANALYSIS (64-68) | SAMPLE TYPE (69-70) | | |
|--|--|-------------------|------------------|---|------------|-----------|------------------|-------------------------------|---------------------|-------|-----|
| | AVERAGE | MAXIMUM | UNITS | MINIMUM | AVERAGE | MAXIMUM | | | | UNITS | |
| Flow | SAMPLE MEASUREMENT | | | | ***** | ***** | | | | | |
| | PERMIT REQUIREMENT | Report 30 Day Avg | Report Daily Max | | ***** | ***** | | Daily When Discharging | Estimate | | |
| | SAMPLE MEASUREMENT | ***** | ***** | MGD | ***** | ***** | **** | | | | |
| Total Suspended Solids | PERMIT REQUIREMENT | ***** | ***** | | ***** | 100.0 | | 1/Month | Grab | | |
| | SAMPLE MEASUREMENT | ***** | ***** | ***** | 30 Day Avg | Daily Max | Mg/l | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | 30 Day Avg | Daily Max | Mg/l | 1/Year | Grab | | |
| Oil and Grease | SAMPLE MEASUREMENT | | | | ***** | ***** | | | | | |
| | PERMIT REQUIREMENT | ***** | ***** | ***** | 15.0 | 20.0 | | | | | |
| | SAMPLE MEASUREMENT | ***** | ***** | ***** | 30 Day Avg | Daily Max | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | |
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| | SAMPLE MEASUREMENT | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | |
| | SAMPLE MEASUREMENT | | | | | | | | | | |
| | PERMIT REQUIREMENT | | | | | | | | | | |
| NAME/TITLE PRINCIPAL EXECUTIVE OFFICER | I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC §1001 AND 33 USC §1319 (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.) | | | | | | TELEPHONE | | DATE | | |
| | COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) | | | | | | AREA CODE | NUMBER | YEAR | MO | DAY |
| | | | | | | | TYPED OR PRINTED | | | | |



COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER QUALITY PROTECTION

ANNUAL STORM WATER INSPECTION FORM

You are eligible to conduct an Annual Inspection in lieu of chemical monitoring to comply with this permit. The Annual Inspection shall include a visual inspection of all outfalls associated with the facility and a comprehensive site compliance certification. Where possible, visual inspection shall identify substances present in the sediment. The Annual Inspection must identify area(s) contributing pollutant(s) to storm water discharge(s) and evaluate whether measures to reduce pollutant loadings identified in the PPC plan are adequate and properly implemented in accordance with terms of the permit or whether additional control measures are necessary. Any deficiencies found during the inspection are to be corrected promptly.

An Annual Storm Water Inspection Report form is provided to assist you with documenting the information required by the Stormwater Permit when an Annual Inspection is conducted along with the Comprehensive Site Compliance Evaluation. The completed Annual Inspection Report Form copies are to be kept on-site.

If you chose to collect and analyze samples, please stop here. You do **not** need to complete this form.



ANNUAL STORM WATER INSPECTION FORM

| | |
|---|--|
| 1. Date of Inspection <input type="checkbox"/> <input type="checkbox"/> 3. NPDES Permit #PAS <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4. Outfall # <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 2. Facility Name and Address: _____ _____ _____ |
|---|--|

DESCRIPTION OF OUTFALL

5. Type of Outfall Concrete Pipe Grassed Rock
 Other _____

6. Description of area(s) that drains to outfall _____

7. Storm water management practices, erosion and sedimentation control practices, and other structural control measures that are in place to control pollutants from running off site.

VISUAL INSPECTION OF OUTFALL

8. Is there visible flow from the pipe? Yes No (Go to number 10)

| | |
|---|-------------|
| a. ODOR: Chemical Musty Sewage Rotten Eggs | Other _____ |
| b. COLOR: Clear Red Yellow Brown | Other _____ |
| c. CLARITY: Clear Cloudy Opaque Suspended Solids | Other _____ |
| d. FLOATABLES: Suds Oily Film Garbage Sewage | Other _____ |
| e. DEPOSITS/STAINS: None Oily Sediment | Other _____ |
| f. VEGETATION: None Normal Excessive Inhibited | Other _____ |

9. Is there standing water present? Yes No (Go to number 10)

| | |
|---|--------------|
| a. ODOR: Chemical Musty Sewage Rotten Eggs | Other _____ |
| b. COLOR: Clear Red Yellow Brown | Other _____ |
| c. CLARITY: Clear Cloudy Opaque Suspended Solids | Other _____ |
| d. FLOATABLES: Suds Oily Film Garbage Sewage | Other _____ |
| e. DEPOSITS/STAINS: None Oily Sediment | Other _____ |
| f. VEGETATION: None Normal Excessive Inhibited | Other: _____ |

10. Is there any evidence of or potential for pollution being discharged at this outfall? Yes No

Describe: _____

If yes, identification of substances present in the sediment (if possible) _____

11. Corrective measures taken or planned to remove sediments or debris if found during inspection. Please provide a schedule if actions are planned.

COMPREHENSIVE SITE COMPLIANCE EVALUATION

12. Verify that drainage maps reflect current conditions

Completed

Comments: _____

13. Evaluate evidence and/or potential for discharge of pollutants into drainage systems.

Completed

Comments: _____

14. Review PPC Plan (including Housekeeping Measures) to determine if any changes, corrections, or updates are necessary.

Completed

Comments: _____

15. Inspect all structural storm water equipment used to implement the PPC Plan to determine if they are adequate.

Completed

Comments: _____

16. Inspect all overall site to determine if erosion and sedimentation control measures are adequate.

Completed

Comments: _____

17. Corrective actions/measures completed or planned to correct any deficiencies found as a result of the inspection. Please provide a schedule if actions are planned.

ADDITIONAL INFORMATION

Provide the following information for the storm event that preceded the visual inspection of the outfall(s)

18. Duration _____

19. Estimation of rainfall (in inches) † _____

20. Estimate the time between the previous rain event _____

21. Estimate the total volume (in gallons) _____

Volume = C x I x A,
 where C is the runoff coefficient (i.e 0.9 for paved and 0.5 for unpaved)
 I is the rainfall amount (in ft), and
 A is the area (square feet) drained to the outfall inspected.
 (convert from cubic feet to gallons by multiplying by 7.481)

22. Estimate the size of the drainage area (in square feet) for each outfall.

| Outfall # | Drainage Area | % Paved | % Unpaved |
|-----------|---------------|---------|-----------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

† The annual inspection should be conducted after a storm event that is greater than 0.1 inches in magnitude and that occurred at least 72 hours from the previous 0.1 inch storm event.

Inspector: _____

 Name/Title Principal Executive Officer Signature

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT SEE 18 U.S.C. 1001 AND 33 U.S.C. 13.9. (Penalties under these statutes may include fines up to \$10,000 and/or imprisonment of between 6 months and 5 years).

 Date

ACTION – RENEWAL NPDES - 01

[01_##_NPDES_Renewal_BCA02.doc List below, Regional Office; delete regional text not related to your region. Delete this note.]

Northeast Region: Water Management Program Manager, 2 Public Square, Wilkes Barre, PA 18711-0790

| NPDES No. (Type) | Facility Name & Address | County & Municipality | Stream Name (Watershed #) | EPA Waived Y/N ? |
|---------------------|---|----------------------------------|------------------------------|---------------------|
| PA-0047325 | PPL Susquehanna, LLC Susquehanna Steam Electric Station 769 Salem Boulevard Berwick, PA 18603-0467 | Luzerne County Salem Township | Susquehanna River SC | No |

In accordance with the Chesapeake Bay Strategy nutrient monitoring requirements were added to Outfall 079 of this permit as published on April 30, 2005.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WATER MANAGEMENT PROGRAM**

| |
|--------------------|
| |
| For Dept. Use Only |

Internal Review and Recommendations

| | | | | | |
|-------------------|-----------------------------|------------------|--|--------------------|-------------------|
| Name of Applicant | <u>PPL Susquehanna, LLC</u> | Project Location | <u>Salem Township Luzerne County</u> | Application Number | <u>PA-0047325</u> |
|-------------------|-----------------------------|------------------|--|--------------------|-------------------|

BRIEF DESCRIPTION OF PROJECT AND DISCUSSION (Use Additional Sheets If Necessary)

FACT SHEET

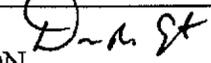
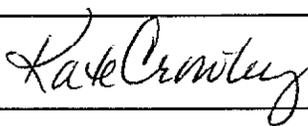
Type: Industrial Waste

Contact: Mr. Britt T. McKinney, Vice President – Nuclear Site Operations
PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603-0467
Salem Township
Luzerne County
570-542-3149
570-542-1504 FAX
BTMcKinney@pplweb.com

DEP Contact: Mr. Brian F. Busher, P.E.
Reviewing Engineer
Permits Section
Water Management Program
DEP Northeast Regional Office
570-826-2306

CURRENT ESTIMATE OF COMPLETION DATE OF PROJECT (Industrial Wastes Only)

RECOMMENDATION AND ACTION

| Approve Issue By Region | Approve Issue by Central Office | Refuse | Signature | Date |
|-------------------------------------|---------------------------------|--------------------------|--|--------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Brian F. Busher, P.E. REVIEWING ENGINEER  | 8/5/05 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Dino R. Agustini, P.E. CHIEF, PERMITS SECTION  | 8/5/05 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | KATE CROWLEY PROGRAM MANAGER  | 8/5/05 |

Applicant is requesting the renewal of their NPDES Permit to discharge treated process wastewater, sewage and stormwater into the Susquehanna River. Permit is being renewed as part of the North Branch Susquehanna River Watershed, SWP Basin 5B. Applicant's SIC is 4911- Electrical Services and is classified under Part 423 Steam Electric Power Generating category. Permit is being renewed using the same effluent limits. This is a major discharge. Outfall 571 has been eliminated.

The water quality limits are as follows:

Outfall 079 – Sewage Treatment Plant

Parameter

Fecal Coliform (5/1 to 9/30) 200/100 ml as a geometric avg.
(10/1 to 4/30) 2,000/100 ml as a geometric avg.

