

Region 3 NPDES Permit Quality Review Pennsylvania

Phase 1: From September 30, 2014 to October 2, 2014

Phase 2: From November 4, 2014 to November 6, 2014

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**Final Report
November 2016**

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I. PQR BACKGROUND

National Pollutant Discharge Elimination System (NPDES) Permit Quality Reviews (PQRs) are an evaluation of a select set of NPDES permits to determine whether permits are developed in a manner consistent with applicable requirements established in the Clean Water Act (CWA) and NPDES regulations. Through this review mechanism, EPA promotes national consistency, and identifies successes in implementation of the NPDES program and identifies opportunities for improvement in the development of NPDES permits.

EPA's review team, consisting of four Region 3 and two Headquarters (HQ) staff members, conducted the core review of the Pennsylvania NPDES permitting program which included two on-site visits to the Pennsylvania Department of Environmental Protection (PADEP) Regional Offices. The first visit was performed in the PADEP Southeast Regional Office in Norristown, Pennsylvania from September 30 through October 2, 2014. The second visit was performed in the PADEP Southcentral Regional Office in Harrisburg, Pennsylvania from November 4 through 6, 2014. Three additional Region 3 staff were involved in the desktop reviews on specific topic areas, further discussed below.

The Pennsylvania PQR consisted of two components: permit reviews and special focus area reviews. The permit reviews focused on core permit quality and included a review of the permit application, permit, fact sheet, and any correspondence, reports or documents in the administrative record that provide the basis for the development of the permit conditions. The core permit review involved the evaluation of selected permits and supporting materials using basic NPDES program criteria. Reviewers completed the core review by examining selected permits and supporting documentation, assessing these materials using standard PQR tools, and talking with permit writers regarding the permit development process. The core review focused on the Central Tenets of the NPDES Permitting program to evaluate the Pennsylvania NPDES program. In addition, discussions between EPA and state staff addressed a range of topics including program status, the permitting process, responsibilities, organization, and staffing. Core topic area permit reviews are conducted to evaluate similar issues or types of permits in all states. The national topics reviewed in the Pennsylvania NPDES program were: nutrients, pesticide, pretreatment¹, and stormwater.

Regional topic area reviews target regionally-specific permit types or particular aspects of permits. The regional topic areas selected by EPA Region 3 included: Chesapeake Bay, Concentrated Animal Feeding Operations (CAFOs), and Total Maximum Daily Loads (TMDLs). These reviews provide important information to Pennsylvania, EPA Region III, EPA HQ and the public on specific program areas.

A total of forty four permits were reviewed for the PQR. Twenty permits were reviewed as part of the core review. A total of 37 permits were also used for the national and regional topic area

¹ PADEP has not been delegated the authority to implement the Pretreatment program in Pennsylvania. The pretreatment authority for Pennsylvania is the US Environmental Protection Agency in Region 3.

reviews. Permits were selected based on issue date and the review categories that they fulfilled. The permits reviewed during this PQR are listed in Tables I, II, and III, below.

Core Review:

Table I		
From September 30, 2014 to October 2, 2014 PADEP Southeast Regional Office		
#	NPDES	Name
1	PA0026247	Hatfield Township Municipal Authority STP
2	PA0026468	Lower Bucks County JMA WWTP
3	PA0026531	Downingtown Area Regional Authority
4	PA0021857	Souderton Borough WWTP
5	PA0026131	Upper Merion Municipal Authority – Trout Run
6	PA0020460	Pennridge Wastewater Treatment Authority
7	PA0021181	Bucks County Water and Sewer Authority – Green Street
8	PA0012629	Philadelphia Energy Solutions
9	PA0051497	Lenape Forged Products
10	PA0025488	Avondale Borough STP

Table II		
From November 4, 2014 to November 6, 2014 PADEP Southcentral Regional Office		
#	NPDES	Name
1	PA0009229	Norfolk Southern Railroad Co
2	PA0032883	Duncansville Borough Municipal Authority
3	PA0026549	Reading City Berks
4	PA0026727	Tyrone Borough
5	PA0027405	Ephrata Borough
6	PA0030643	Shippensburg Borough
7	PA0087181	Ephrata Borough WWTP #2
8	PA0021075	Myerstown Borough
9	PA0247391	North Codorus Township STP (minor)
10	PA0082538	Altoona City Water System Horseshoe Curve Plant (minor)

National and Regional Topic Area Reviews:

Table III			
NPDES general and individual permits			
#	Topic	NPDES	Name
1	Nutrients	PA0043982	Utilities, Inc. of Pennsylvania, also known as Broad Run STP
2		PA0080055	Conewago Industrial Park
3		PA0246921	Lenhartsville Borough STP
4	Pesticides	PAG-15	General Permit for Point Source Discharges to Waters of the Commonwealth of Pennsylvania from the Application of Pesticides
5		PA270784	Pennsylvania Fish and Boat Commission
6		PA0272612	U.S. Fish and Wildlife Service (A-1)
7	Pretreatment	PA0032883	Duncansville
8		PA0026727	Tyrone
9		PA0027405	Ephrata #1
10		PA0087181	Ephrata #2
11		PA0030643	Shippensburg
12		PA0026247	Hatfield
13		PA0026468	Lower Bucks
14		PA0021857	Souderton
15		PA0021181	Bucks County
16	Stormwater	PAG-03	General Permit for Discharges of Stormwater Associated with Industrial Activities
17		PAG-02	General or Individual Permit for Stormwater Discharges Associated with Constructions Activities
18		PAG-13	General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4)
19	Chesapeake Bay	PA0110582	Eastern Snyder Co Regional STP
20		PA0008231	Guilford Mills Penn Dye & Finishing
21		PA0046680	Republic Services of PA, LLC
22		PA0038415	East Pennsboro Township
23		PA0027049	Williamsport Sanitary Authority
24		PA0021687	Wellsboro Municipal Authority
25		PA0026557	Municipal Authority of the City of Sunbury
26		PA0021644	Dover Borough WWTP
27		PA0009326	Motts LLP

28		PA0232513	Kelly Township Union County
29		PA0008281	PPL Brunner Island LLC
30		PA0020273	Milton Regional Sewer Authority Northumberland County
31		PA0045985	Mountaintop Area Joint Sanitary Authority
32		PA0027171	Municipal Authority of the Town of Bloomsburg
33	CAFO	PAG-12	General Permit for CAFO Operations
34		PA0082538	Altoona City Water System Horseshoe Curve Plant
35	TMDL	PA0246921	Lenhartsville Borough STP
36		PA0025674	Meadowbrook STP
37		PA0026701	Morrisville Borough STP

II. STATE PROGRAM BACKGROUND

A. Program Structure

The PADEP is the NPDES permitting authority for the Commonwealth of Pennsylvania. The PADEP's mission is "to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment." PADEP's administrative structure consists of a Central Office (CO), 6 regional offices (ROs), and 18 district offices (DOs). A comprehensive list of these offices can be found in Appendix A.

PADEP's NPDES permit universe is composed by 10,219 active facilities. PADEP CO is responsible for program development and evaluation, specialized assistance in the areas of policy, regulatory development, complex permitting, laboratory audits, safety training, treatment plant operations, enforcement, and data management. PADEP ROs are responsible for implementing programs through permitting, inspection, enforcement, and compliance assistance to the regulated community. The ROs are structured identically to consistently implement regulatory programs and services statewide, including permitting, inspection and enforcement for all environmental programs. The DOs perform inspection and enforcement for all environmental programs and issue underground mining permits.

PADEP's water programs rely on its Office of Water Management (PADEP OWM) to perform its duties and responsibilities toward fulfilling its mission. PADEP's OWM plans, directs and coordinates departmental programs associated with the management and protection of the Commonwealth's vast water resources. Staff administers and oversees departmental programs involving surface and groundwater quantity and quality planning, and soil and water conservation. The office also coordinates policies, procedures, and regulations which influence public water supply withdrawals and quality, sewage facilities planning, point source municipal and industrial discharges, encroachments upon waterways and wetlands, dam safety, earth disturbance activities and control of storm water and non-point source pollution. In addition, the office also coordinates the planning, design and construction of flood protection and

stream improvement projects. PADEP OWM is divided into five bureaus: Bureau of Waterways Engineering and Wetlands (BWEW), Bureau of Conservation and Restoration (BCR), Bureau of Point and Non-Point Source Management (BPNPSM), Bureau of Safe Drinking Water (BSDW), and Bureau of Interstate Waters Office (BIWO). The BCR and BPNPSM are directly related to the functions of the NPDES program reviewed during the PQR, and their responsibilities will be described in more detail below. The BWEW, BSDW, and BIWO are not directly related to this review, however, information on the structure and function of these bureaus can be found in Appendix B.

The BCR's mission is to restore polluted streams and lakes and remove them from the impaired waters list. The bureau accomplishes this mission by implementing programs that fund treatment systems and Best Management Practices in priority watersheds where significant and cost effective restoration can be achieved. Specifically, the bureau manages the following funding programs and grants: Acid Mine Drainage 10% Set-aside Fund, Federal Nonpoint Source Section 319 Grant, Chesapeake Bay Watershed Initiative Grant, Chesapeake Bay Regulatory and Accountability Grant, Chesapeake Bay Implementation Grant, Conservation District Fund Allocation Program, Conservation Reserve Enhancement Program, Dirt and Gravel Road Maintenance Program and Growing Greener Watershed Protection grants. The bureau also manages efforts to increase the number of farming operations that are in compliance with environmental rules and regulations and oversees implementation of the Concentrated Animal Feeding Operations (CAFO) permitting program. CAFO permits were reviewed as part of this PQR. Other program areas managed by the bureau include: Improving and Healthy Waters, Riparian Forest Buffer Initiative, Lake Assessments, Conservation District support, and the Schuylkill River Project.

The BPNPSM oversees the statewide Clean Water Program in PADEP's six ROs, and is responsible for protecting and preserving the waters of Pennsylvania, including 86,000 miles of streams and lakes, through implementation of the following program activities:

- Establishment of water quality standards;
- Water quality monitoring and assessments;
- Municipal sewage management and planning (Act 537);
- National Pollutant Discharge Elimination System (NPDES) permitting and inspection of point source discharges;
- Water Quality Management (WQM) permitting and inspection of land discharges and facility construction;
- Technical outreach for wastewater treatment facilities and wastewater operators, and licensing for Sewage Enforcement Officers (SEOs);
- Administration of the nutrient trading program;
- Permitting and inspection of biosolids treatment/processing facilities and residential septage management; and
- Coordination between associated federal, interstate and intrastate agencies
- The development and issuance of NPDES permits is primarily carried out by PADEP ROs.

B. Universe and Permit Issuance

Pennsylvania's NPDES permit universe is described in the table, below.

Pennsylvania's NPDES Permit Universe			
Type of Point Source	Permittees	Type of Point Source	Permittees
Individual Permits		General Permits	
POTWs			
Major	300		
Non-major	758	PAG-02	1983
CSO	132	PAG-03	1948
Non-POTWs		PAG-04	2472
Major	105	PAG-05	68
Non-major	5417	PAG-06	28
CAFOs	105	PAG-10	138
Stormwater		PAG-11	2
Municipal	328	PAG-12	291
Industrial	331	PAG-13	636
Construction	277	PAG-15	11

As of the time of the PQR, 101 of PADEP's major permits were expired representing a 25.9% backlog of the major permits universe, and 590 minor permits were expired representing a 8.0% backlog of the minor permit universe. PADEP uses its own permit renewal application forms. These forms include the information required by EPA NPDES permit application forms and require that renewal applications be received within 180 days of the permit expiration date, which is part of the standard conditions in all Pennsylvania NPDES permits. Procedures on how PADEP handles its NPDES permit applications are listed in Pennsylvania's SOPs, which have been developed for each NPDES general and individual permit in Pennsylvania. With respect to NPDES general permits, these SOPs will describe how to handle the permit application, and also how to grant coverage to the applicant. Descriptions of the detailed permit application SOPs can be found in Appendix C. PADEP has also developed SOPs describing the expectations for establishing effluent limitations for NPDES individual sewage and industrial permits. Refer to Appendix D for a list of all Standard Operating Procedures associated with PADEPs Clean Water Program. PADEP's permit development process, for which an overview is described below, follows the detailed instructions outlined in these SOPs.