No other water quality based limits apply to this or other outfalls.

The technology based limits were calculated as follows:

The pH of all discharges, except once through cooling water and stormwater, shall be within the range of 6.0 and 9.0. (Outfalls 070, 075 and 080 are stormwater outfalls.)

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

Outfall 071 – Cooling Tower Blowdown (7.93 mgd)

| <u>Parameter</u> | | <u>Daily Max. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-------------------------|----------|--------------------------|--------------------------|
| Free Available Chlorine | (423.13) | .20 | .50 |
| Total Chromium* | (423.13) | .20 | |
| Total Zinc* | (423.13) | 1.0 | |

pH 6.0 to 9.0 at all times.

*Monitoring frequency 1/Year is recommended for chromium and zinc because of their relatively low discharge concentrations compared to their technology based limits.

Free available chlorine, total chromium and total zinc are BAT based.

Condition regulating the length of chlorine discharge also applies. Using the recent TRC speedsheet, no water quality based limits for TRC are required. The above technology limits will protect water quality.

Outfalls 072, 073 and 074 are all low volume waste sources. The following BPT low volume waste limits apply to these outfalls as well as Internal Outfalls 171 and 371.

| <u>Parameter</u> | | <u>Monthly Avg (mg/l)</u> | <u>Daily Max. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-----------------------------|-------------------|-------------------------------|------------------------------|------------------------------|
| Total Suspended Solids | (423.12) | 30.0 | 100.0 | |
| Oil & Grease ⁽¹⁾ | (423.12) | 15.0 | 20.0 | 30.0 |
| pH ⁽²⁾ | (Chapter 95.2(2)) | 6.0 to 9.0 at all times | | |

⁽¹⁾ The 30.0 mg/l is BPT based Chapter 95.2(3)(ii)

⁽²⁾ The pH limit does not apply to the Internal Outfalls

Outfall 079 – STP flow (.08 MGD)

| <u>Parameter</u> | <u>Monthly Avg. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-------------------------|----------------------------|--------------------------|
| CBOD ₅ | 25.0 | 50.0 |
| Total Suspended Solids | 30.0 | 60.0 |
| Total Residual Chlorine | 1.0 | 2.0 |
| pH | 6.0 to 9.0 at all times | |

The above limits are BPT Secondary Treatment. TRC is “facility specific” BAT.

PentoxSD was used to model for Toxics. No water quality based limits for toxics are required. The above Tech based TRC Limits are adequate to protect water quality.

The applicant requested four changes to the permit. The first requested change was the removal of internal Outfall 571. This outfall receives cooling and seal water from recirculation pump operation. The water coming to this internal outfall is returned to the main cooling water circulation system sump. This change was made.

The second requested change was for a modified monitoring frequency for Outfall 072 from monthly to quarterly. Outfalls 072, 073 and 074 all receive stormwater from various transformers and lube oil storage areas. All three outfalls have oil and grease separators. Outfalls 073 and 074 have quarterly monitoring requirements while Outfall 072 has monthly monitoring requirements. This change was made.

The third requested change was to eliminate the reference to the specific edition of Standard Methods for CBOD₅ analysis. The reference was replaced with “the most recent edition.”

The fourth request pertained to the recording of chemical addition usage on the “Chemical Additive Report Form.” The applicant requested the special condition be changed to allow for the recording of this information on their own forms. They have specific procedures, controls and records for chemical addition and use of the DEP form requires duplicative effort.

Stormwater monitoring requirements have been added to Outfalls 070, 075 and 080. The applicant will be required to monitor and report for Oil & Grease, pH, and TSS. Stormwater special conditions with appropriate BMPs have been included in Part C also.

The application included EPA 316(b) Phase II Documentation. The documentation showed actual river withdrawals can occur above 58 MGD. Withdrawals above the 50 MGD threshold require compliance under 316(b) Phase II. The applicant documents are in compliance with 40 CFR 125.94(a) Compliance Alternatives (1)(i), since the facility has a closed loop recirculating system with cooling towers. The 316(b) documentation provided in the application is provided to Mr. Thomas Barron of the Department's Bureau of Water Supply and Wastewater Management for review and comment. No comments were received. No requirements related to EPA 316(b) Phase II are imposed in this permit.

Temperature was modeled. No limits were added to the permit.

The public notice was published in the PA Bulletin on April 30, 2005.

Comments were received from the permittee on June 2, 2005. Those comments addressed clarification on EPA 316(b) status as documented in this IR&R/Fact Sheet and removal of metal analysis (copper, nickel, zinc and iron) from the stormwater Outfalls 070, 075 and 080. The monitoring of these metals is applicable to coal-fired steam electric facilities and not a nuclear facility. The metal monitoring was removed from those outfalls.

As part of Pennsylvania's effort to prevent localized impairment, help restore impaired waters, and remove the Chesapeake Bay and its tidal tributaries from the list of impaired waters under the Clean Water Act by the year 2010, the Department of Environmental Protection (DEP) has begun to implement a strategy for reducing our nutrient and sediment loads from the Susquehanna and Potomac River watersheds. As such, the Department has placed monitoring requirements for Total Nitrogen (TN) and Total Phosphorus (TP) in your NPDES permit renewal for the first three years. Monitoring of nutrient loads discharged from each point source facility is critical to documenting our progress in the restoration effort. Monitoring also helps identify the type of effort you may need to undertake to achieve any future nutrient load reductions.

Please be advised that under 25 Pa. Code §92.8a(a) of the Department's Rules and Regulations, we are notifying you that new cap load limits for TN and TP may change your existing treatment requirements. You will be advised once the cap load limits have been developed for your facility, and how those new limits will be incorporated into your NPDES permit.

EPA had no comments on the draft permit.

The EPA waiver is not in effect.

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Northeast Regional Office
Water Management Program
 March 31, 2005
 570-826-2306

SUBJECT: Sewage
 NPDES Application No. PA 0047325
 PPL Susquehanna, LLP
 Salem Township, Luzerne County

TO: Dino R. Agustini, P.E.
 Chief, Permits Section

FROM: Brian F. Busher, P.E.
 Sanitary Engineer
 Permits Section

A Part I (NPDES) permit application has been received for the above treatment facility. The applicable water quality standards for this discharge are as follows:

RECEIVING STREAM: North Branch Susquehanna River
 WATERSHED: North Branch Susquehanna River Watershed 5B
 CLASSIFICATION: WWF
 USE OF RECEIVING STREAM: Aquatic life, water supply, recreation
 NAME OF EXISTING/PROPOSED POTABLE WATER SUPPLY (PWS): Danville Water Authority

PWS LOCATION: Approximately 27 miles downstream on the North Branch Susquehanna River. 40 56' 43" Lat.; 76 36' 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF 12.09 MGD for **Outfall 071, cooling water.**

| <u>Parameter</u> | <u>Monthly Average</u> | <u>Daily Max Average</u> | <u>Instantaneous Maximum</u> |
|----------------------------|------------------------|--------------------------|------------------------------|
| 1. Free Available Chlorine | none | 0.2 mg/l | 0.5 mg/l |
| 2. Zinc, Total | none | 1.0 mg/l | none |
| 3. Chromium, Total | none | 0.20 mg/l | none |
| 4. pH | | 6-9 at all times | |

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Northeast Regional Office
Water Management Program
 March 31, 2005
 570-826-2306

SUBJECT: Sewage
 NPDES Application No. PA 0047325
 PPL Susquehanna, LLP
 Salem Township, Luzerne County

TO: Dino R. Agustini, P.E.
 Chief, Permits Section

FROM: Brian F. Busher, P.E.
 Sanitary Engineer
 Permits Section

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RECEIVING STREAM: North Branch Susquehanna River
 WATERSHED: North Branch Susquehanna River Watershed 5B
 CLASSIFICATION: WWF
 USE OF RECEIVING STREAM: Aquatic life, water supply, recreation
 NAME OF EXISTING/PROPOSED POTABLE WATER SUPPLY (PWS): Danville Water Authority

PWS LOCATION: Approximately 27 miles downstream on the North Branch Susquehanna River. 40 56' 43" Lat.; 76 36' 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF 0.02 mgd, 0.032 mgd and 0.016 mgd for **Outfalls 072, 073 and 074**, respectively.

| <u>Parameter</u> | <u>Monthly Average</u> | <u>Daily Max</u> | <u>Instantaneous Maximum</u> |
|-------------------------------------|------------------------|------------------|------------------------------|
| 1. TSS (BPT based) | 30 mg/l | 100 mg/l | none |
| 2. Oil and Grease (BPT, Chapter 95) | 15 mg/l | 20 mg/l | 30 mg/l |
| 4. pH | | 6-9 at all times | |

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Protection
Northeast Regional Office
Water Management Program
 March 31, 2005
 570-826-2306

SUBJECT: Sewage
 NPDES Application No. PA 0047325
 PPL Susquehanna, LLP
 Salem Township, Luzerne County

TO: Dino R. Agustini, P.E.
 Chief, Permits Section

FROM: Brian F. Busher, P.E.
 Sanitary Engineer
 Permits Section

A Part I (NPDES) permit application has been received for the above treatment facility. The applicable water quality standards for this discharge are as follows:

RECEIVING STREAM: North Branch Susquehanna River
 WATERSHED: North Branch Susquehanna River Watershed 5B
 CLASSIFICATION: WWF
 USE OF RECEIVING STREAM: Aquatic life, water supply, recreation
 NAME OF EXISTING/PROPOSED POTABLE WATER SUPPLY (PWS): Danville Water Authority

PWS LOCATION: Approximately 27 miles downstream on the North Branch Susquehanna River. 40 56' 43" Lat.; 76 36' 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF 0.080 MGD for Outfall 079 (Sewage).

| <u>Parameter</u> | <u>Monthly Average</u> | <u>Instantaneous Maximum</u> |
|----------------------------------|-------------------------|------------------------------|
| 1. CBOD ₅ | 25 mg/l | 50 mg/l |
| 2. TSS | 30 mg/l | 60 mg/l |
| 3. pH | | 6-9 at all times |
| 4. Fecal Coliform (5/1 to 9/30) | 200/100 ml (geo. avg.) | |
| 5. Fecal Coliform (10/1 to 4/30) | 2000/100 ml (geo. avg.) | |

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER QUALITY MANAGEMENT
POLLUTION REPORT
(Effect of Discharges on Receiving Waters)**

PROJECT DESCRIPTION: (Facilities) New Discharge Amendment
 Renewal Preliminary

A. Application No. PA0047325
 B. Applicant, Case Name or Permittee PPL Susquehanna, LLP
 Municipality Salem Township County Luzerne County
 C. Type Waste Sewage D. Design Year _____
 Industrial Waste E. Wastewater Flow See below MGD
 Mine Drainage Load Characteristics Attached
 F. USGS - Q Berwick Latitude 41 5" 30" Longitude 76 7' 45"
 Series Code 4-19.3

| Outfall | Flow (MGD) |
|---------|--------------|
| 071 | 12.9 Cooling |
| 072 | 0.020 |
| 073 | 0.032 |
| 074 | 0.016 |
| 079 | 0.08 Sewage |

WATER USES AND CRITERIA: (Planning/Water Quality)

G. Receiving Waters North Branch Susquehanna River ; D.A. 10,220 sq. mi.; Q₇₋₁₀ Flow 919 CFS

- WATER USES:
- Dry Steam
 - Standard Use List
 - Add _____
 - Delete _____
 - Impoundment

DOWNSTREAM USES:

H. Secondary Waters _____ ; D.A. _____ sq. mi.; Q₇₋₁₀ Flow _____ CFS

- WATER USES:
- Dry Steam
 - Standard Use List
 - Add _____
 - Delete _____
 - Impoundment

DOWNSTREAM USES:

POLLUTION CONTROL NEEDS: (Planning/Water Quality)

I. Treatment Requirements:

NOTE: Attach Addendum, Modules or other data showing volume and characteristics of all wasteloads influencing treatment requirements, including calculation sheets.

Adopted Standards

Proposed by Applicant

Specific

POLLUTION REPORT
(Effect of Discharges on Receiving Waters)
Outfall 071 Cooling

| <u>Specific Substance</u> | <u>BPT Secondary Treatment</u> | | <u>Requirements to (1) Meet Water Quality Standards</u> | |
|-----------------------------------|--------------------------------|----------------|---|----------------|
| | Avg. (2) | Inst. Max. (3) | Avg. (2) | Inst. Max. (3) |
| 1. <u>Free Available Chlorine</u> | 0.2 mg/l | 0.5 mg/l | none | none |
| 2. <u>Zinc, Total</u> | 1.0 mg/l | none | none | none |
| 3. <u>Chromium, Total</u> | 0.2 mg/l | none | none | none |
| 4. <u>pH</u> | | | 6.0 to 9.0 at all times | |

- (1) Permit requirements would be the more stringent of the two.
- (2) Specify as 30-day average.
- (3) Maximum not to be exceeded for any one day or at any time.

Applicable values should be labeled as pounds per day or mg/l.

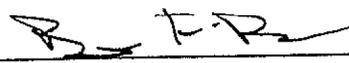
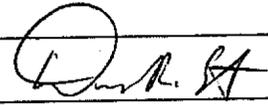
J. Comprehensive Planning and Water Quality Management Requirements:

Project Conforms

Project does not conform; explain on a separate attached sheet or reference to other documents under remarks.

K. Remarks: Stream Segment _____, Stream Code 06685
Water Quality assessment completed by _____ on _____

APPROVALS

L. Reviewing Engineer Brian F. Busher, P.E.  Date 3/31/05
Regional Hydrogeologist/Biologist _____ Date _____
Chief, Permits Section Dino R. Agustini, P.E.  Date 4/15/05

POLLUTION REPORT
 (Effect of Discharges on Receiving Waters)
Outfalls 072, 073 and 074

| <u>Specific Substance</u> | <u>BPT Secondary Treatment</u> | | | <u>Requirements to (1) Meet Water Quality Standards</u> | |
|--|--------------------------------|----------------|------------|---|----------------|
| | 30 day Avg. (2) | Daily Max. (3) | Inst. Max. | 30 day Avg. (2) | Inst. Max. (3) |
| 1. <u>TSS (BPT based)</u> | 30 mg/l | 100 mg/l | none | none | none |
| 2. <u>Oil and Grease (BPT, Chptr 95)</u> | 15 mg/l | 20 mg/l | 30mg/l | 15 mg/l | 30 mg/l |
| 4. <u>pH</u> | | | | 6.0 to 9.0 at all times | |

- (1) Permit requirements would be the more stringent of the two.
- (2) Specify as 30-day average.
- (3) Maximum not to be exceeded for any one day or at any time.

Applicable values should be labeled as pounds per day or mg/l.

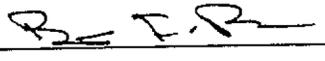
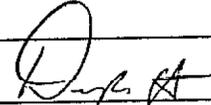
J. Comprehensive Planning and Water Quality Management Requirements:

Project Conforms

Project does not conform; explain on a separate attached sheet or reference to other documents under remarks.

K. Remarks: Stream Segment _____, Stream Code 06685
 Water Quality assessment completed by _____ on _____.

APPROVALS

L. Reviewing Engineer Brian F. Busher, P.E.  Date 3/31/05
 Regional Hydrogeologist/Biologist _____ Date _____
 Chief, Permits Section Dino R. Agustini, P.E.  Date 4/15/05

POLLUTION REPORT
 (Effect of Discharges on Receiving Waters)
Outfalls 079 Sewage

| <u>Specific Substance</u> | <u>BPT Secondary Treatment</u> | | <u>Requirements to (1) Meet Water Quality Standards</u> | |
|---|--------------------------------|-----------------------|---|-----------------------|
| | <u>Avg. (2)</u> | <u>Inst. Max. (3)</u> | <u>Avg. (2)</u> | <u>Inst. Max. (3)</u> |
| 1. <u>CBOD₅</u> | 25.0 | 50.0 | none | none |
| 2. <u>TSS</u> | 30.0 | 60.0 | none | none |
| 3. <u>pH</u> | 6.0 to 9.0 at all times | | 6.0 to 9.0 at all times | |
| 4. <u>Fecal Coliform (5-1 to 9-30)</u> | | | 200/100 ml as a geo. avg. | |
| 5. <u>Fecal Coliform (10-1 to 4-30)</u> | | | 2,000/100 ml as a geo. avg. | |

- (1) Permit requirements would be the more stringent of the two.
- (2) Specify as 30-day average.
- (3) Maximum not to be exceeded for any one day or at any time.

Applicable values should be labeled as pounds per day or mg/l.

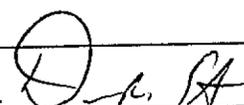
J. Comprehensive Planning and Water Quality Management Requirements:

Project Conforms

Project does not conform; explain on a separate attached sheet or reference to other documents under remarks.

K. Remarks: Stream Segment _____, Stream Code 06685
 Water Quality assessment completed by _____ on _____.

APPROVALS

L. Reviewing Engineer Brian F. Busher, P.E.  Date 4/3/05
 Regional Hydrogeologist/Biologist _____ Date _____
 Chief, Permits Section Dino R. Agustini, P.E.  Date 4/12/05

Basin: North Branch Susquehanna River Page _____ of _____
 Date: 3-14-05
 Case: PPL Susquehanna, LLP Municipality: Salem Township
 County: Luzerne
 Receiving Stream: Susquehanna North Branch

Reach: _____

Stream Classification: WWF Flow Reference: Susquehanna River @ Danville
 Gauge Sta. #01540500 Bull. USGS Website

Q7-10 1,010 (CFS) DA 11,220 (mi.²)

Drainage Area = 10,220 sq. mi. (taken from previous Pollution Report)

$Q_{7-10} = 1,010 \text{ cfs} / 11,220 \text{ mi}^2 \times 10,220 \text{ mi}^2 = 919 \text{ cfs}$
 $Q_w(071) = 12.09 \text{ mgd} \times 1.547 \text{ cfs/mgd} = 18.7 \text{ cfs}$
 $Q_{7-10} / Q_w = 919 \text{ cfs} / 18.7 \text{ cfs} = 49.14 \text{ dilution factor}$
 $Q_t = 919 \text{ cfs} + 18.7 \text{ cfs} = 937.7 \text{ cfs}$

$Q_w(079) = 0.08 \text{ mgd} \times 1.547 \text{ cfs/mgd} = 0.12 \text{ cfs}$
 $Q_{7-10} / Q_w = 919 \text{ cfs} / 0.12 \text{ cfs} = 7658 \text{ dilution factor}$

No need to model given secondary treatment and dilution factor.

This NPDES Permit renewal is for the discharge of treated process wastewater, sewage and stormwater into the Susquehanna River. The SIC is 4911- Electrical Services and is classified under Part 423 Steam Electric Power Generating category. Permit is being renewed using the same effluent limits. This is a major discharge. Outfall 571 has been eliminated.

The water quality limits are as follows:

Outfall 079 – Sewage Treatment Plant

Parameter

Fecal Coliform (5/1 to 9/30) 200/100 ml as a geometric avg.
 (10/1 to 4/30) 2,000/100 ml as a geometric avg.

No other water quality based limits apply to this or other outfalls.

The technology based limits were calculated as follows:

The pH of all discharges, except once through cooling water and stormwater, shall be within the range of 6.0 and 9.0. (Outfalls 070, 075 and 080 are stormwater outfalls.)

transformer fluid.

Outfall 071 – Cooling Tower Blowdown (7.93 mgd)

| <u>Parameter</u> | | <u>Daily Max. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-------------------------|----------|--------------------------|--------------------------|
| Free Available Chlorine | (423.13) | .20 | .50 |
| Total Chromium* | (423.13) | .20 | |
| Total Zinc* | (423.13) | 1.0 | |

pH 6.0 to 9.0 at all times.

*Monitoring frequency 1/Year is recommended for chromium and zinc because of their relatively low discharge concentrations compared to their technology based limits.

Free available chlorine, total chromium and total zinc are BAT based.