Once permit applications are received and processed by PADEP administrative staff, the application is assigned to an "application manager" (i.e., permit writer) for permit development. The permit writer reviews the application for administrative and technical completeness. If the application is found to be incomplete, the applicant will be contacted as appropriate to obtain the necessary information, or application denial or incomplete letters

may be used. Following a determination of application completeness, the permit writer performs a technical review of the application during which time the effluent limits, monitoring requirements, and site specific permit conditions will be determined and used to develop the draft permit, fact sheet, and any other supporting development documents.

Permit writers in the ROs use the SOPs developed by CO (see Appendix D) to develop draft permits. Permit applications, Total Maximum Daily Loads (TMDLs), Effluent Limitation Guidelines (ELGs), other applicable documents and state regulations are reviewed to evaluate pollutants of concern and establish appropriate effluent limitations. Technology-based effluent limits (TBELs) and Best Professional Judgement (BPJ) limits are determined based on any applicable ELGs, and based on PA's regulations at PA Code 25 Chapters 92a. and 96. TBELs are compared to water quality-based effluent limits (WQBELs) to determine the most stringent limits for inclusion in the permit.

WQBELs are developed using a variety of tools. Permit writers perform a toxics screening analysis of renewal application and discharge data to determine pollutants of concern that may require effluent limits or monitoring requirements. Permit writers use several models, including "WQM 7.0" (the wasteload allocation program for dissolved oxygen and ammonia nitrogen) to evaluate the appropriate CBOD5 and ammonia-nitrogen WQBELs, and PENTOXSD (PADEP's single wasteload allocation program) to evaluate reasonable potential for toxic pollutants of concern. Permit writers are able to apply mixing zones for WQBEL calculations through the PENTOXSD modeling program. In some cases PADEP may utilize mixing zones evaluated by agencies such as the Delaware River Basin Commission (DRBC), since multiple dischargers and tidal influences can be considered. PADEP has developed Technical Reference Guides for PENTOXSD and WQM 7.0, which are referenced in Appendix E and can be found in the PADEP eLibrary. The water quality models are also available on PADEP's website.² Permit writers evaluate reasonable potential and develop WQBELs for Whole Effluent Toxicity (WET) when appropriate (i.e., for major POTW discharges and for industrial waste discharges, as deemed necessary by the state), using the procedures outline in the WET SOP (see Appendix D). Monitoring frequencies for permit parameters are determined based on PADEP's technical guidance and include considerations such as facility size, type of discharge, frequency of discharge, and compliance history of the facility.

Any new and expanding discharges to High Quality (HQ) or Exceptional Value (EV) waters are evaluated in accordance with PADEP's antidegradation requirements, which involves reviews typically conducted in conjunction with PA's sewage planning process (Act 537). This process includes evaluation of an appropriate alternatives analysis, including consideration of land discharge alternatives. PADEP's antidegradation regulations are included in the state's water quality standards regulations provided at PA Code Chapter 93.4(a-d), and its Water Quality Antidegradation Implementation Guidance can be found in the eLibrary.³ PADEP's EV

²<http://www.dep.pa.gov/Business/Water/PointNonPointMgmt/WastewaterMgmt/Pages/NPDESWQM.aspx#.Vmh8IKNOk3G>

³<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47704/391-0300-002.pdf>

classification (the highest level of protection in which no degradation is allowed) includes Outstanding National Resource Waters, and outstanding state, regional, and local waters. The level of protection of HQ waters can be reduced from the existing quality, but only to accommodate important social or economic development (Social or Economic Justification process). EV waters are equivalent to the federal Tier 3 classification, and HQ waters are equivalent to the federal Tier 2 classification. Existing use protection is referred to as the “Tier 1” protection level in federal regulations, and requires that for all surface waters, all existing instream water uses and the level of water quality necessary to protect those uses must be maintained and protected. PADEP considers water uses to be protected when DEP makes a decision to issue or deny a permit or approval request for an activity that may impact the use, through applying numeric water quality criteria in PA Code Chapter 93 and the toxic substances criteria in PA Code Chapter 16 (Toxics Management Strategy - Statement of Policy).

Pennsylvania’s permits contain standard conditions in Part A and Part B of its permits, while site specific and special conditions are developed as appropriate and are included in Part C of its permits. Narrative limits are included in Part A, requiring discharges to be free from specific materials or substances that will be inimical to water uses, or to human, animal, plant, or aquatic life.

Fact Sheets and other supporting documents (such as Water Quality Protection Reports, Toxics Screening Analysis, WET evaluations, correspondence, etc.) provide the draft permit development documentation. Permit writers use the states’ NPDES Management System (NMS) system to produce the draft permit and fact sheet and related documents.⁴ Permits required to be submitted to EPA for review are uploaded to an FTP site, where documents are accessible by EPA and downloading and review. PADEP publishes the draft permit documents in the PA Bulletin Online for the required 30-day public notice period. Permit writers consider comments received during the public notice period, and address comments received on the draft permit via a Fact Sheet Addendum. PADEP addresses requests for public hearings as outlined in Pennsylvania’s regulations at PA Code Chapters 92a.82 and 92a.83.

C. State-Specific Challenges

PADEP has a limited staff for developing and issuing NPDES permits. PADEP has been able to maintain a core NPDES permit program, dedicated permitting staff for a number of years who carry a wealth of history and knowledge about existing facilities and previous permit development. Also, PADEP has hired new staff, including management personnel. The new employees are being trained by senior management personnel and staff.

PADEP has a large permit universe relative to other states in the region, and with six ROs the approach to permit development can differ within each regional office. For example, although the various analytical tools are used consistently throughout the regions to determine the need

⁴ PADEP’s new permit development system is referred to as the Water Management System (WMS).

for WQBELs, the considerations made by the permit writer when evaluating limits can vary from region to region. CO continues to update their SOPs and implement templates as a means to streamline the permit development process, however, consistency among the regional offices can still be a challenge for PADEP.

PADEP's permit backlog is still an issue. The fiscal year priority permit selection list commitment has been used to help better address this issue.

D. Current State Initiatives

PADEP has been improving its NPDES permitting program by employing new and revised tools to increase the efficiency and efficacy of related processes. PADEP has been implementing the following initiatives to increase its NPDES permit writing proficiency:

- **Revised Permit Applications** - PADEP made revisions to its NPDES permit application for major POTWs to include all the parameters listed in 40 CFR Part 122 Appendix J.
- **Revised Permit Template** - PADEP has developed several NPDES permit templates to help address consistency issues among PADEP ROs and DOs. PADEP may revise these templates for its own purposes or when EPA, through its permit review, asks for clarification or finds any inconsistency with federal regulations.
- **Revised Templates for a Fact Sheet and Basis of Statement** - PADEP has developed several permit fact sheet and basis of statement templates to help address consistency issues among PADEP ROs and DOs, and to support any applicable SOPs. PADEP may revise these templates for its own purposes or when EPA, through its permit review, asks for clarification or finds any inconsistency with federal regulations.
- **State Policy for Specific Parameters of Concern** – As part the draft NPDES permit development process, an analysis should be performed to determine whether to include monitoring requirements for sulfate, chloride, bromide, and 1,4-dioxane in the draft permit.
- **Standard Operating Procedures (SOPs)** - PADEP has issued several SOPs to help streamline its NPDES permit writing process. SOPs promote consistency and still allow for some flexibility to address different state issues. PADEP may revise these templates for its own purposes or when EPA, through its permit review, asks for clarification or finds any inconsistency with federal regulations.

III. CORE REVIEW FINDINGS

A. Basic Facility Information and Permit Application

1. Facility Information

Basic facility information is necessary to properly establish permit conditions. For example, information regarding facility type, location, processes and other factors is required by NPDES

permit application regulations (40 CFR 122.21). This information is essential for developing technically sound, complete, clear and enforceable permits. Similarly, fact sheets must include a description of the type of facility or activity subject to a draft permit.

Program Strengths:

Overall, PADEP fact sheets and permits provide a clear description of the facility names, addresses, type of facility and processes/operations, and receiving waters. PADEP's permits also contained all other basic permit information including issuance, effective and expiration dates, authorization-to-discharge information, a description of the activities/services carried out by the facilities and to which outfalls those wastewaters discharge.

Areas for Improvement:

There are no areas for improvement.

2. Permit Application Requirements

Federal regulations at 40 CFR 122.21 and 122.22 specify application requirements for permittees seeking NPDES permits. Although federal forms are available, authorized states are also permitted to use their own forms provided they include all information required by the federal regulations. This portion of the review assesses whether appropriate, complete, and timely application information was received by the state and used in permit development.

Program Strengths:

PADEP uses its own application forms, which includes the information required by EPA NPDES permit application forms. Permit applications were well organized in the paper filing system and were readily available for review during the PQR. Most permit applications appeared to be submitted in a timely fashion, some of which were complete while others did not appear to be complete. Not all permit applications were submitted on time. Data submitted with the vast majority of permit applications appeared to be adequate and in accordance with application and regulatory requirements. There were a few permit applications in where the detection levels were not sensitive enough to assess compliance with the PA WQS. PADEP has been working on an initiative to send out reminder letters for submission of permit applications. This helps minimize and address late submission issues.

Areas for Improvement:

Not all permit applications were submitted on time. An application provided effluent characterization data for parameters where the detection levels were not sensitive enough to assess compliance with the PA WQS. An application did not include all the required parameters for a major POTW. Otherwise, PADEP's permit application requirements and procedures are in accordance with Federal regulatory requirements.

B. Technology-based Effluent Limitations

NPDES regulations at 40 CFR 125.3(a) require that permitting authorities develop technology-based requirements where applicable. Permits, fact sheets and other supporting documentation for POTWs and non-POTWs were reviewed to assess whether technology based effluent limitations (TBELs) represent the minimum level of control that must be imposed in a permit.

1. TBELs for POTWs

POTWs must meet secondary or equivalent to secondary standards (including limits for BOD, TSS, pH, and percent pollutant removal), and must contain numeric limits for all of these parameters (or authorized alternatives) in accordance with the secondary treatment regulations at 40 CFR Part 133. A total of 16 POTW permits were reviewed as part of the PQR.

Program Strengths:

The POTW permits reviewed contained numeric limits with appropriate units of measure, and met the minimum secondary treatment requirements contained at 25 PA Code Chapter 92a.47 Sewage Permit, or more stringent standards as determined by WQBEL evaluations for BOD/CBOD, TSS, and pH.

PADEP employs a SOP to assist permit writers with deriving technology based effluent limitations for POTWs, entitled “Establishing Effluent Limitations for Individual Sewage Permits.” This SOP describes the procedures by which permit writers will identify pollutants of concern, determine whether those pollutants should be monitored only or also be subject to numeric limitations, and determine the numeric values for effluent limitations. This SOP does not address monitoring frequency and sample type. The New and Reissuance Sewage Individual NPDES Permit Applications refer to this SOP. It presents the general sequence of activities that permit writers will undertake to establish effluent limitations. In general, permit writers will not make limitations less stringent in reissued permits unless the conditions of federal anti-backsliding regulations are met and the rationale is explained in the fact sheet.