Condition regulating the length of chlorine discharge also applies. Using the recent TRC spreadsheet, no water quality based limits for TRC are required. The above technology limits will protect water quality.

Outfalls 072, 073 and 074 are all low volume waste sources. The following BPT low volume waste limits apply to these outfalls as well as Internal Outfalls 171 and 371.

| <u>Parameter</u> | | <u>Monthly Avg (mg/l)</u> | <u>Daily Max. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-----------------------------|-------------------|---------------------------|--------------------------|--------------------------|
| Total Suspended Solids | (423.12) | 30.0 | 100.0 | |
| Oil & Grease ⁽¹⁾ | (423.12) | 15.0 | 20.0 | 30.0 |
| pH ⁽²⁾ | (Chapter 95.2(2)) | 6.0 to 9.0 at all times | | |

⁽¹⁾ The 30.0 mg/l is BPT based Chapter 95.2(3)(ii)

⁽²⁾ The pH limit does not apply to the Internal Outfalls

Outfall 079 – STP flow (.08 MGD)

| <u>Parameter</u> | <u>Monthly Avg. (mg/l)</u> | <u>Inst. Max. (mg/l)</u> |
|-------------------------|----------------------------|--------------------------|
| CBOD ₅ | 25.0 | 50.0 |
| Total Suspended Solids | 30.0 | 60.0 |
| Total Residual Chlorine | 1.0 | 2.0 |
| pH | 6.0 to 9.0 at all times | |

The above limits are BPT Secondary Treatment. TRC is “facility specific” BAT.

Stormwater monitoring requirements have been added to Outfalls 070, 075 and 080

Outfall 070 – S-2 Sedimentation Pond – stormwater only. There are no limitations for this discharge.

Outfall 075 – Peach Stand Pond - Stormwater only. There are no limitations for this discharge.

Outfall 080 – C-1 Pond - Stormwater only. There are no limitations for this discharge.

| Parameter | Monthly Average (mg/l) | Daily Maximum (mg/l) | Instantaneous Maximum (mg/l) |
|---------------------------|------------------------|----------------------|------------------------------|
| Oil and Grease | Monitor and Report | | |
| pH | Monitor and Report | | |
| Total Suspended Solids | Monitor and Report | | |
| Copper (total) | Monitor and Report | | |
| Nickel (total) | Monitor and Report | | |
| Zinc (total) | Monitor and Report | | |
| Iron (total) | Monitor and Report | | |

Removed.

PentoxSD was used to model for Toxics. No water quality based limits for toxics are required. The above Tech based TRC Limits are adequate to protect water quality.

The applicant requested the removal of internal Outfall 571. This outfall receives cooling and seal water from recirculation pump operation. The water coming to this internal outfall is returned to the main cooling water circulation system sump. This change was made.

Temperature evaluation was completed at the increased flow from Outfall 071. No changes from the previous permit. The results are attached. The application included EPA 316(b) Phase II documentation. The station withdrawals approximately 40 MGD. The 316(b) information did not include temperature data. Default temperature data was used for modeling. No limits are required

Total Residual Chlorine (TRC) evaluation was completed at the increased flow. No water quality limits are required. The spreadsheet is attached. No changes from the previous permit.

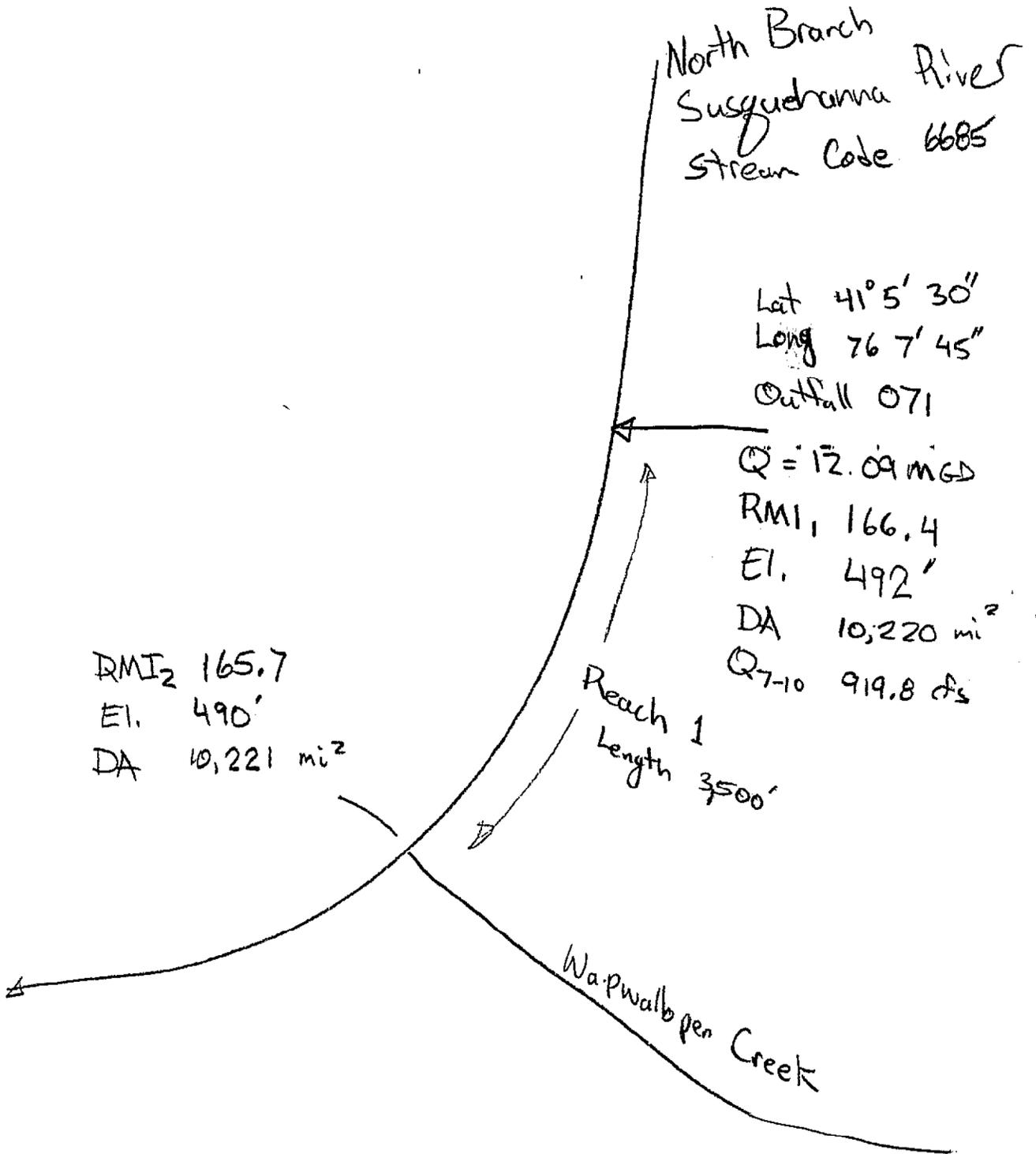
PPL commented.
Do w. withdrawal up to 58 MGD.
They meet 316(b) requirements currently.

Removed as per applicant request.
For coal powered facilities

WQ - SEWAGE PART I NPDES APPLICATION MEMO - 11-331 (New 5/15/98-jar)
(Formerly 11-126/.3 on CPT - Put on PC new) (Rev. 4/26/99, djm) (Rev. 4/2/02-RK:jar) (Rev. 4/26/02-
RK:jar)

Berwick Quad

4-19.3





Low-Flow Statistics for Pennsylvania Streams



Developed by the U.S. Geological Survey for the Pennsylvania Department of Environmental Protection

Pennsylvania Low-Flow Statistics - Query Results

LOW-FLOW STATISTICS [All flow statistics in cubic feet per second (ft³/s)]

Mouse over or click on table headings to view definition of statistic

| | | |
|---|--|--|
| STREAM NAME: Susquehanna River GAGE OR BRIDGE SITE: gage REFERENCE GAGE: ¹ 01540500 | COUNTY: Montour USGS QUAD: Danville STATION NAME: Susquehanna River at Danville, PA | LATITUDE: 405729 LONGITUDE: 763710 DRAINAGE AREA (sq. mi.): 11220 |
|---|--|--|

| Entire Period of Record ² | Q _{1,10} | Q _{2,10} | Q _{30,10} | MEAN | MEDIAN | HARMONIC MEAN |
|--------------------------------------|-------------------|-------------------|--------------------|-------|--------|---------------|
| 1906-96 | 960 | 1010 | 1200 | 15000 | 8410 | 4920 |

0900 csm
919 cfs

| FLOW DURATION TABLE (Probability of Exceedance) | | | | | | | | | | |
|---|-------|-------|-------|-------|------|------|------|------|------|------|
| P5 | P10 | P20 | P30 | P40 | P50 | P60 | P70 | P80 | P90 | P95 |
| 52430 | 36460 | 22690 | 15900 | 11520 | 8410 | 6310 | 4580 | 3220 | 2110 | 1620 |

| Pre-Regulation Period of Record ³ | Q _{1,10} | Q _{2,10} | Q _{30,10} | MEAN | MEDIAN | HARMONIC MEAN |
|--|-------------------|-------------------|--------------------|-------|--------|---------------|
| 1906-78 | 926 | 977 | 1160 | 15000 | 8320 | 4920 |

| FLOW DURATION TABLE (Probability of Exceedance) | | | | | | | | | | |
|---|-------|-------|-------|-------|------|------|------|------|------|------|
| P5 | P10 | P20 | P30 | P40 | P50 | P60 | P70 | P80 | P90 | P95 |
| 52830 | 36900 | 23000 | 15960 | 11460 | 8320 | 6140 | 4450 | 3140 | 2060 | 1570 |

| Post-Regulation Period of Record ⁴ | Q _{1,10} | Q _{2,10} | Q _{30,10} | MEAN | MEDIAN | HARMONIC MEAN |
|---|-------------------|-------------------|--------------------|-------|--------|---------------|
| 1980-96 | 1180 | 1220 | 1440 | 14520 | 8820 | 5640 |

| FLOW DURATION TABLE (Probability of Exceedance) | | | | | | | | | | |
|---|-------|-------|-------|-------|------|------|------|------|------|------|
| P5 | P10 | P20 | P30 | P40 | P50 | P60 | P70 | P80 | P90 | P95 |
| 49770 | 34110 | 21940 | 15610 | 11830 | 8820 | 6870 | 5220 | 3580 | 2290 | 1760 |

¹ Reference Gage indicates which USGS gage was used in the computation of lowflow statistics for the specified locations
² Period of Record for climatic year, April 1 through March 31
³ Period of record refers to pre-regulation conditions
⁴ Period of record refers to post-regulation conditions
 ** Statistic not computed due to insufficient data

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This system designed and developed by the U.S. Geological Survey, Water Resources Division, New Cumberland, Pa. © 2002.

PENTOXSD Analysis Results

Recommended Effluent Limitations

SWP Basin Stream Code: Stream Name:
 07K 6685 SUSQUEHANNA RIVER

| RMI | Name | Permit Number | Disc Flow (mgd) |
|--------|-----------------|---------------|-----------------|
| 166.40 | PPL Susquehanna | PA0047325 | 12.0900 |

| Parameter | Effluent Limit | Governing Criterion | Max. Daily Limit | Most Stringent | |
|------------------------------|----------------|---------------------|------------------|----------------|-----------------|
| | (µg/L) | | (µg/L) | WQBEL (µg/L) | WQBEL Criterion |
| ALUMINUM | 1260 | INPUT | 1965.803 | 2089.347 | AFC |
| BARIUM | 117 | INPUT | 182.539 | 58041.06 | THH |
| BORON | 70 | INPUT | 109.211 | 22564.95 | AFC |
| COPPER | 8 | INPUT | 12.481 | 54.652 | AFC |
| DISSOLVED IRON | 200 | INPUT | 312.032 | 7255.132 | THH |
| FLUORIDE (PWS) | 250 | INPUT | 390.04 | NA | NA |
| LEAD | 1.7 | INPUT | 2.652 | 121.389 | CFC |
| MANGANESE | 198 | INPUT | 308.912 | 24183.77 | THH |
| SULFATE (PWS) | 96600 | INPUT | 150711.5 | NA | NA |
| TOTAL DISSOLVED SOLIDS (PWS) | 608700 | INPUT | 949669.9 | NA | NA |
| TOTAL IRON | 2170 | INPUT | 3385.549 | 75268.01 | CFC |
| ZINC | 19 | INPUT | 29.643 | 452.126 | AFC |

PENTOXSD Analysis Results

Wasteload Allocations

| RMI | Name | Permit Number | AFC | | | | | | | | |
|------------------------------|---|---------------|------------------|-----------|-------------|---------------|-------------------|-------------|-------|-------------------|---------|
| 166.40 | PPL Susquehanna | PA0047325 | Q7-10: | CCT (min) | 15 | PMF | 0.068 | Analysis pH | 7.503 | Analysis Hardness | 143.069 |
| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | | | | |
| COPPER | 0 | 0 | 0 | 0 | 18.833 | 19.618 | 85.265 | | | | |
| | Dissolved WQC. Dissolved WQC. Chemical translator of 0.96 applied. | | | | | | | | | | |
| LEAD | 0 | 0 | 0 | 0 | 95.164 | 128.807 | 559.833 | | | | |
| | Dissolved WQC. Dissolved WQC. Chemical translator of 0.739 applied. | | | | | | | | | | |
| ZINC | 0 | 0 | 0 | 0 | 158.726 | 162.297 | 705.389 | | | | |
| | Dissolved WQC. Dissolved WQC. Chemical translator of 0.978 applied. | | | | | | | | | | |
| ALUMINUM | 0 | 0 | 0 | 0 | 750 | 750 | 3259.717 | | | | |
| FLUORIDE (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| TOTAL IRON | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| DISSOLVED IRON | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| MANGANESE | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| BARIUM | 0 | 0 | 0 | 0 | 21000 | 21000 | 91272.08 | | | | |
| BORON | 0 | 0 | 0 | 0 | 8100 | 8100 | 35204.95 | | | | |
| SULFATE (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| TOTAL DISSOLVED SOLIDS (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| CFC | | | | | | | | | | | |
| Q7-10: | CCT (min) | 720 | PMF | 0.471 | Analysis pH | 7.416 | Analysis Hardness | 150.55 | | | |
| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | | | | |
| COPPER | 0 | 0 | 0 | 0 | 12.162 | 12.669 | 306.386 | | | | |
| | Chemical translator of 0.96 applied. | | | | | | | | | | |
| LEAD | 0 | 0 | 0 | 0 | 3.708 | 5.019 | 121.389 | | | | |
| | Chemical translator of 0.739 applied. | | | | | | | | | | |
| ZINC | 0 | 0 | 0 | 0 | 160.025 | 162.297 | 3924.952 | | | | |
| | Chemical translator of 0.986 applied. | | | | | | | | | | |
| ALUMINUM | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |
| FLUORIDE (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | | | | |

PENTOXSD Analysis Results

Wasteload Allocations

| RMI | Name | Permit Number | | | | | | | |
|--------|------------------------------|---------------|-----------------------|---|---|---|------|------|----------|
| 166.40 | PPL Susquehanna | PA0047325 | | | | | | | |
| | TOTAL IRON | | 0 | 0 | 0 | 0 | 1500 | 1500 | 75268.01 |
| | | | WQC = 30 day average. | | | | | | |
| | DISSOLVED IRON | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | MANGANESE | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | BARIUM | | 0 | 0 | 0 | 0 | 4100 | 4100 | 205732.5 |
| | BORON | | 0 | 0 | 0 | 0 | 1600 | 1600 | 80285.88 |
| | SULFATE (PWS) | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | TOTAL DISSOLVED SOLIDS (PWS) | | 0 | 0 | 0 | 0 | NA | NA | NA |

THH

| Q7-10: | CCT (min) | 720 | PMF | NA | Analysis pH | NA | Analysis Hardness | NA | |
|-----------|------------------------------|-----|--------------------|-----------|------------------|-----------|-------------------|---------------|------------|
| Parameter | | | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) |
| | COPPER | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | LEAD | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | ZINC | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | ALUMINUM | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | FLUORIDE (PWS) | | 0 | 0 | 0 | 0 | 2000 | 2000 | NA |
| | TOTAL IRON | | 0 | 0 | 0 | 0 | NA | NA | NA |
| | DISSOLVED IRON | | 0 | 0 | 0 | 0 | 300 | 300 | 7255.132 |
| | MANGANESE | | 0 | 0 | 0 | 0 | 1000 | 1000 | 24183.77 |
| | BARIUM | | 0 | 0 | 0 | 0 | 2400 | 2400 | 58041.06 |
| | BORON | | 0 | 0 | 0 | 0 | 3100 | 3100 | 74969.7 |
| | SULFATE (PWS) | | 0 | 0 | 0 | 0 | 250000 | 250000 | NA |
| | TOTAL DISSOLVED SOLIDS (PWS) | | 0 | 0 | 0 | 0 | 500000 | 500000 | NA |

CRL

PENTOXSD Analysis Results

Wasteload Allocations

| RMI | Name | Permit Number | | | | | | |
|------------------------------|--------------------|---------------|------------------|-----------|------------|---------------|------------|--|
| 166.40 | PPL Susquehanna | PA0047325 | | | | | | |
| Qh: | CCT (min) | 720 | PMF | 0.678 | | | | |
| Parameter | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | |
| COPPER | 0 | 0 | 0 | 0 | NA | NA | NA | |
| LEAD | 0 | 0 | 0 | 0 | NA | NA | NA | |
| ZINC | 0 | 0 | 0 | 0 | NA | NA | NA | |
| ALUMINUM | 0 | 0 | 0 | 0 | NA | NA | NA | |
| FLUORIDE (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | |
| TOTAL IRON | 0 | 0 | 0 | 0 | NA | NA | NA | |
| DISSOLVED IRON | 0 | 0 | 0 | 0 | NA | NA | NA | |
| MANGANESE | 0 | 0 | 0 | 0 | NA | NA | NA | |
| BARIUM | 0 | 0 | 0 | 0 | NA | NA | NA | |
| BORON | 0 | 0 | 0 | 0 | NA | NA | NA | |
| SULFATE (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | |
| TOTAL DISSOLVED SOLIDS (PWS) | 0 | 0 | 0 | 0 | NA | NA | NA | |

PENTOXSD Analysis Results

Hydrodynamics

| <u>SWP Basin</u> | | <u>Stream Code:</u> | | | <u>Stream Name:</u> | | | | | | |
|----------------------------|----------------------|---------------------|--------------------------|-----------------------------|---------------------|---------------|---------------|----------|-------------------|---------------------------|--------------|
| 07K | | 6685 | | | SUSQUEHANNA RIVER | | | | | | |
| RMI | Stream Flow (cfs) | PWS With (cfs) | Net Stream Flow (cfs) | Disc Analysis Flow (cfs) | Reach Slope | Depth (ft) | Width (ft) | WD Ratio | Velocity (fps) | Reach Trav Time (days) | CMT (min) |
| Q7-10 Hydrodynamics | | | | | | | | | | | |
| 166.400 | 919.8 | 0 | 919.8 | 18.70322 | 0.0005 | 5 | 800 | 160 | 0.2346 | 0.1823 | 1000+ |
| 165.700 | 1839.8 | 0 | 1839.8 | NA | 0 | 0 | 0 | 0 | 0 | 0 | NA |
| Qh Hydrodynamics | | | | | | | | | | | |
| 166.400 | 2892.4 | 0 | 2892.4 | 18.70322 | 0.0005 | 8.2775 | 800 | 96.648 | 0.4457 | 0.096 | 1000+ |
| 165.700 | 5301.5 | 0 | 5301.5 | NA | 0 | 0 | 0 | 0 | 0 | 0 | NA |