Areas for Improvement:

The PADEP NPDES permit template used to develop NPDES individual permits in Pennsylvania requires that the permittee must comply with the 85% removal for TSS and BOD5, however the NPDES permits reviewed did not require the permittee to report the percent removal in its DMRs. The NPDES permits contain a supplemental DMR form that requires influent and effluent information for these parameters but not for the 85% removal.

2. TBELs for Non-POTW Dischargers

Permits issued to non-POTWs must require compliance with a level of treatment performance equivalent to Best Available Technology Economically Achievable (BAT) or Best Conventional Pollutant Control Technology (BCT) for existing sources, and consistent with New Source Performance Standards (NSPS) for new sources. Where federal effluent limitations guidelines (ELGs) have been developed for a category of dischargers, the TBELs in a permit must be based on the application of these guidelines. If ELGs are not available, a permit must include requirements at least as stringent as BAT/BCT developed on a case-by-case using best professional judgment (BPJ) in accordance with the criteria outlined at 40 CFR 125.3(d).

Program Strengths:

For non-POTW permits, effluent limits were appropriately expressed in short and long term effluent limitations. The explanation of facility descriptions, process wastewaters being evaluated, and treatment processes were adequately discussed in the FSs. Overall, applicable ELGs were evaluated and applied in developing TBELs.

To implement the ELGs that EPA has promulgated, PADEP employs a SOP to assist permit writers with deriving effluent limitations, entitled "Establishing Effluent Limitations for Individual Industrial Permits." This SOP describes the procedures by which permit writers will identify pollutants of concern, determine whether those pollutants should be monitored only or also be subject to numeric limitations, and determine the numeric values for effluent limitations when developing Part A limit sets for individual NPDES industrial waste and industrial stormwater permits. The New and Reissuance Industrial Waste and Industrial Stormwater Individual NPDES Permit Applications refer to this SOP. It presents the general sequence of activities that permit writers will undertake to establish effluent limitations. In general, permit writers will not make limitations less stringent in reissued permits unless the conditions of federal anti-backsliding regulations are met and the rationale is explained in the fact sheet.

Areas for Improvement:

Some NPDES permits reviewed maintained effluent limitations from the previous permit with no identification in the fact sheet as to how the previous limits were derived. While NPDES permits reviewed overall applied the appropriate category for the type of processes employed, and the appropriate technology-based requirements were evaluated for the permit, there was not enough information explaining the ELGs applicability and constraints. Some FSs did not provide a discussion of the applicable ELGs and how they were evaluated or applied in the permit.

C. Water Quality-Based Effluent Limitations

The NPDES regulations at 40 CFR 122.44(d) require permits to include any requirements in addition to or more stringent than technology-based requirements where necessary to achieve state water quality standards, including narrative criteria for water quality. To establish such “water quality-based effluent limits” (WQBEL), the permitting authority must evaluate the proposed discharge and determine whether technology-based requirements are sufficiently stringent, and whether any pollutants or pollutant parameters could cause or contribute to an excursion above any applicable water quality standard.

The PQR for PADEP assessed the processes employed by permit writers and water quality modelers to implement these requirements. Specifically, the PQR reviewed permits, fact sheets, and other documents in the administrative record to evaluate how permit writers:

- Determined the appropriate water quality standards applicable to receiving waters,
- Evaluated and characterized the effluent and receiving water including identifying pollutants of concern,
- determined critical conditions,
- Incorporated information on ambient pollutant concentrations,
- Assessed any dilution considerations,
- Determined whether limits were necessary for pollutants of concern and, where necessary,
- Calculated such limits or other permit conditions.

For impaired waters, the PQR also assessed whether and how permit writers consulted and developed limits consistent with the assumptions of applicable EPA-approved total maximum daily loads (TMDLs).

Program Strengths:

PADEP’s fact sheets clearly described the receiving waters, their designated uses and 303(d) impairment status. Additionally, fact sheets clearly indicated when a TMDL had been completed and provided an explanation of the TMDL requirements and how they were applied in the permit. PADEP consistently applies WQBELs in its permits that are in accordance with the wasteload allocation (WLA) requirements of the applicable TMDLs. PADEP’s permit writers use a variety of tools to analyze reasonable potential (RP), mixing zones, and to calculate WQBELs based on Pennsylvania’s Water Quality Standards (PAWQS) at 25 PA Code Chapter 93 and based on the methods in EPA’s TSD and TST and applicable guidance. PADEP tools used for developing WQBELs were discussed in Section II.B. of this report, and are also summarized in Appendix E.

To derive WQBELs, PADEP considers federal NPDES regulations (including standards and guidance), Pennsylvania’s NPDES regulations (including standards, guidance, computer-based programs, and SOPs), and applicable requirements such as Delaware River Basin Commission (DRBC) Water Quality Regulations. Where other water quality regulations (such as those for

DRBC) are more stringent, PADEP applies the most stringent regulation when developing the WQBEL.

In support of Pennsylvania's WQS, PADEP employs SOPs to assist permit writers in the derivation of effluent limitations, entitled "Establishing Effluent Limitations for Individual Industrial Waste Permits" and "Establishing Effluent Limitations for Individual Sewage Permits." These SOPs describe the procedures by which permit writers will identify pollutants of concern, determine whether those pollutants should be monitored only or also be subject to numeric limitations, and determine the numeric values for effluent limitations when developing Part A limit for individual NPDES industrial waste and industrial stormwater permits. It presents the general sequence of activities that permit writers will undertake to establish effluent limitations. In general, permit writers will not make limitations less stringent in reissued permits unless the conditions of federal anti-backsliding regulations are met and the rationale is explained in the fact sheet.

In support of Pennsylvania's WQS, including its narrative criteria, PADEP employs a SOP to assist permit writers in the derivation of effluent limitations for Whole Effluent Toxicity (WET), entitled "Whole Effluent Toxicity (WET)." This SOP describes the methods by which the Clean Water Program will conduct reviews of WET test reports and determine NPDES permit requirements for WET. This SOP applies only to any facility that currently conducts WET testing or should begin conducting testing. These definitions are provided only to facilitate understanding of the approaches taken in this SOP, and are used solely to describe PADEP's WET program.

In support of Pennsylvania's WQS, PADEP employs a SOP to assist permit writers in the derivation of effluent limitations for chemical additives, entitled "Chemical Additives." This SOP describes the methods by which the CWP and BPNPSM will conduct reviews of chemical additives. According to PA NPDES regulations, the term "chemical additive" means a chemical product (including products of disassociation and degradation, collectively "products") introduced into a waste stream that is used for cleaning, disinfecting, or maintenance and which may be detected in effluent discharged to waters of the Commonwealth. The term generally excludes chemicals used for neutralization of waste streams, the production of goods, and treatment of wastewater. This SOP applies only to industrial waste facilities. This SOP has been developed to assure consistent and comprehensive implementation of regulatory requirements in typical scenarios. The recommended procedures in this SOP should be followed unless site-specific factors, in the opinion of the permit writer, justify a deviation from the SOP. Site-specific factors that support deviation from the recommended procedures in this SOP should be documented in the fact sheet. In preparing the fact sheet to describe the basis for any permit condition developed by the permit writer, the permit writer references the regulation that supports the specific requirement. In preparing the fact sheet to describe the implementation procedure through which the permit condition was developed, the permit writer references the SOP where applicable. For example: "WET testing is required for this facility as per 40 CFR § 122.21(j)(5). The WET dilution series was assigned consistent with the procedure described in Whole Effluent Toxicity (WET) SOP."

Areas for Improvement:

The WQBEL development and evaluation tools were not always available for review with the public record. There was some background information available, and this information was not always used in limit development calculations. PADEP generally assumes “zero” background for pollutants that it assessed. One of the tools used to develop effluent limitations appears to have some errors regarding the discharge concentrations when compared to the permit application. Some WET results used to develop the effluent characterization were not the most current results. A WET failure was noted and no reasonable potential was determined. In all cases, the site-specific fact sheet did not contain any discussion on how the permit writer considered the narrative water quality criteria. In some cases, the site-specific fact sheet did not mention whether or not the effluent characterization complies with the antidegradation requirements. Additionally, while the fact sheets may state which WQBELs or TBELs are being applied in the permit, there is no direct comparison provided of the TBELs and WQBELs effluent limitations that were calculated.

D. Monitoring and Reporting

NPDES regulations at 40 CFR 122.41(j) require permittees to periodically evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. Monitoring and reporting conditions require the permittee to conduct routine or episodic self-monitoring of permitted discharges and where applicable, internal processes, and report the analytical results to the permitting authority with information necessary to evaluate discharge characteristics and compliance status.

Specifically, 40 CFR 122.44(i) requires NPDES permits to establish, at minimum, annual monitoring for all limited parameters sufficient to assure compliance with permit limitations, including specific requirements for the types of information to be provided and the methods for the collection and analysis of such samples. In addition, 40 CFR 122.48 requires that permits specify the type, intervals, and frequency of monitoring sufficient to yield data which are representative of the monitored activity. The regulations at 40 CFR 122.44(i) also require reporting of monitoring results with a frequency dependent on the nature and effect of the discharge.

Program Strengths:

All of the permits that were reviewed included at least annual monitoring for all limited parameters. All permits included the monitoring locations and frequency of sampling

appropriate for the discharge type, and WET testing was applied where appropriate (for all major POTWs and for Industrial dischargers where PADEP deemed it necessary).

Areas for Improvement:

With respect to the Chesapeake Bay NPDES permits reviewed, increasing the monitoring frequency for the Chesapeake Bay TMDL parameters in the draft permit will improve the representativeness of the data collected, thereby improving the accuracy of the effluent limit calculations and the determination of whether credits are needed for compliance and, if so, how many credits are needed. It will also improve the accuracy of the data used to generate credits, if any, by a facility. We recommend that PADEP revise the monitoring frequency for the Chesapeake Bay parameters to at least twice per week.

E. Standard and Special Conditions

Federal regulations at 40 CFR 122.41 require that all NPDES permits, including NPDES general permits, contain an enumerated list of “standard” permit conditions. Further, the regulations at 40 CFR 122.42 require that NPDES permits for certain categories of dischargers must contain additional standard conditions. Permitting authorities must include these conditions in NPDES permits and may not alter or omit any standard condition, unless such alteration or omission results in a requirement more stringent than required by the federal regulations.

In addition to standard permit conditions, permits may also contain additional requirements that are unique to a particular permittee or discharger. These case-specific requirements are generally referred to as “special conditions.” Special conditions might include requirements such as: additional monitoring or special studies such as pollutant management plan or a mercury minimization plan; best management practices [see 40 CFR 122.44(k)], or permit compliance schedules [see 40 CFR 122.47]. Where a permit contains special conditions, such conditions must be consistent with applicable regulations.

Program Strengths:

A review of PADEP’s standard permit conditions indicated that all of the requirements were at least as stringent as the federal regulations. Special conditions in permits reviewed during the PQR included appropriate compliance schedules for meeting WQBELs, conducting WET testing, and implementing stormwater BMP requirements, among other requirements.

Areas for Improvement:

There are no areas for improvement.

F. Administrative Process

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6); coordinating EPA and state review of the draft (or proposed) permit (40 CFR

123.44); providing public notice (40 CFR 124.10); conducting hearings if appropriate (40 CFR 124.11 and 40 CFR 124.12); responding to public comments (40 CFR 124.17); and, modifying a permit (if necessary) after issuance (40 CFR 124.5). EPA discussed each element of the administrative process with PADEP, and reviewed materials from the administrative process as they related to the core permit review.