PENTOXSD

Modeling Input Data

| Stream Code | RMI | Elevation (ft) | Drainage Area (sq mi) | Slope | PWS With (mgd) | Apply FC |
|-------------|--------|----------------|-----------------------|---------|----------------|-------------------------------------|
| 6686 | 166.40 | 492.00 | 10220.00 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| LFY | Trib Flow (cfs) | Stream Flow (cfs) | WD Ratio | Rch Width (ft) | Rch Depth (ft) | Rch Velocity (fps) | Rch Trav Time (days) | Tributary | | Stream | | Analysis | | |
|-------|-----------------|-------------------|----------|----------------|----------------|--------------------|----------------------|-------------|-----|-------------|----|-------------|----|---|
| | | | | | | | | Hard (mg/L) | pH | Hard (mg/L) | pH | Hard (mg/L) | pH | |
| Q7-10 | 0.1 | 919.8 | 0 | 0 | 800 | 5 | 0 | 0 | 89 | 7.4 | 0 | 0 | 0 | 0 |
| Qh | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 7 | 0 | 0 | 0 | 0 |

Discharge Data

| Name | Permit Number | Existing Disc Flow (mgd) | Permitted Disc Flow (mgd) | Design Disc Flow (mgd) | Reserve Factor | AFC PMF | CFC PMF | THH PMF | CRL PMF | Disc Hard (mg/L) | Disc pH |
|-----------------|---------------|--------------------------|---------------------------|------------------------|----------------|---------|---------|---------|---------|------------------|---------|
| PPL Susquehanna | PA0047325 | 12.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 324 | 8.5 |

Parameter Data

| Parameter Name | Disc Conc (µg/L) | Trib Conc (µg/L) | Disc Daily CV | Disc Hourly CV | Steam Conc (µg/L) | Stream CV | Fate Coef | FOS | Crit Mod | Max Disc Conc (µg/L) |
|------------------------------|------------------|------------------|---------------|----------------|-------------------|-----------|-----------|-----|----------|----------------------|
| ALUMINUM | 1280 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| BARIUM | 117 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| BORON | 70 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| COPPER | 8 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| DISSOLVED IRON | 200 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| FLUORIDE (PWS) | 250 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| LEAD | 1.7 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| MANGANESE | 198 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| SULFATE (PWS) | 96600 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| TOTAL DISSOLVED SOLIDS (PWS) | 808700 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| TOTAL IRON | 2170 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| ZINC | 19 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |

| Stream Code | RMI | Elevation (ft) | Drainage Area (sq mi) | Slope | PWS With (mgd) | Apply FC |
|-------------|--------|----------------|-----------------------|---------|----------------|-------------------------------------|
| 6686 | 165.70 | 490.00 | 10221.00 | 0.00000 | 0.00 | <input checked="" type="checkbox"/> |

Stream Data

| | LFY | Trib | Stream | WD | Rch | Rch | Rch | Tributary | | Stream | | Analysis | |
|-------|--------|-------|--------|-------|-------|-------|----------|-----------|-----|--------|----|----------|----|
| | | Flow | Flow | Ratio | Width | Depth | Velocity | Hard | pH | Hard | pH | Hard | pH |
| | (cfsm) | (cfs) | (cfs) | | (ft) | (ft) | (fps) | (mg/L) | | (mg/L) | | (mg/L) | |
| Q7-10 | 0.1 | 920 | 0 | 0 | 800 | 5 | 0 | 0 | 89 | 7.4 | 0 | 0 | 0 |
| Qh | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 7 | 0 | 0 | 0 |

Discharge Data

| Name | Permit Number | Existing Disc Flow | Permitted Disc Flow | Design Disc Flow | Reserve Factor | AFC PMF | CFC PMF | THH PMF | CRL PMF | Disc Hard | Disc pH |
|------|---------------|--------------------|---------------------|------------------|----------------|---------|---------|---------|---------|-----------|---------|
| | | (mgd) | (mgd) | (mgd) | | | | | | (mg/L) | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 7 |

Parameter Data

| Parameter Name | Disc Conc | Trib Conc | Disc Daily CV | Disc Hourly CV | Stream Conc | Stream CV | Fate Coef | FOS | Crit Mod | Max Disc Conc |
|------------------------------|-----------|-----------|---------------|----------------|-------------|-----------|-----------|-----|----------|---------------|
| | (µg/L) | (µg/L) | | | (µg/L) | | | | | (µg/L) |
| ALUMINUM | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| BARIUM | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| BORON | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| COPPER | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| DISSOLVED IRON | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| FLUORIDE (PWS) | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| LEAD | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| MANGANESE | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| SULFATE (PWS) | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| TOTAL DISSOLVED SOLIDS (PWS) | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| TOTAL IRON | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |
| ZINC | 0 | 0 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 1 | 0 |

Facility: **PPL Susquehanna LLP**

Permit Number: **PA0047325**

Stream: **Susquehanna River North Branch**

| | WWF Ambient Stream Temperature (°F) (Default) | Ambient Stream Temperature (°F) (Site-specific data) | Target Maximum Stream Temp. ¹ (°F) | WWF Daily WLA ² (Million BTUs/day) | WWF Daily WLA ³ (°F) | at Discharge Flow (MGD) |
|-----------|--|--|---|--|--|----------------------------|
| Jan 1-31 | 35 | 0 | 40 | 78,055 | 110.0 | 12.09 |
| Feb 1-29 | 35 | 0 | 40 | 85,485 | 110.0 | 12.09 |
| Mar 1-31 | 40 | 0 | 46 | 206,604 | 110.0 | 12.09 |
| Apr 1-15 | 47 | 0 | 52 | 229,134 | 110.0 | 12.09 |
| Apr 16-30 | 53 | 0 | 58 | 229,134 | 110.0 | 12.09 |
| May 1-15 | 58 | 0 | 64 | 150,135 | 110.0 | 12.09 |
| May 16-30 | 62 | 0 | 72 | 250,225 | 110.0 | 12.09 |
| Jun 1-15 | 67 | 0 | 80 | 190,064 | 110.0 | 12.09 |
| Jun 16-30 | 71 | 0 | 84 | 190,064 | 110.0 | 12.09 |
| Jul 1-31 | 75 | 0 | 87 | 98,171 | 110.0 | 12.09 |
| Aug 1-15 | 74 | 0 | 87 | 87,033 | 110.0 | 12.09 |
| Aug 16-31 | 74 | 0 | 87 | 87,033 | 110.0 | 12.09 |
| Sep 1-15 | 71 | 0 | 84 | 67,715 | 110.0 | 12.09 |
| Sep 16-30 | 65 | 0 | 78 | 67,715 | 110.0 | 12.09 |
| Oct 1-15 | 60 | 0 | 72 | 68,450 | 110.0 | 12.09 |
| Oct 16-31 | 54 | 0 | 66 | 68,450 | 110.0 | 12.09 |
| Nov 1-15 | 48 | 0 | 58 | 76,856 | 110.0 | 12.09 |
| Nov 16-30 | 42 | 0 | 50 | 61,484 | 110.0 | 12.09 |
| Dec 1-31 | 37 | 0 | 42 | 58,241 | 110.0 | 12.09 |

¹ This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1°F above ambient stream temperature is allocated.

² The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

³ The WLA expressed in °F is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110°F are displayed as 110°F.

Flow Data for Thermal Discharge Analysis

Facility: PPL Susquehanna LLP
Permit Number: PA0047325
Stream Name: Susquehanna River North Branch
Analyst/Engineer: Busher
Stream Q7-10 (cfs): 919

| | Facility Flows ¹ | | | | Stream Flows | |
|-----------|-----------------------------|-------------------------|--------------------------|-----------------|------------------------------|---|
| | Stream (Intake) (MGD) | External (Intake) (MGD) | Consumptive (Loss) (MGD) | Discharge (MGD) | Adj. Q7-10 Stream Flow (cfs) | Downstream ² Stream Flow (cfs) |
| Jan 1-31 | 40.86 | 0 | 28.77 | 12.09 | 2940.8 | 2898.3 |
| Feb 1-29 | 40.86 | 0 | 28.77 | 12.09 | 3216.5 | 3172.0 |
| Mar 1-31 | 40.86 | 0 | 28.77 | 12.09 | 6433.0 | 6388.5 |
| Apr 1-15 | 40.86 | 0 | 28.77 | 12.09 | 8546.7 | 8502.2 |
| Apr 16-30 | 40.86 | 0 | 28.77 | 12.09 | 8546.7 | 8502.2 |
| May 1-15 | 40.86 | 0 | 28.77 | 12.09 | 4686.9 | 4642.4 |
| May 16-30 | 40.86 | 0 | 28.77 | 12.09 | 4686.9 | 4642.4 |
| Jun 1-15 | 40.86 | 0 | 28.77 | 12.09 | 2757.0 | 2712.5 |
| Jun 16-30 | 40.86 | 0 | 28.77 | 12.09 | 2757.0 | 2712.5 |
| Jul 1-31 | 40.86 | 0 | 28.77 | 12.09 | 1562.3 | 1517.8 |
| Aug 1-15 | 40.86 | 0 | 28.77 | 12.09 | 1286.6 | 1242.1 |
| Aug 16-31 | 40.86 | 0 | 28.77 | 12.09 | 1286.6 | 1242.1 |
| Sep 1-15 | 40.86 | 0 | 28.77 | 12.09 | 1010.9 | 966.4 |
| Sep 16-30 | 40.86 | 0 | 28.77 | 12.09 | 1010.9 | 966.4 |
| Oct 1-15 | 40.86 | 0 | 28.77 | 12.09 | 1102.8 | 1058.3 |
| Oct 16-31 | 40.86 | 0 | 28.77 | 12.09 | 1102.8 | 1058.3 |
| Nov 1-15 | 40.86 | 0 | 28.77 | 12.09 | 1470.4 | 1425.9 |
| Nov 16-30 | 40.86 | 0 | 28.77 | 12.09 | 1470.4 | 1425.9 |
| Dec 1-31 | 40.86 | 0 | 28.77 | 12.09 | 2205.6 | 2161.1 |

¹ Facility flows are not required (and will not affect the permit limits) if all intake flow is from the receiving stream (Case 1), consumptive losses are small, and permit limits will be expressed as Million BTUs/day.

² Downstream Stream Flow includes the discharge flow.

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.

Version 1.0 -- 08/01/2004

Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017

NOTE: The user can only edit fields that are blue.

PA Temperature Criteria and Stream Flow Multipliers

Facility: PPL Susquehanna LLP

Permit Number: PA0047325

Stream: Susquehanna River North Branch

| | WWF Criteria (°F) | CWF Criteria (°F) | TSF Criteria (°F) | 316 Criteria (°F) | Q7-10 Multipliers (Used in Analysis) | Q7-10 Multipliers (Default - Info Only) |
|-----------|----------------------|----------------------|----------------------|----------------------|---|--|
| Jan 1-31 | 40 | 38 | 40 | 0 | 3.2 | 3.2 |
| Feb 1-29 | 40 | 38 | 40 | 0 | 3.5 | 3.5 |
| Mar 1-31 | 46 | 42 | 46 | 0 | 7 | 7 |
| Apr 1-15 | 52 | 46 | 52 | 0 | 9.3 | 9.3 |
| Apr 16-30 | 58 | 52 | 58 | 0 | 9.3 | 9.3 |
| May 1-15 | 64 | 54 | 64 | 0 | 5.1 | 5.1 |
| May 16-30 | 72 | 58 | 68 | 0 | 5.1 | 5.1 |
| Jun 1-15 | 80 | 60 | 70 | 0 | 3 | 3 |
| Jun 16-30 | 84 | 64 | 72 | 0 | 3 | 3 |
| Jul 1-31 | 87 | 66 | 74 | 0 | 1.7 | 1.7 |
| Aug 1-15 | 87 | 66 | 80 | 0 | 1.4 | 1.4 |
| Aug 16-31 | 87 | 66 | 87 | 0 | 1.4 | 1.4 |
| Sep 1-15 | 84 | 64 | 84 | 0 | 1.1 | 1.1 |
| Sep 16-30 | 78 | 60 | 78 | 0 | 1.1 | 1.1 |
| Oct 1-15 | 72 | 54 | 72 | 0 | 1.2 | 1.2 |
| Oct 16-31 | 66 | 50 | 66 | 0 | 1.2 | 1.2 |
| Nov 1-15 | 58 | 46 | 58 | 0 | 1.6 | 1.6 |
| Nov 16-30 | 50 | 42 | 50 | 0 | 1.6 | 1.6 |
| Dec 1-31 | 42 | 40 | 42 | 0 | 2.4 | 2.4 |

NOTES:

WWF= Warm water fishes

CWF= Cold water fishes

TSF= Trout stocking

| 1A | B | C | D | E | F | G |
|----|---|--|-------------------------------|--------------------------------------|--------------------------------------|---------------------|
| 2 | TRC EVALUATION | | | Enter Facility Name in E3 | | |
| 3 | Input appropriate values in B4:B8 and E4:E7 | | | PPL Susquehanna LLP PA0047325 3/2005 | | |
| 4 | 919 | = Q stream (cfs) | | 0.5 | = CV Daily | |
| 5 | 12.09 | = Q discharge (MGD) | | 0.5 | = CV Hourly | |
| 6 | 4 | = no. samples | | 1 | = AFC_Partial Mix Factor | |
| 7 | 0.62 | = Chlorine Demand of Stream | | 1 | = CFC_Partial Mix Factor | |
| 8 | | = Chlorine Demand of Discharge | | | = AFC_Criteria Compliance Time (min) | |
| 9 | 0.5 | = BAT/BPJ Value | | | = CFC_Criteria Compliance Time (min) | |
| | | = % Factor of Safety (FOS) | | | = Decay Coefficient (K) | |
| 10 | Source | Reference | AFC Calculations | | Reference | CFC Calculations |
| 11 | TRC | 1.3.2.iii | WLA_afc = 31.417 | | 1.3.2.iii | WLA_cfc = 31.016 |
| 12 | PENTOXSD TRG | 5.1a | LTAMULT_afc = 0.373 | | 5.1c | LTAMULT_cfc = 0.581 |
| 13 | PENTOXSD TRG | 5.1b | LTA_afc = 11.707 | | 5.1d | LTA_cfc = 18.031 |
| 14 | | | | | | |
| 15 | Source | Effluent Limit Calculations | | | | |
| 16 | PENTOXSD TRG | 5.1f | AML_MULT = 1.720 | | | |
| 17 | PENTOXSD TRG | 5.1g | AVG MON LIMIT (mg/l) = 0.500 | | BAT/BPJ | |
| 18 | | | INST MAX LIMIT (mg/l) = 1.170 | | | |
| | | | | | | |
| | WLA_afc | (.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))... ...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100) | | | | |
| | LTAMULT_afc | EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5) | | | | |
| | LTA_afc | wla_afc*LTAMULT_afc | | | | |
| | WLA_cfc | (.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))... ...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100) | | | | |
| | LTAMULT_cfc | EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5) | | | | |
| | LTA_cfc | wla_cfc*LTAMULT_cfc | | | | |
| | AML_MULT | EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1)) | | | | |
| | AVG MON LIMIT | MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT) | | | | |
| | INST MAX LIMIT | 1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc) | | | | |

SUBJECT: Industrial/Sewage
NPDES APP.: PA -0047325
NAME: Pa Power & Light
MUNICIPALITY: Salem
COUNTY: Luzerne

DATE SENT:
DATE RETURNED:
FILE NAME: pplstea

TO: PAUL P. FOSKO, CHIEF *P 8/29/89*

THRU: PAUL M. SWERDON, CHIEF

DINO AGUSTINI
SANITARY ENGINEER
FACILITIES SECTION

JOSEPH V. SCOLERE *Jrs 8/29/89*
SANITARY ENGINEER
PLANNING SECTION

A PART I (NPDES) permit application has been received for the above treatment facility. In order to prepare this permit for public notice and eventually permit issuance, the water quality standards for this discharge are required.

RECEIVING STREAM: N. Branch of Susquehanna

CLASSIFICATION: WWF

USE OF RECEIVING STREAM: Aquatic life, water supply, recreation

NAME OF EXISTING POTABLE WATER SUPPLY (PWS): Danville Water Supply

PWS LOCATION: Susquehanna River @ 40 56 43" Lat.; 76 36 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF .080 (Discharge MGD.
079 STP)

| <u>Parameter</u> | <u>Monthly Average</u> | <u>Instantaneous Maximum</u> |
|----------------------------------|------------------------|------------------------------|
| 1. CBOD5 | 25 mg/l | 50 mg/l |
| 2. TSS | 30 mg/l | 60 mg/l |
| 3. pH (WQ) | | 6-9 at all times |
| 4. Fecal Coliform (5/1-9/30)(WQ) | | 200/100ml(geom. Avg) |
| 5. Fecal Coliform(10/1-4/30)(WQ) | | 2000/100ml(geom. Avg) |

SUBJECT: Industrial/Sewage
NPDES APP.: PA -0047325
NAME: Pa Power & Light
MUNICIPALITY: Salem
COUNTY: Luzerne

DATE SENT:
DATE RETURNED:
FILE NAME:

TO: PAUL P. FOSKO *P 8/24/89* CHIEF

THRU: PAUL M. SWERDON, CHIEF

DINO AGUSTINI
SANITARY ENGINEER
FACILITIES SECTION

JOSEPH V. SCOLERE *led 8/25/89*
SANITARY ENGINEER
PLANNING SECTION

A PART I (NPDES) permit application has been received for the above treatment facility. In order to prepare this permit for public notice and eventually permit issuance, the water quality standards for this discharge are required.

RECEIVING STREAM: N. Branch of Susquehanna

CLASSIFICATION: WWF

USE OF RECEIVING STREAM: Aquatic life, water supply, recreation

NAME OF EXISTING POTABLE WATER SUPPLY (PWS): Danville Water Supply

PWS LOCATION: Susquehanna River @ 40 56 43" Lat ; 76 36 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF (Discharge 071) 8.4 MGD. Cooling Water)

| <u>Parameter</u> | <u>30 Day Average</u> | <u>Daily Max Average</u> | <u>Inst. Maximum</u> |
|-----------------------------------|-----------------------|--------------------------|----------------------|
| 1. Free Avail. Chlorine | none | 0.2 mg/l | 0.5 mg/l |
| 2. Chromium, Total | none | 0.2 mg/l | none |
| 3. Zinc, Tot | none | 1.0 mg/l | none |
| 4. pH (WQ) | | | 6-9 at all times |
| 5. Oil and Grease (WQ) | 15 mg/l | | 5 mg/l |

8/24/89

SUBJECT: Industrial/Sewage
NPDES APP.: PA -0047325
NAME: Pa Power & Light
MUNICIPALITY: Salem
COUNTY: Luzerne

DATE SENT:
DATE RETURNED:
FILE NAME:

TO: PAUL P. FOSKO *8/29/89* CHIEF

THRU: PAUL M. SWERDON, CHIEF

DINO AGUSTINI
SANITARY ENGINEER
FACILITIES SECTION

JOSEPH V. SCOLERE *8/29/89*
SANITARY ENGINEER
PLANNING SECTION

A PART I (NPDES) permit application has been received for the above treatment facility. In order to prepare this permit for public notice an eventually permit issuance, the water quality standards for this discharge are required.

RECEIVING STREAM: N. Branch of Susquehanna

CLASSIFICATION: WWF

USE OF RECEIVING STREAM: Aquatic life, water supply, recreation

NAME OF EXISTING POTABLE WATER SUPPLY (PWS): Danville Water Supply

PWS LOCATION: Susquehanna River @ 40 56 43" Lat. ; 76 36 12" Long.