Program Strengths:

PADEP's administrative process includes the proper coordination of EPA and state review of draft permits, the required public notice period for draft permits, the name and address of the office processing the permit action, name and address of the permittee/facility, the name and contact information of the person more information can be obtained.

Areas for Improvement:

During the review of the public record, it was noted that the public notices did not meet some of the minimum federal requirements. The public notice template for NPDES permits was missing a brief description of the comment procedures required at 40 CFR 124.11 and 124.12, a statement of procedures to request a hearing (or time and place of hearing if already requested), a description of the sludge use and disposal practice(s), and the location of sludge treatment facilities treating domestic sewage and use or disposal sites as required by 40 CFR 124.10(d)(1)(vii). It was not always evident whether permit comments were received and how or if they were addressed. No specific response to comment documents were observed during the core review; however, some FSs for final issued permits noted that changes were made based on comments received.

G. Administrative Record

The administrative record is the foundation that supports the NPDES permit. If EPA issues the permit, 40 CFR 124.9 identifies the required content of the administrative record for a draft permit and 40 CFR 124.18 identifies the requirements for a final permit. Authorized state programs should have equivalent documentation. The record should contain the necessary documentation to justify permit conditions. At a minimum, the administrative record for a permit should contain the permit application and supporting data; draft permit; fact sheet or statement of basis; all items cited in the statement of basis or fact sheet including calculations used to derive the permit limitations; meeting reports; correspondence between the applicant and regulatory personnel; all other items supporting the file; final response to comments; and, for new sources where EPA issues the permit, any environmental assessment, environmental impact statement, or finding of no significant impact.

Current regulations require that fact sheets include information regarding the type of facility or activity permitted, the type and quantity of pollutants discharged, the technical, statutory, and regulatory basis for permit conditions, the basis and calculations for effluent limits and

conditions, the reasons for application of certain specific limits, rationales for variances or alternatives, contact information, and procedures for issuing the final permit. Generally, the administrative record includes the permit application, the draft permit, any fact sheet or statement of basis, documents cited in the fact sheet or statement of basis, and other documents contained in the supporting file for the permit.

For the 20 permits reviewed regarding the core review, the administrative record contained many of the necessary documents; however, the record was sometimes incomplete in describing the basis for permit development. While the record contained permit applications, public notice documents, draft permits, fact sheets, final permits, and related correspondence, specific information related to the derivation of both TBELs and WQBELs were not always adequately documented. One of the NPDES permits reviewed was amended without EPA's review. A major amendment to an issued permit shall be reviewed by EPA. In some cases draft NPDES permits that were previously reviewed by EPA were revised and issued without EPA's review.

1. Documentation of Effluent Limitations

Permit records for POTWs and industrial facilities should contain comprehensive documentation of the development of all effluent limitations. Technology-based effluent limitations (TBELs) should include assessment of applicable standards, data used in developing effluent limitations, and actual calculations used to develop effluent limitations. The procedures implemented for determining the need for water quality-based effluent limitations (WQBELs) as well as the procedures explaining the basis for establishing, or for not establishing, WQBELs should be clear and straight forward. The permit writer should adequately document changes from the previous permit, ensure draft and final limitations match (unless the basis for a change is documented), and include all supporting documentation in the permit file.

Program Strengths:

The fact sheets (FSs) provide a discussion of the treatment processes and type of discharge for POTWs and non-POTW permits, and effluent limits were in the appropriate units and forms. PADEP fully documents the receiving streams, impairments, and applicable TMDLs.

Areas for Improvement:

A comparison between TBELs and WQBELs was not clearly reflected in the records. There was not enough documentation of changes between the previous and new permit, including, but not limited to, anti-backsliding, anti-degradation discussion, TMDLs, and ELGs. Some RP evaluations were not fully documented. For instance, TBELs and WQBELs were not always compared to determine and assign the more stringent effluent limitations. There was lack of documentation for parameters that did not have RP. When limits are carried over, justification and documentation from previous FSs should be included with newly drafted permits. In some cases, limits were less stringent than previous permit with no FS documentation and

explanation regarding anti-backsliding. FSs did not always include justification for compliance schedules of less than one year.

A major permit modification was not submitted to EPA for review, as required, and revisions to a final permit were made and finalized without EPA review. PADEP public notices did not include all of the requirements specified in 124.10(d). These areas include a brief description of the comment procedures required by 40 CFR 124.11 and 124.12 and a statement of procedures to request a hearing (unless a hearing has already been scheduled) (40 CFR 124.10(d)(1)(v)), and a description of sludge use/disposal practices and the location of each sludge treatment works treating domestic sewage and use or disposal sites (40 CFR 124.10(d)(1)(vii)).

H. National Topic Areas

National topic areas are aspects of the NPDES permit program that warrant review based on the specific requirements applicable to the selected topic areas. These topic areas have been determined to be important on a national scale. National topic areas are reviewed for all state PQRs. The national topics areas are: nutrients, pesticides, pretreatment and stormwater.

1. Nutrients

For more than a decade, both nitrogen and phosphorus pollution has consistently ranked as one of the top causes of degradation of surface waters in the U.S. Since 1998, EPA has worked at reducing the levels and impacts of nutrient pollution. A key part in this effort has been the support EPA has provided to States to encourage the development, adoption, and implementation of numeric nutrient criteria as part of their water quality standards (see the EPA's *National Strategy for the Development of Regional Nutrient Criteria*). In a 2011 memo to the EPA regions titled *Working in Partnerships with States to Address Nitrogen and Phosphorus Pollution through use of a Framework for State Nutrient Reductions*, the Agency announced a framework for managing nitrogen and phosphorus pollution that, in part, relies on the use of NPDES permits to reduce nutrient loading in targeted or priority watersheds.

Background:

To assess how nutrients are addressed in the Pennsylvania NPDES program, EPA Region 3 reviewed three NPDES permits, including Utilities Inc. of Pennsylvania – Broad Run STP (PA0043982), Conewago Industrial Park (PA0080055), and Lenhartsville Borough STP (PA0246921). Although not discussed in this section, EPA has reviewed 14 Chesapeake Bay permits that implement nutrient limits allocated by the Chesapeake Bay TMDL. Please refer to Section IV.A. of this report regarding details of the Chesapeake Bay regional topic area and permit implementation. Pennsylvania does not have nutrient water quality criteria; therefore, the majority of NPDES permits address nutrient permit limits through the implementation of TMDL WLAs or through the use of Pennsylvania's regulation at PA Code Chapter 96.5. Chapter 96.5(c) specifically requires that when the determination is made that a discharge of phosphorus contributes or threatens to impair existing or designated uses in lotic systems, the

discharge will be limited to an average monthly concentration of 2 mg/l. Chapter 96.5(b) indicates that for lentic systems or other impoundments, Pennsylvania will develop a TMDL and associated WLAs and LAs.

Nutrient discharge limitations for the Utilities Inc. Broad Run STP are set by the Christina River Basin Low-Flow (for Nutrients and Dissolved Oxygen) TMDL. The TMDL describes negative effects in the watershed from agricultural nutrient inputs, and lists dissolved oxygen and sediments as impairments in the watershed. Many of the tributaries are listed for DO due to excessive phosphorus and nitrogen. The TMDL used numeric causal variables applied in a dynamic model to arrive at TMDL loads and nutrient output concentrations. The Utilities Inc. of Pennsylvania facility is a point source discharger to the East Brandywine Creek and has nutrient WLAs prescribed by the TMDL. The permit employs limits based on the TMDL WLAs for total nitrogen, ammonia-nitrogen (seasonal limits), total phosphorous (seasonal limits), Carbonaceous Biological Oxygen Demand (CBOD5), and dissolved oxygen (DO). The TMDL takes a holistic approach and requires reduction of nutrients expressed as both loads and concentration limits which are appropriately implemented in the permit.

The Conewago Industrial Park (PA0080055) permittee discharges to the Conewago Creek, which is impaired for sediment and phosphorus. The permit established permit limits for total phosphorus based on the WLAs assigned to this facility in the Conewago Creek Watershed TMDL. Since Pennsylvania does not have water quality criteria for nutrients, the TMDL used a reference watershed approach to identify the TMDL endpoints or water quality objectives for nutrients in the impaired segments of the Conewago Creek watershed. A comparison to a similar, non-impaired watershed, was used to estimate the amount of phosphorus loading that would meet the water quality objectives for Conewago Creek. The WLA was based on the permitted concentration of 2.0 mg/L of phosphorus and the design flow of the facility, and was appropriately applied in the permit.

The Lenharstville Borough STP (PA0246921) discharges to Furnace Creek, which is within the Lake Ontelaunee Watershed. Lake Ontelaunee is impaired for nutrients and suspended solids, and the Lake Ontelaunee Watershed TMDL assigned WLAs for point source discharges. Without nutrient criteria, Pennsylvania's TMDL interpreted narrative water quality criteria (PA Code Chapter 96.3 (a and b)) to identify water quality endpoints for the watershed. Chapter 96.3(a) states that existing and designated surface water uses shall be protected, while Chapter 96.3(b) states that antidegradation requirements in §§ 93.4a—93.4d and 105.1, 105.15, 105.17, 105.18a, 105.20a and 105.451 shall apply to surface waters. The approach to addressing the nutrient impairments was to improve the trophic status of the lake using chlorophyll-a as a surrogate for algal biomass; phosphorus was identified as the limiting nutrient controlling algal biomass in the lake. Phosphorus loads were assigned to point sources, including Lenharstville Borough STP, and the permit appropriately applied the WLA.

Program Strengths:

Overall, Pennsylvania has implemented a strong program to protect surface waters from nutrients where local TMDLs are in place. As stated earlier, when TMDLs are not in place, Pennsylvania can use its authority under Chapter 96.5(c) to limit average monthly phosphorus concentrations to 2 mg/l when a determination is made that a discharge of phosphorus contributes or threatens to impair existing or designated uses in lotic systems.

Areas for Improvement:

Pennsylvania has met EPA's expectations with regard to establishing water quality-based TMDLs and is following through in implementing reductions in NPDES permits.

2. Pesticides

On October 31, 2011, the EPA issued a final NPDES *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides*. This action was in response to a 2009 decision by the U.S. Sixth Circuit Court of Appeals (National Cotton Council of America v. EPA, 553 F.3d 927 (6th Circuit 2009)) in which the court vacated EPA's 2006 Final Rule on Aquatic Pesticides (71 Fed. Reg. 68483, November 27, 2006) and found that point source discharges of biological pesticides and chemical pesticides that leave a residue, into waters of the U.S. were pollutants under the CWA. The federal PGP applies where the EPA is the permitting authority. All NPDES-authorized states and territories (47 in all) have developed and are implementing NPDES permits for pesticide discharges.

Background:

On January 7, 2009, the Sixth Circuit vacated the EPA's 2006 NPDES Pesticides Rule under a plain language reading of the CWA. National Cotton Council of America v. EPA, 553 F.3d 927 (6th Circuit 2009). The Court held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant." In response to this decision, on April 9, 2009, EPA requested a two-year stay of the mandate to provide the Agency time to develop general permits, to assist NPDES-authorized states to develop their NPDES permits, and to provide outreach and education to the regulated community. On June 8, 2009, the Sixth Circuit granted EPA the two-year stay of the mandate. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted EPA's request for an extension to allow more time for pesticide operators to obtain permits for pesticide discharges into U.S. waters. The court's decision extended the deadline for when permits would be required from April 9, 2011 to October 31, 2011.