EFFLUENT LIMITATIONS BASED ON A FLOW OF .072,073,074 Discharges MGD.

| <u>Parameter</u> | <u>Monthly Average</u> | <u>Daily Max</u> | <u>Instantaneous Maximum</u> |
|----------------------------------|------------------------|------------------|------------------------------|
| 1. TSS (BPT) | 30 mg/l | 100 mg/l | none |
| 2. pH (WQ) | | | 6-9 at all times |
| 3. Oil and Grease (BPT, Chpt 97) | 15 mg/l | 20 mg/l | 30 mg/l |

DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF WATER QUALITY MANAGEMENT
 POLLUTION REPORT

(Effect Of Discharges On Receiving Waters)

PROJECT DESCRIPTION: (Facilities) Existing Discharge but new NPDES
New Discharger Change
X Renew NPDES Preliminary

A. Application/permit No. PA 0047325
 B. Applicant, Case Name or Permittee Pa Power & Light Co
 Municipality Salem Twp County Luzerne
 C. Type Waste x Sewage D. Design Year
x Industrial Waste E. Wastewater Flow See Below MGD
 Mine drainage Load Characteristics Attached
 F. USGS - Q Berwick Latitude 41 5 30 " LONGITUDE 76 7 45 "
 Series Code: 4-19.3

WATER USES AND CRITERIA: (PLANNING/WATER QUALITY)

G. Receiving Waters N. Br. Susquehanna D.A. 10220 sq. mi.
 Flow 893 CFS

| WATER USES: | Outfall | Flow | MGD |
|--------------------------------------|------------|--------------------|----------------|
| <u>x</u> Standard Use List | <u>071</u> | <u>8.4</u> | <u>Cooling</u> |
| <u> </u> Add Mn | <u>072</u> | <u>.0105</u> | |
| <u> </u> Delete | <u>073</u> | <u>.0087</u> | |
| <u> </u> Impoundment | <u>074</u> | <u>.0087</u> | |
| WATER USES: <u> </u> Dry Stream | <u>079</u> | <u>.08(permit)</u> | <u>stp</u> |
| <u> </u> Add | | | |
| <u> </u> Delete | | | |
| <u> </u> Impoundment | | | |

DOWNSTREAM USES:

POLLUTION CONTROL NEEDS: (PLANNING/WATER QUALITY)

- Treatment Requirements:
 NOTE: Attach Addendum, Modules or other data showing volume and characteristics of all wasteload influencing treatment requirements, including calculation sheets.

 Adopted Standards Proposed by Applicant
x Specific

POLLUTION REPORT

(Effect of Discharges on Receiving Waters)
 Discharge(079 STP) NPDES (1)

| Specific Substance | Minimum Effluent Requirements | | | Requirements to Meet Water Quality | |
|-------------------------------|-------------------------------|--------------|---------------|------------------------------------|-----------|
| | 30 Day Avg.(2) | Daily Max(3) | Inst. Max.(4) | 30 Day Avg.(2) | Inst. Max |
| 1. CBOD5 | 25mg/l | | 50 mg/l | none | none |
| 2. TSS | 30mg/l | | 60 mg/l | none | none |
| 3 pH | 6-9 at all times | | | 6 -9 at all times | |
| 4. Fecal Coliform (5/1 -9/30) | none | | | 200/100 ml (Geo.avg) | |
| 5. Fecal Coliform (10/1-4/30) | none | | | 2000/100ml (" " ") | |

- (1) Permit requirements would be the more stringent of the two.
 - (2) Specify as 30-day average.
 - (3) Maximum not to be exceeded for any one day.
 - (4) Maximum not to be exceeded at any time.
- Applicable values should be labeled as pounds per day or mg/l.

J. Comprehensive Planning and Water Quality Management Requirements:

X Project Conforms
 Project does not conform; explain on a separate attached sheet or reference to other documents under remarks

K. Remarks: 1 Stream code 06885 ;
 2 Water Quality Assessment completed by J. Scolere on 8/25/88
 3 Nearest ds water supply is Danville Water supply on Susquehanna River.

APPROVALS

L. FACILITIES SECTION:

 Date: _____

M. Reviewer
 Planning/WQ Joseph V. Scolere *JVS*
 Date: 8/25/88

 Date: _____

Biologist
 Regional Geologist/WQ _____
 Date: _____

Chief
 Planning/WQ Paul Fosko *Pfosko*
 Date: 8/24/89

 Date: _____

Basin Engr. _____
 Date: _____

POLLUTION REPORT

(Effect of Discharges on Receiving Waters)

| Discharge (071 Cooling Tower) Specific Substance | NPDES (1) Minimum Effluent Requirements | | | Requirements to (1) Meet Water Quality | | |
|---|--|-----------------|-----------------|---|-----------|--------------------|
| | 30 Day Avg. (2) | Daily Max (3) | Inst. Max. (4) | 30 Day Avg. (2) | Daily Max | Inst. Max. (4) |
| 1. Free Avail. Chlorine | none | 0.2 mg/l | 0.5 mg/l | none | | none |
| 2. Chromium, Tot | none | 0.2 mg/l | none | none | | none |
| 3. Zinc, Tot | none | 1.0 mg/l | none | none | | none |
| 4. pH | none | | | 6-9 minimum at all times | | |
| 5. Oil and Grease | none | none | none | 15 mg/l | | 30 mg/l |

- (1) Permit requirements would be the more stringent of the two.
 - (2) Specify as 30-day average.
 - (3) Maximum not to be exceeded for any one day.
 - (4) Maximum not to be exceeded at any time.
- Applicable values should be labeled as pounds per day or mg/l.

J. Comprehensive Planning and Water Quality Management Requirements:
 Project Conforms
 Project does not conform; explain on a separate attached sheet or reference to other documents under remarks.

K. Remarks: 1 Stream code 06685 ;
 2 Water Quality Assessment completed by J. Scolere on 8/25/89 ;
 3 Nearest ds water supply is Danville Water supply on Susquehanna River.

APPROVALS L. FACILITIES SECTION:

 Date: _____

M. Reviewer
 Planning/WQ Joseph V. Scolere *JVS*
 Date: 8/29/89

 Date: _____

Biologist
 Regional Geologist/WQ _____
 Date: _____

Chief
 Planning/WQ Paul Fosko *Fosko*
 Date: 8/29/89

 Date: _____

Basin Engr. _____
 Date: _____

POLLUTION REPORT

(Effect of Discharges on Receiving Waters)

| Discharge(072,073,074) | NPDES (1) | | | Requirements to (1) | |
|---------------------------|-------------------------------|--------------|---------------|--------------------------|---------------|
| | Minimum Effluent Requirements | | | Meet Water Quality | |
| <u>Specific Substance</u> | 30 Day Avg.(2) | Daily Max(3) | Inst. Max.(4) | 30 Day Avg.(2) | Inst. Max.(4) |
| 1. TSS | 30 mg/l | 100 mg/l | none | none | none |
| 2. Oil & Grease | 15 mg/l | 20 mg/l | 30 mg/l | 15 mg/l | 30 mg/l |
| 3. pH | none | | | 6-9 minimum at all times | |

- (1) Permit requirements would be the more stringent of the two.
- (2) Specify as 30-day average.
- (3) Maximum not to be exceeded for any one day.
- (4) Maximum not to be exceeded at any time.

Applicable values should be labeled as pounds per day or mg/l.

J. Comprehensive Planning and Water Quality Management Requirements:

X Project Conforms
 Project does not conform; explain on a separate attached sheet or reference to other documents under remarks.

K. Remarks: 1 Stream code 06685 ;
 2 Water Quality Assessment completed by J.Scolere on 8/25/89 ;
 3 Nearest ds water supply is Danville Water supply on Susquehanna River.

APPROVALS L. FACILITIES SECTION:

_____ Date: _____

M. Reviewer
 Planning/WQ Joseph V. Scolere *JV*

Date: 8/21/89

Biologist
 Regional Geologist/WQ _____

Date: _____

Chief
 Planning/WQ Paul Fosko *Fosko*

Date: 8/29/89

Basin Engr. _____

Date: _____

BASIN: Susquehanna River

Page: _____ OF _____
DATE: 8/24/89

CASE: PP&L Steam Generating Station

MUNICIPALITY: Salem Twp

COUNTY: Luzerne County

RECEIVING STREAM: Susquehanna

REACH: _____

STREAM CLASSIFICATION: WWF

FLOW REFERENCE:

See Previous Modeling 12/84

G. Sta 01540500 Susq. R. @ Danvill

G. Sta 01536500 Susq. R. @ Wilkes
Barre

SEE Previous Modeling 12/84

Q7-10 = 893 CFS

DA = 10,220 sq. mi

Qw(071) = 8.40 MGD x 1.547 = 12.99 cfs

Q7-10 / Qw = 893 / 12.99 = 68.7

Qt = 893 cfs + 12.99 cfs = 905 cfs

Qw(079) = .080 MGD x 1.547 = 0.12 cfs

Q7-10 / Qw(079) > 10 Therefore no need to model ; Give Secondary Trmt.

Background

Data Ecological Study (See Pollution Report on 11/16/84)

Hardness = 137 ug/l

Copper = 10 ug/l

Zinc = 30 ug/l

Outfall 071

Temperature

See previous modeling, 1984. Using new Temperature Criteria (1989) and proposed Ambient Temperature Guidance (1989) for WWF, No temperature limits are recommended.

Copper

Background 10 ug/l

Hardness = 137 mg/l

Aquatic Criteria = 15.4 ug/l @ 137 ug/l

~~Sample = 22.5 ug/l~~

~~Q7-10 /Qw = 68.7 > Sample / Criteria = 1.4~~

avg 8/27/85

No limit is recommended

Zinc

Background = 30 ug/l

Aquatic Criteria = 138ug/l @Hardness 137 ug/l

Sample = 373 ug/l

Q7-10 /Qw = 68.7 > Sample/Criteria = 2.7

No limit is recommended

Phenols

Aquatic Criteria = 5 at water

Sample < 15 ug/l

Q7-10 /Qw = 68.7 > sample/Criteria = 3

No limit is recommended

Aluminum

Aquatic Criteria = 0.5 mg/l = 500 ug/l

Sample = 500 ug/l

Q7-10/Qw = 68.7 > Sample /Criteria = 1

No limit is recommended

Mercury

Aquatic Criteria = .012 ug/l

Sample < .5 ug/l

Q7-10 /Qw = 68.7 > Sample /Criteria = 50

No limit is recommended

Chloroform

Human Health Criteria = .2 (CRL)

Sample = 5.3 ug/l

Q7-10/Qw = 68.7 > Sample/Criteria = 26

No limit is recommended

Conditioned Water Additives

No limit recommended due to sufficient dilution and/or non regulated chemicals