As a result of the Court's decision to vacate the 2006 NPDES Pesticides Rule, NPDES permits are required for discharges of biological pesticides and of chemical pesticides that leave a residue, to waters of the United States. EPA proposed a draft pesticide general permit on June 4, 2010 to cover certain discharges resulting from pesticide applications. EPA Regional offices and state NPDES authorities may issue additional general permits or individual permits if needed.

On October 29, 2011, the Pennsylvania Department of Environmental Protection (DEP) published notice of the availability of a final statewide general permit that provides authorization to entities with control over the decision to perform pesticide applications (i.e., Decision- Makers) to discharge under the federal National Pollutant Discharge Elimination System (NPDES) program.

For this PQR, EPA Region 3 reviewed three pesticide permits, one GP and two individual permits. The “PAG-15 Authorization for Coverage under the NPDES General Permit for Point Source Discharges to Waters of the Commonwealth of Pennsylvania from the Application of Pesticides” permit is intended to provide coverage under the Clean Water Act and Pennsylvania Clean Streams Law to operators who discharge directly to waters of the Commonwealth from the application of biological pesticides or chemical pesticides that leave a residue (collectively called pesticides), when the pesticide application is for one of the following pesticide use patterns: (1) mosquito and other flying insect pest control; (2) weed and algae pest control; (3) animal pest control; and (4) forest canopy pest control. If pesticide applications are not eligible for coverage under the general permit but otherwise exceed the thresholds where permit coverage is required, the Decision-Maker will need to apply for an individual permit. Pesticide applications that will not result in a direct discharge to waters of the Commonwealth do not need permit coverage.

The Pennsylvania Fish and Boat Commission (PA270784) is an individual permit to provide weed and algae control at state fish hatcheries and public access areas, and the U.S. Fish and Wildlife Service (PA0272612) is an individual permit for a sea lamprey control program in the Conneaut and Fish Creeks. PA uses individual permits when the application is to a special protection water or has the potential to impact endangered species or critical habitat. The two individual permits reviewed adhere to the structure and requirements of the PA general permit, which is in turn compliant with the EPA National Pesticide General Permit.

Program Strengths:

Pennsylvania is able to use resources and experienced personnel from different program areas to support its pesticide program. Both the general and individual permits are fully compliant with federal regulations.

Area for Improvements:

Due to budgetary constrictions, Pennsylvania is only able to commit limited staff to the pesticide program. It would like to expand the program if additional resources or funding were available.

3. Pretreatment

The general pretreatment regulations at 40 CFR Part 403 establish responsibilities of federal, state, and local government, industry and the public to implement pretreatment standards to

control pollutants from industrial users which may cause pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

Background:

The goal of this pretreatment program review was to assess the status of the pretreatment program in Pennsylvania as well as assess specific language in POTW NPDES permits. With respect to NPDES permits, focus was placed on the following regulatory requirements for pretreatment activities and pretreatment programs:

- 40 CFR 122.42(b) (POTW requirements to notify Director of new pollutants or change in discharge);
- 40 CFR 122.44(j) (Pretreatment Programs for POTWs);
- 40 CFR 403.8 (Pretreatment Program Requirements: Development and Implementation by POTW);
- 40 CFR 403.9 (POTW Pretreatment Program and/or Authorization to revise Pretreatment Standards: Submission for Approval);
- 40 CFR 403.12(i) (Annual POTW Reports); and
- 40 CFR 403.18 (Modification of POTW Pretreatment Program).

The PQR also summarizes the following: program oversight, which includes the number of audits and inspections conducted; number of significant industrial users (SIUs) in approved pretreatment programs; number of categorical industrial users (CIUs) discharging to municipalities that do not have approved pretreatment programs; and the status of implementation of changes to the general pretreatment regulations at 40 CFR part 403 adopted on October 14, 2005 (known as the streamlining rule).

The Commonwealth of Pennsylvania does not have an approved pretreatment program. Pennsylvania Department of Environmental Protection (PA DEP) issues NPDES permits directly to POTWs and EPA Region 3 implements the pretreatment program. According to the Integrated Compliance Information System (ICIS) there are 108 POTWs in Pennsylvania that have pretreatment programs, including two programs that are required and not yet approved.

For PQRs related to pretreatment, the information in the table below is pulled from ICIS. When two numbers are reported below, the first number was reported within PCIs and PCAs in ICIS, the second number was reported in the Annual Reports, in ICIS.

State of Pennsylvania Pretreatment Program at a Glance 2013	
Number of Approved POTW Pretreatment Programs	106
Number of SIUs in POTWs with Approved Pretreatment Programs	232/727*
Number of SIUs in POTWs without Approved PPs	0**

State of Pennsylvania Pretreatment Program at a Glance 2013	
Percent of SIUs with expired Permits	0/2
Number of CIUs in POTWs with Approved Pretreatment Programs	***/286
Number of CIUs in POTWs without Approved Pretreatment Programs	0**
Number of Pretreatment Compliance Inspections in 2013	22
Number of Pretreatment Compliance Audits in 2013	1
Percentage of POTWs for which CMS Goals were met	1%
Date State Program updated for Streamlining Regulations	NA****
<p>* 85 of the 106 approved POTWs and 1 of the 17 covered POTWs had their 2013 pretreatment annual reports available in ICIS. Of the pretreatment annual reports covering the 2008 through 2012 calendar years, between 102 and 107 approved POTWs had annual reports available in ICIS. Based on the full universe of annual reports for 2013, the number of SIUs in approved pretreatment programs is 911.</p> <p>** SIU and CIU figures not reported in ICIS. At the end of Fiscal Year 13 the number of CIUs in POTWs without approved pretreatment programs was 52.</p> <p>*** CIU figures for PCI records are not reported in ICIS.</p> <p>****Not applicable. EPA directly implements the Pennsylvania pretreatment program, therefore, the streamlining rule provisions were not required to be adopted by the state.</p>	

As part of the PQR analysis for pretreatment implementation requirements permits were reviewed from two different regions within the State – Southcentral Regional Office and Southeast Regional Office. Five permits were reviewed from the Southcentral Regional Office, four permits were for POTWs with approved pretreatment programs, and one for a POTW without pretreatment programs. Four permits were reviewed from the Southeast Regional Office, two were for POTWs with approved pretreatment programs, and two were for POTWs without pretreatment programs. The permits and fact sheets were provided for review by EPA Headquarters staff. All permits had accompanying fact sheets. All fact sheets provided by Southeast Regional Office were drafts.

From available data, the design flows for the nine Pennsylvania POTWs permits reviewed range from 1.2 million gallons per day (MGD) to 10 MGD.

Permittee	Permit No.	Pretreatment program Required?	Design Flow Avg (MGD)	Issued	Expires
Southcentral Regional Office					
Duncansville	PA0032883	N	1.75	6/1/2013	5/31/2018
Tyrone	PA0026727	Y	9	1/1/2014	12/31/2018
Ephrata #1	PA0027405	Y	3.8	2/1/2014	1/31/2019
Ephrata #2	PA0087181	Y	2.3	2/1/2014	1/31/2019
Shippensburg	PA0030643	Y	4.3	2/1/2014	1/31/2019
Southeast Regional Office					
Hatfield	PA0026247	Y	6.43	10/1/2012	9/30/2017
Lower Bucks	PA0026468	Y	10	11/1/2012	10/21/2017

Permittee	Permit No.	Pretreatment program Required?	Design Flow Avg (MGD)	Issued	Expires
Souderton	PA0021857	N	2	6/1/2013	5/31/2018
Bucks County	PA0021181	N	1.2	7/1/2014	6/30/2019

Region 3 Permit Issuance Practices

The Region 3 pretreatment team is part of the NPDES Permits Branch of the Office of NPDES Permits and Enforcement. The pretreatment team consists of two full-time staff and two part-time staff. Pretreatment staff conduct audits, local limits reviews, and annual report reviews of approved POTW pretreatment programs. For NPDES permits, the standard pretreatment language is developed by the pretreatment staff with input from Region 3 attorneys and the State of Pennsylvania staff. When a permit comes in for review, the permit reviewer sends it to the assigned pretreatment person who reviews the pretreatment language to determine if it needs to be adjusted. That adjustment could include a change in the monitoring frequencies for pretreatment or the local limits development language or other language as appropriate. At times, Region 3 pretreatment staff also make recommendations on the need for limits for toxic pollutants based on the pretreatment monitoring data that the Region collects.

The Region 3 pretreatment staff works with the enforcement branch to identify enforcement cases. Enforcement staff take the lead in developing and pursuing the case and pretreatment program staff are available to provide technical assistance on the pretreatment requirements and to provide background on the POTW's history. Pretreatment staff generally review any program documents that are submitted as part of an enforcement case.

For industrial users in non-pretreatment cities, the standard operating procedure is to try to identify categorical industrial users from the POTW permit applications for those POTWs that do not have approved pretreatment programs. However, the Regional Coordinator stated that he is unsure whether he receives all of these applications. As the semiannual compliance reports come in for categorical industries in non-pretreatment cities, a pretreatment staff member reviews them for completeness and compliance. Region 3 does not have the monitoring data computerized at this point, so the evaluation is done manually. Region 3 is continually in the process of identifying new categorical industrial users, so at any given time there are users that are in various stages of being categorized, having limits established, etc. The Region has these users on a cycle to be inspected every 3 years. These inspections are done by the Region's field inspectors.

In terms of ICIS data input, the RIDE and inspection data for the POTWs with approved programs is entered by the person assigned to the case. The inspection data for the inspections completed by EPA OECEJ is entered by the Region 3 Pretreatment Coordinator.

Program Strengths:

All permits are consistent and thorough. They contain all required components including who should be notified/or reported to, and due dates for submissions of local limits reevaluations (within one year of permit issuance) and annual reports (by March 31st of each year). All permits incorporate 40 CFR Part 403 requirements by reference as well as including specific pretreatment program requirements. All permits also require reporting to DEP and EPA of changes in the influent waste stream due to changes to hauled-in wastes, in addition to indirect discharges.

Areas for improvement:

Region 3 is not meeting Compliance Monitoring Strategy (CMS) goals in Pennsylvania⁵. Region 3 met the CMS goal of at least one audit and two inspections within 5 years (2009-2013) at one of its 106 POTWs with approved pretreatment programs (one percent).

Non-Pretreatment Program POTWs – Southcentral Regional Office and Southeast Regional Office

All three permits for POTWs without pretreatment programs (Duncansville, Souderton and Bucks County) have a standard reopener clause but the clause does not specify that it can be reopened to require development of a pretreatment program, if deemed necessary.

The Southeast Regional Office fact sheets for Souderton and Bucks County do not specifically say that a pretreatment program is not required. (The Duncansville fact sheet says that a pretreatment program is not required because the design flow of the treatment plant is less than 5 mgd and receives no flow from industrial users. It also states that the permit contains conditions requiring that the permittee monitor and control industrial users if applicable. The fact sheet mentions that there are no SIUs in the discussion about development about water quality-based limits.)

Approved Pretreatment ProgramsSouthcentral Regional Office

Neither of the fact sheets for the Ephrata permits mention that a pretreatment program is required. Fact sheets for Tyrone and Shippensburg do state that a pretreatment program is required, however, neither of them has dates for pretreatment program approval or program modification dates.

The Tyrone fact sheet does not describe types of industrial users, it simply says “The facility receives a significant amount of wastewater from industrial sources.” The Shippensburg does

⁵ CMS goals are one PCA and two PCIs conducted per 5-year NPDES permit term. This PQR does not look at each POTW’s NPDES permit term, but it looks at compliance for the period of 2009 through 2013.

not mention anything about its industrial users. (Both Ephrata permits describe the types of industrial users and their flows.)

The fact sheets for Tyrone and Shippensburg do not discuss whether the reasonable potential analysis conducted to develop water quality-based limits included analysis of pollutants common for the types of industries discharging to the POTW.

Southeast Regional Office

The fact sheet for Hatfield is in a different format from all other fact sheets reviewed. The Hatfield fact sheet contains a subheading "Pretreatment Program: and lists industries, but it does not specifically state that a pretreatment program is required, like the Lower Bucks fact sheet does.

The Lower Bucks fact sheet lists names of contributing industries but does not describe them like the Hatfield permit does (categorical, noncategorical SIU, hauled-in waste). Neither fact sheet describes industrial user flows.

The fact sheet for Lower Bucks does not discuss whether the reasonable potential analysis conducted to develop water quality-based limits included analysis of pollutants common for the types of industries discharging to the POTW. The Hatfield fact sheet mentions consideration of industrial dischargers for establishing the TDS limit. The fact sheet states that industrial dischargers have the potential to elevate the effluent TDS concentrations. However, the Hatfield fact sheet does not discuss whether the reasonable potential analysis conducted to develop other limits included analysis of pollutants common for the types of industries discharging to the POTW.

4. Stormwater

The NPDES program requires stormwater discharges from certain municipal separate storm sewer systems (MS4s), industrial activities, and construction sites to obtain permit coverage. Generally, EPA and NPDES-authorized states issue individual permits for medium and large MS4s and general permits for smaller MS4s, industrial activities, and construction activities.

Background:

The following is a list of Pennsylvania stormwater permits at the time of the Pennsylvania PQR:

1. General Permit for Discharges of Stormwater Associated with Industrial Activities (PAG-03).
2. General or Individual Permit for Stormwater Discharges Associated with Construction Activities (PAG-02).
3. General Permit for Stormwater Discharges from Small MS4 (PAG-13).

Region 3 selected three NPDES stormwater permits to review for the PQR. These permits include:

1. General Permit for Discharges of Stormwater Associated with Industrial Activities (PAG-03).
2. General or Individual Permit for Stormwater Discharges Associated with Construction Activities (PAG-02).
3. General Permit for Stormwater Discharges from Small MS4 (PAG-13).

General Permit for Discharges of Stormwater Associated with Industrial Activities (PAG-03)

Background:

The NPDES Permit for discharges of stormwater associated with industrial activity, PAG-03, is a general permit issued by the Pennsylvania Department of Environmental Protection. The permit was issued on December 5, 2010, and expired on December 4, 2015. The PAG-03 GP was administratively extended for one year to December 4, 2016. Permittees currently regulated under the permit that submitted a timely and complete Notice of Intent (NOI) have their coverage automatically continued until a new GP is reissued. Permittees with permit coverage under the PAG-03 GP are automatically covered by the reissued PAG-03 GP on the date the PAG-03 GP is published in the *Pennsylvania Bulletin*. Permittees that are unable to comply with the Reissued GP will need to submit an application for an individual NPDES permit within 90 days of the final GP publication in the *Pennsylvania Bulletin*. The effective dates of coverage under the permit vary by permittee, dependent on when the NOI was approved by PADEP.

Program Strengths:

Individual permits are required for any discharges that may have the potential to violate WQS, including those discharges subject to ELGs, TMDLs, and endangered or threatened species. The permit has comprehensive requirements for TBELs with few exceptions. The permit does require compliance with WQS, whose determination of compliance is based on monitoring results set forth by the permit. The permit requires that site inspections be conducted by someone who has training in and is familiar with Preparedness, Prevention and Contingency (PPC) Plans and requirements. The permit does not specify the required contents of a PPC plan; however the PPC Plan instructions do explain this, and they are comprehensive and generally match up with federal stormwater pollution prevention plan (SWPPP) requirements.

Areas for Improvement:

1. The permit that was reviewed is a sample permit; therefore it contains no authorized signature. However, individual Authorizations to Discharge that are sent to permittees are signed and dated.
2. The permit does not address co-located activities.

3. The permit does not provide for public access to NOI information.
4. The permit does not explain how to terminate permit coverage.
5. No fact sheet was available for this permit.
6. The permit does not address good housekeeping or reduction of dust and vehicle tracking.
7. The permit does not address discharges to impaired waters in advance of a TMDL nor discharges to waters with a TMDL. For the latter, an individual permit is required.
8. The permit does not specify that corrective actions are necessary nor what those actions might be.
9. While the permit does not require a SWPPP, it does require a PPC Plan. However, the permit does not specify what needs to be included in the plan. Such details are in the instructions to the PPC Plan. The permit requires PPC Plans to be kept at least 1 year and all other records to be kept at least 6 years. (More stringent for some, less stringent for others.) The permit requires that records are available to “any interested persons” but the PPC Plan does not have that same requirement.

General or Individual Permit for Stormwater Discharges Associated with Construction Activities (PAG-02)

Background:

The NPDES Permit for discharges of stormwater associated with construction activity, PAG-02, is a general permit issued by the Pennsylvania Department of Environmental Protection. Based on the review of the Sample Permit from PADEP’s website, it is unclear when the permit was issued and when it expires because there are no dates. However, EPA records indicate it was issued December 8, 2012, and expires on December 7, 2017.

Program Strengths:

The permit requires the control of stormwater volume and velocity, and minimizing sediment discharges from the site. The permit requires the minimization of soil compaction and also requires soil stabilization and refers to PA Ch. 102 (a) or (b) for specific criteria. The permit addresses requirements of 40 C.F.R. §§ 450.21(e)(1-4). The permit requires water quality standards to be met. It also requires visual self-inspections. The permit requires an inspection report to be completed, and that inspections be completed by trained and qualified individuals (although what training and qualification is needed is not specified). While the permit does not specify corrective action measures, it does state that failure to implement corrective actions becomes a permit violation. The permit requires an Erosion and Sediment Control (E&S) Plan as part of its SWPPP and states that it must be kept on site at all times; however, as noted below, the permit does not specify required E&S Plan contents. The permit requires records be kept for at least 3 years, that submittal of any relevant records/information must be submitted to the permitting authority upon request, and that E&S Plans be made available to the public.

Areas for Improvement:

1. The permit does not have issuance or expiration dates. Additionally, permit coverage is effective 5 years from the date of approval for coverage, which extends permit coverage beyond the 5 year permit term.
2. The permit does not require permittees under an expired permit to resubmit an NOI for coverage, nor does the permit specify when new permittees must submit an NOI for coverage.
3. The permit does not require that NOIs be posted at the site.
4. The permit incorporates the TBELs from 40 C.F.R. § 450 by reference only. Instead, the permit should include the TBELs as actual permit conditions, and should also incorporate them in ways that make them clear and enforceable (instead of incorporating them verbatim). For example, the permit should include permit conditions for controlling peak flow rates and total volume, minimizing soil exposure, minimizing disturbance of steep slopes, and providing and maintain natural buffers (in fact, PA just repealed the buffer requirement).
5. The permit does not include dewatering control requirements or surface outlets requirements.
6. The permit does not require BMPs to be developed for equipment and vehicle washing, but discharges of these types are prohibited unless managed by an appropriate control.
7. The permit does not require BMPs to be developed to minimize exposure to building materials, but the permit requires that building materials be properly recycled.
8. The permit does not authorize discharges to impaired waters; however, it states the permit may be modified to address impaired waters listings.
9. The permit does not include anti-degradation language.
10. The permit does not specify how an inspection must be conducted, and refers the permittee to the inspection checklist and instructions.
11. The permit does not require training for key personnel.
12. The contents of the E&S Plan (SWPPP) are not in the permit; instead, the permit refers to PA Chapter 102, and states nothing specific (except a description of BMPs to be used at the site, including drawings and narratives).
13. The permit should not include effluent limits in the Erosion and Sediment Control Plan section of the permit (see Part 2.C.a). It is important that the permit have a clear distinction between the effluent limits in the permit, which the State is responsible for developing, and the discharger's erosion and sediment control plan, which is a documentation tool used by the permittee to demonstrate how they plan to meet the permit's effluent limits.

General Permit for Stormwater Discharges from Small MS4 (PAG-13)**Background:**

Federal regulations in 40 CFR Section 122.34 outline the NPDES permit requirements for discharges of stormwater from small municipal separate storm sewer systems (MS4s). The

permit requirements include a description of the minimum control measures (MCMs) that operators of small MS4s must develop and implement as well as EPA guidance. Urban stormwater runoff is a source of various pollutants and the MS4 program was designed to control pollution from the continual development and urbanization of metropolitan areas. The focus of the MS4 Stormwater review is to verify that permits and fact sheets comply with federal regulations and are protective of water quality. In Pennsylvania, there is one state-wide general permit for small MS4s – PAG-13. The PAG-13 permit provides NPDES coverage to approximately 900 entities throughout the state. This permit was reissued in March 2013 and was evaluated as part of this PQR review process. The PAG-13 Phase II MS4 general permit was issued on September 17, 2011. It became effective March 16, 2013. It expires March 15, 2018. Besides the large quantity of permittees covered under the general permit, Pennsylvania also requires any entity that discharges to a High Quality (HQ) or Exceptional Value (EV) designated water to obtain individual NPDES permit coverage.

The permit requires that all permittees develop, implement and enforce a Stormwater Management Plan (SWMP). The PAG-13 permit contains a SWMP for permittees to follow, which is included as Appendix A. Permittees may elect to develop their own plan, provided it is as stringent as the plan contained within the permit. The SWMP in PAG-13 lists all the required MCMs as outlined in the federal regulations and describes the written plans and best management practices (BMPs) to be implemented as part of the permit. The SWMP addresses six main components: (1) Public Education and Outreach; (2) Public Involvement/Participation; (3) Illicit Discharge Detection and Elimination; (4) Construction Site Stormwater Runoff Control; (5) Post Construction Stormwater Management in New and Redevelopment; and (6) Pollution Prevention/Good Housekeeping for Municipal Operations.

The permit further requires the development and implementation of an MS4 TMDL Plan for those entities that discharge to a receiving water that is impaired and has an established TMDL with a designated wasteload allocation (WLA). The purpose of the plan is to identify potential projects, estimated costs, and potential funding sources for projects that aim toward meeting TMDL WLAs and applicable water quality standards. Additionally, for entities that discharge to a receiving water within the Chesapeake Bay watershed, a Chesapeake Bay Pollutant Reduction Plan must be prepared, that describes how the permittee will reduce discharges of nutrients and sediment from existing sources. Both plans are submitted to PADEP for review and approval.

Program Strengths:

While it would appear that there are some aspects of the permit that do not correspond exactly with the regulations in the check list-particularly related to construction and post-construction minimum measures, Pennsylvania has Chapter 102 stormwater regulations (which include post-construction stormwater management) that contain a number of conditions related to water quality and quantity control that are applicable statewide. Therefore, the permit area is considered to be consistent with all regulatory requirements.

Areas for Improvement:

There were a few recommendations based upon the permit review that that state should consider in its renewal of the permit in 2018.

1. It is recommended that a separate permit be developed for non-traditional type MS4s since they do not have the same jurisdictional controls as municipal entities.
2. Due to the large number of permittees in the state covered under this permit, it is recommended that Pennsylvania consider a method to encourage the use of a watershed based permitting system.
3. The permit contains requirements for development of separate plans to address TMDLs; however the permit lacks specific guidance for permittees regarding what the plans are supposed to contain to be considered acceptable.
4. The permit requires permittees discharging to the Chesapeake Bay watershed to prepare a Chesapeake Bay Pollutant Reduction Plan. However, the permit lacks specific nutrient and sediment reduction targets and contains no clear performance measures for permittees to use in plan development.
5. The state should be advised that EPA is modifying its regulations pertaining to the use of small MS4 general permits, which may affect the content and administration of the state's general permit. As this rulemaking moves forward, EPA will continue to work with the state to provide advice on how the next MS4 general permit (or permits) can be issued consistent with the requirements in the revised regulations.

IV. REGIONAL TOPIC AREA FINDINGS**A. Chesapeake Bay**

The NPDES regulations at 40 CFR 122.44(d)(1)(vii)(B) require that effluent limits be developed consistent with the assumptions and requirements of any wasteload allocations (WLAs) established by approved TMDLs. The Chesapeake Bay TMDL was developed and allocations were established within the entire watershed to ensure protection of in-stream water quality standards established by the State of Maryland within the Bay itself. The focus of the Chesapeake Bay review is to verify that permits and fact sheets have been developed to incorporate proper effluent requirements to meet the intent of the TMDL established WLAs assigned to facilities in Pennsylvania.

Background:

On December 29, 2010, EPA established the Chesapeake Bay TMDL, a historic and comprehensive "pollution diet" with rigorous accountability measures to initiate sweeping actions to restore clean water in the Chesapeake Bay and the region's streams, creeks and rivers. The TMDL established WLAs for NPDES point sources throughout the watershed, including sources in Pennsylvania. Watershed Implementation Plans (WIPs) were developed by

the Bay jurisdictions to detail how and when the jurisdictions will meet TMDL allocations. There are 212 “significant” wastewater dischargers in Pennsylvania with assigned individual WLAs for Total Phosphorus (TP), Total Nitrogen (TN), and Total Suspended Solids (TSS). All but eight (8) of these dischargers have been issued permits by PADEP that incorporate the individual WLAs. The TMDL also established aggregate TP, TN and TSS WLAs for all “non-significant” wastewater dischargers in Pennsylvania.

Program Strengths:

As part of EPA Region 3’s oversight responsibilities, PADEP is required to submit for EPA review draft permits for all significant dischargers in the Bay. During Federal FY 2014, Region 3 reviewed 58 draft permits developed by PADEP for significant dischargers. The draft permits properly included effluent limitations that are consistent with the assumptions and requirements of the wasteload allocations in the Chesapeake Bay Watershed TMDL. PADEP also maintains a spreadsheet of all non-significant dischargers and evaluates discharge data for these facilities in order to verify consistency with the aggregate WLA.

Areas for Improvement:

PADEP developed a Chesapeake Bay specific special condition which is contained in most permits implementing the Bay TMDL in the Commonwealth, which allowed for facilities to utilize Pennsylvania’s Nutrient Trading Program. In 2014, EPA Region 3 objected to 14 draft permits, which use this permit language; the basis for EPA’s objections is described below:

1. Use of Credits Generated by Nonpoint Sources and Trading Ratios

PADEP NPDES permits for dischargers in the Chesapeake Bay watershed that contain the present language in Part C. of the permit, authorizing the use of credits generated by nonpoint agricultural sources, do not comply with Sections 301 and 402 of the Clean Water Act (CWA). The credit use portion in Part C. of the permit allows point sources to use credits generated by agricultural nonpoint sources according to Pennsylvania regulations; however, Pennsylvania regulations establish a nonpoint source agricultural baseline that is inconsistent with the TMDL allocations, and therefore inconsistent with the CWA. Pennsylvania issued its Nutrient Trading Program in December 2006 and codified it under 25 Pa Code 96.8 in 2010. Because this program was developed before the Bay TMDL, these regulations codified an agricultural baseline that did not incorporate the lower targets identified in the TMDL.

It is critical that the baseline be consistent with the Bay TMDL to ensure that water quality standards are achieved, and so that nonpoint agricultural credits can be used for NPDES reporting and compliance purposes in a manner consistent with the Bay TMDL. Therefore, the language in Part C. of the permit must prohibit the use of credits generated by agricultural nonpoint sources until such time as the agricultural baseline for credit generation has been revised to be consistent with the TMDL.

With the exception of a limited number of credit certifications, the overwhelming majority of certifications will expire in Compliance Year 2015. It is EPA's position that credit certifications that are existing should be honored; however, new agricultural certifications should not be granted until the baseline is revised to bring it into alignment with the TMDL. In order to resolve the specific objection, PADEP will need to revise the portions of its Chesapeake Bay permit language addressing the use of credits and offsets generated by agricultural nonpoint sources and the use of the uncertainty/trading ratio.

2. Additional Information Regarding Credit Generation

In order to be able to determine whether a permittee is in compliance with its effluent limitations, EPA must be able to determine that a credit has been generated properly. As a result, EPA would expect to be able to review a full record showing how the credit was generated, including a description of the project, certification documents, and proof of verification (e.g., photos, maps, or other physical evidence) showing the project was installed. This also enables transparency of information to the public. EPA suggests that the permit or Fact Sheet contain language identifying the location of this information, such as a PADEP office, and a contact person for obtaining access to that information. In addition, EPA suggests that PADEP include in the Fact Sheet for the next permit cycle a description of the credits and offsets used in the prior permit period; this is one mechanism by which PADEP can document, during permit reissuance and/or permit modification, the full record of information with respect to any credits that were used by a facility to attain compliance with its Chesapeake Bay effluent limitations.

3. Monitoring Frequency of Chesapeake Bay Parameters

The current monitoring frequency for Chesapeake Bay parameters in Parts A.I.A., B., and C. of the permit is once per week with 24-hour composite sampling. Increasing this monitoring frequency in the NPDES permit will improve the representativeness of the data collected, thereby improving the accuracy of the effluent limit calculations and the determination of whether credits are needed for compliance and, if so, how many credits are needed. It will also improve the accuracy of the data used to generate credits, if any, by a facility. We recommend that PADEP revise the monitoring frequency for the Chesapeake Bay parameters in Parts A.I.A., B., and C. of the permit from once per week to twice per week.

PADEP has subsequently provided a proposed revision to the permit language to address the specific objections and EPA has agreed upon the proposed changes. PADEP has also committed to revising the monitoring frequencies for TN and TP for significant dischargers, in order to increase the representative sampling of the discharges.

At the time that EPA performed its PQR, these issues had yet to be resolved. As of March 2015, the comments EPA raised in its specific objection letters have been addressed through the subsequent changes to Part A of the revised draft permit template by increasing the monitoring frequency of the Total Nitrogen species and Total Phosphorus to twice per week, and to Part C of the revised draft permit template by modifying the Chesapeake Bay boiler plate language requirement that authorizes the use of offsets, credits, and trading.

B. Concentrated Animal Feeding Operations (CAFOs)

Background:

Federal regulations at 40 CFR 122.23 define an Animal Feeding Operation (AFO) as a lot or facility where animals are stabled or confined and fed for at least 45 days per year and where crops, vegetation, forage growth, or post-harvest residue are not sustained in the normal growing season over any portion of the lot or facility. Concentrated Animal Feeding Operations (CAFOs) are the largest of these facilities and are defined as point sources by the Clean Water Act (CWA). Federal regulations authorize the permitting authority to designate any animal feeding operation as a CAFO subject to permitting if the facility is a significant contributor of pollution to waters of the United States.

EPA first developed federal effluent limitations guidelines (ELGs) for CAFOs in 1974. In 2003, the EPA revised the CAFO requirements at 40 CFR § 122.23 and the ELGs at 40 CFR Part 412. The 2003 CAFO Rule stated all CAFOs are subject to the development and implementation of a nutrient management plan (NMP) and annual reporting requirements. Following challenges in federal court to the 2003 CAFO regulations, the EPA published revisions to the CAFO regulations and ELGs (73 Fed. Reg. 70418, November 20, 2008). The revised 2008 CAFO rule required that CAFOs apply for a permit if they discharge or propose to discharge to a surface water. In addition, NMPs have to be reviewed by the permitting authority and the terms of the NMP must be incorporated into the permit, making it a requirement to public notice the NMP. On July 19, 2012, EPA issued a final rule to revise its CAFO permit regulation to remove the requirement that CAFOs that “propose to discharge” must seek NPDES permit coverage. This rule revision is in response to a 2011 U.S. Court of Appeals for the Fifth Circuit decision in *National Pork Producers Council v. EPA*, which vacated portions of the Agency’s 2008 CAFO rule. In addition, this action removed from the CAFO permit regulation the option to voluntarily certify that a CAFO does not discharge or propose to discharge.

In Pennsylvania, the CWA and Pennsylvania’s Clean Streams Law (CSL) regulate CAFOs. According to Pennsylvania’s regulations, a CAFO is a farm where large quantities of livestock or poultry are housed inside buildings or in confined feedlots. An operation with more than 1,000 Animal Equivalent Units (AEUs) or a Concentrated Animal Operation (CAO) with 301-1000 AEUs require a CAFO permit before the operation can be populated with livestock. Regulations at 25 Pa. Code § 92 require CAFOs to obtain an NPDES permit from PADEP and comply with the NPDES permit requirements. CAFOs in Pennsylvania must meet the baseline requirements for nutrient management, manure storage, and erosion and sediment control as well as all federal CAFO program requirements. PADEP has primary responsibility for administering and implementing the Pennsylvania NPDES CAFO Program. PADEP Central Office is responsible for program administration and implementation occurs at the PADEP RO level. Each PADEP RO has a Bureau of Point and Non-point Source Management (Clean Water Program) that is responsible for reviewing and issuing NPDES CAFO permits and a Bureau of Waterways, Engineering, and Wetlands (W&W) responsible for NPDES CAFO compliance and enforcement.

Our review of Pennsylvania's NPDES regulations and associated guidance for CAFOs indicates that Pennsylvania's approved program predates the promulgation of the 2008 CAFO Rule. To address this, EPA has been working with PADEP to make the necessary changes to its NPDES regulations. As part of this effort, and following EPA's comments and recommendations, PADEP made revisions to its NPDES CAFO general permit (PAG-12) to conform to the 2008 CAFO Rule. The PAG-12 represents more than 50% of NPDES CAFO-permitted facilities in Pennsylvania and is used as a template for case-by-case individual permits. Pennsylvania requires individual permits for operations that meet specific criteria.

Program Strengths:

Following PQRs that were performed in 2007 and 2011, Pennsylvania has strengthened the CAFO program by completing and employing the following:

1. Reissued its NPDES CAFO general permit to cover more than half of the permitted CAFO universe in Pennsylvania. This general permit was issued on April 1, 2013 and it will expire on March 31, 2018. Improvements made from the previous general permit include the addition of new definitions (e.g., Medium and Small CAFOs), the incorporation of new requirements (e.g., manure storage structure, water quality management, annual reporting, self-monitoring, record keeping, winter spreading, and TMDLs, including the Chesapeake Bay TMDL), an updated annual report form, an updated notice for intent (NOI), and an updated fact sheet. PAG12 retains requirements for an NMP, Erosion and Sediment Control Plans, and Preparedness, Prevention and Contingency Plan.
2. Developed an NPDES CAFO individual permit template based on PAG12 to help resolve permitting consistency issues in Pennsylvania. This template is used to issue NPDES CAFO individual permits in Pennsylvania.
3. The Pennsylvania Department of Agriculture (PADA) made revisions to its NMP development software and the state technical standards, based among other inputs received, on EPA's comments and recommendations. This tool is used to develop NMPs in Pennsylvania. An NMP is a detailed planning document that identifies conservation practices and management activities that, when implemented, help to ensure that both production and natural resource protection goals are achieved. The objective of an NMP is to document those practices and activities that will help achieve the goals of the producer and protect or improve water quality. Every NPDES permit issued to a CAFO must require that the CAFO implement the terms of a site-specific NMP approved by the permitting authority pursuant to 40 CFR § 122.42(e)(5). Those site-specific terms of the NMP are defined as "the information, protocols, best management practices (BMPs), and other conditions" identified in a CAFO's NMP and determined by the permitting authority to be necessary to meet the requirements of 40 CFR § 122.42(e)(1). In order to meet those requirements, the information, protocols, BMPs, and other conditions in the NMP must, at a minimum, address the following minimum measures: manure storage, mortality management, clean water diversions, prevention of direct animal contact with water, chemical handling, conservation practices to control runoff, manure

and soil testing protocols, land application protocols and record keeping requirements. An NMP must discuss the required elements of an NMP in a clear, consistent, and accurate manner. An analysis of how criteria of the minimum measures are met, must be included in NMPs. These analyses should be based on best professional judgment (BPJ), inspections, and requirements set forth in 40 CFR § 122.42, applicable effluent limitations and standards, including those specified in 40 CFR Part 412. We will be providing MDE with our comments on these two NMPs during the week of June 29, 2015. Below, please find the format of our review. Once an NMP is approved by permitting authorities, it will be incorporated into an NPDES CAFO permit, either an individual or a general permit.

4. Pennsylvania's NPDES CAFO program is broader in scope than the federal NPDES CAFO regulations includes agricultural operations not regulated under federal regulations.
 - a. All operations with more than 1,000 AUs;
 - b. CAOs with greater than 300 AEs; or
 - c. Operations that meet the large CAFO definition at 40 CFR § 122.23(b)(4). This definition sets threshold numbers for specific animal types. Operations that meet or exceed any one of these numbers are classified as CAFOs. The thresholds are (a) 700 mature dairy cows, whether milked or dry; (b) 1,000 veal calves; (c) 1,000 cattle other than mature dairy cows or veal calves; (d) 2,500 swine each weighing 55 pounds or more; (e) 10,000 swine each weighing less than 55 pounds; (f) 500 horses; (g) 10,000 sheep or lambs; (h) 55,000 turkeys; (i) 30,000 laying hens or broilers, if using a liquid manure handling system; (j) 125,000 chickens (other than laying hens) if using a dry handling system; (k) 82,000 laying hens if using a dry handling system; (l) 30,000 ducks, if using a dry manure handling system; (m) 5,000 ducks, if using a liquid manure handling system.
 - d. New or expanding NPDES CAFO facilities to obtain an approved permit prior to commencing operations

Area for Improvement:

There are no areas for improvement.

C. Total Maximum Daily Loads (TMDLS)

The NPDES regulations at 40 CFR § 122.44(d)(1)(vii)(B) require that effluent limits be developed consistent with the assumptions and requirements of any WLAs established by approved TMDLs. Section 303(d) of CWA requires states to develop TMDLs for impaired waterbodies. A TMDL establishes the amount of a pollutant that a waterbody can assimilate without exceeding its water quality standard for that pollutant. TMDLs develop water quality based allocations for point and non-point source discharges. Allocations for point source discharges are implemented through the NPDES permitting process. These WLAs, once incorporated into permits, intend to reduce pollution from point sources as part of the practices to restore and

maintain the quality of a state's water resources. The focus of the TMDL review is to verify that permits and fact sheets have been developed to incorporate proper effluent requirements to meet the intent of the TMDL WLAs assigned to facilities in Pennsylvania. Four permits were reviewed to determine whether PADEP is developing permits consistent with the assumptions and requirements of approved TMDLs.

Background:

EPA has found that point sources discharging to an impaired waterbody do not always have an assigned wasteload allocation (WLA) in PADEP approved TMDLs. This has specifically been noted in PADEP's older acid mine drainage (AMD) TMDLs. Point source discharges within AMD impaired watersheds may be sources of TMDL pollutants of concern, which may require an individual WLA or may be considered a "negligible" source, but which need to be accounted for in the TMDL. EPA has encouraged PADEP to work with permitted entities to determine if pollutants present in effluent have been quantified in the regulated waste streams, and if not, to develop procedures in the permitting process to gather the required information. The quantification of these pollutants will strengthen overall development of potential water quality limits and prepare dischargers to comply with any proposed TMDL revisions. Based on EPA's comments and recommendations, PADEP has been addressing these issues by employing a case-by-case analysis of relevant discharges during permit renewal. PADEP has imposed permit monitoring requirements for TMDL parameters of concern to verify present and future discharge levels and to inform potential future TMDL revisions, may limit discharges to criteria end-of-pipe, and has revised several TMDLs when a facility is noted to be a source of the TMDL pollutant of concern and it is determined that the TMDL should have provided an individual WLA for the facility.

EPA reviewed the Altoona City Water System Horseshoe Curve Plant (PA0082538), which is a non-POTW facility that discharges to Burgoon Run. This permit was issued on June 14, 2013 and expires on June 30, 2018. PADEP adopted the TMDL for the Beaverdam Branch Watershed TMDL in March 2007, which contains WLAs for this facility for Fe and Al. For average discharge of 0.19 MGD, WLAs of 2.0 mg/l monthly average or 3.2 lbs/day for Fe and 4.0 mg/l monthly average or 6.3lbs/day for Al were established for this discharge. The permit appropriately applies the TMDL WLAs for these pollutants.

The Lenharstville Borough STP permit (PA0246921) discharges to Furnace Creek, which is within the Lake Ontelaunee Watershed. Lake Ontelaunee is impaired for nutrients and suspended solids, and the Lake Ontelaunee Watershed TMDL assigned WLAs for point source discharges. Phosphorus loads were assigned to point sources, including Lenharstville Borough STP, and the permit appropriately applied the WLA.

The Meadowbrook STP permit (PA0025674) discharges to Turtle Creek, which is impaired for AMD pollutants (aluminum, iron, and manganese). The Turtle Creek TMDL is an AMD TMDL that did not address point sources of pollution other than mining sources; therefore, no WLA was provided for this discharge. The original draft permit did not address the Turtle Creek

TMDL and its requirements. Based on EPA comments, the permit was revised to include monitoring for the pollutants of concern (aluminum, iron, and manganese) in order to determine the discharge levels of these pollutants, and to inform any future TMDL revisions.

The Morrisville Borough STP permit (PA0036701) discharges to the Delaware River, which is impaired for Polychlorinated Biphenyls (PCBs). The Delaware River PCB TMDL assigns WLAs for point source discharges; however, the TMDL is currently being implemented in permits via a BMP approach that involves data collection for 209 PCB congeners, and development and implementation of Pollutant Minimization Plans (PMPs) to reduce PCB loadings within the watershed and attain the numeric TMDL WLAs. This facility was determined to be one of several facilities contributing to 99% of the loadings from point source discharges. The permit properly requires four PCB samples per year (two during dry and two during wet weather flows), and requires the permittee to submit a PMP within 12 months of permit issuance.

Program Strengths:

The Altoona City, Lenharstville Borough STP and Morrisville Borough STP permits properly included effluent limitations to comply with the assigned WLAs. The permits and fact sheets document that the permits are consistent with the assumptions of the approved TMDLs.

Areas for Improvement:

As noted earlier, with respect to TMDLs in Pennsylvania where no WLAs are assigned for a facility, EPA and PADEP coordination continues and has resulted in TMDL revisions, when appropriate to address missing point source discharge WLAs. These efforts include, but are not limited to, new calculated WLAs for facilities that were not part of the TMDL development process and the establishment of “bulk reserve” or an aggregate load for negligible discharges. New PADEP TMDLs are being developed to address these issues. In many cases, where no data is available for the TMDL pollutant of concern, PADEP has included monitoring for the TMDL pollutants of concern to inform any future TMDL revisions, if necessary. PADEP should continue to require monitoring for TMDL pollutants of concern, where data is not available.

V. ACTION ITEMS

This section provides a summary of the main findings of the review and provides proposed action items to improve PADEP’s NPDES permit programs. This list of proposed action items will serve as the basis for ongoing discussions between Region 3 and PADEP as well as between Region 3 and EPA HQ. These discussions should focus on eliminating program deficiencies to improve performance by enabling good quality, defensible permits issued in a timely fashion.

The proposed action items are divided into three categories to identify the priority that should be placed on each item and facilitate discussions between Regions and states.

- **Critical Findings** (Category One) - Most Significant: Proposed action items will address a current deficiency or noncompliance with respect to a federal regulation.
- **Recommended Actions** (Category Two) - Recommended: Proposed action items will address a current deficiency with respect to EPA guidance or policy.
- **Suggested Practices** (Category Three) - Suggested: Proposed action items are listed as recommendations to increase the effectiveness of the state's or Region's NPDES permit program.

The critical findings and recommended actions proposed should be used to augment the existing list of "follow up actions" currently established as an indicator performance measure and tracked under EPA's Strategic Plan Water Quality Goals or may serve as a roadmap for modifications to the Region's program management.

A. Basic Facility Information and Permit Application

The PADEP fact sheets and permits that were reviewed provide all of the necessary basic facility information, including facility names, addresses, facility type and processes/operations, receiving waters, issuance, effective, and expiration dates, etc. PA's older permit application forms did not require major POTWs to sample for all Appendix J parameters (as required by 40 CFR 122.21(j)(4)(iv)(A)) if those facilities did not have significant industrial users. During this PQR, several permits were reviewed that did not include the required effluent monitoring data because the older applications were used; however, we note that PADEP has corrected this error in its new permit application instructions for major sewage facilities. Since this correction has been made, EPA is not proposing any action items related to this specific issue. While most permit applications appeared to be submitted in a timely manner, a few permit applications were not submitted on time. There were also a few permit applications in which the detection levels were not sensitive enough to assess compliance with PA WQS. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Critical Findings:

1. 40 CFR 122.21(d) requires that any POTW with a currently effective permit shall submit a new application at least 180 days before the permit expiration date of the existing permit, unless permission a later date has been granted by the Director. Permit applications were not consistently submitted 180 days prior to the permit expiration date, and according to the administrative record a time extension was not always granted by PADEP. As discussed during the exit briefings for the PQR, CO has stated that it is working on an initiative to send out reminder letters for submission of permit applications to address the issue of late permit application submissions. PADEP should document whether this initiative is still being developed, or whether this or any other initiative will be/has already been put into practice. (Category 1)
2. 40 CFR 122.21(g)(7)(iii) requires that applications for existing manufacturing, commercial, mining, and silvicultural dischargers must report quantitative data for every

outfall for specific listed pollutants. Some permit applications indicated that pollutants were “believed absent”, and no data was provided; however, there are specific pollutants for which every applicant with such discharges must report quantitative data. PADEP should ensure during its permit application review that all required information for the appropriate type of permit activity is submitted, and that applications are complete. (Category 1)

Recommended Actions:

1. We recommend that PADEP permit applications and permit development procedures address the use of sufficiently sensitive EPA approved methods for the characterization of effluent discharges and the evaluation of a discharge to cause, have the reasonable potential cause, or contribute to an excursion of state water quality standards. (Category 2)

B. Technology-based Effluent Limitations

PADEP permits meet or exceed the minimum secondary treatment requirements for POTWs. The PADEP NPDES permit template used to develop NPDES individual sewage permits in Pennsylvania requires that the permittee must comply with the 85% removal for TSS and BOD5; however, the NPDES permits reviewed did not require the permittee to report the percent removal in its DMRs. The NPDES permits contain a supplemental DMR form that requires influent and effluent information for these parameters but not for the 85% removal requirement. A percent removal requirement was required to be reported on DMRs, when a more stringent than secondary treatment requirement existed (i.e., when there was a DRBC requirement greater than 85% removal for a specific facility).

The development of non-POTW TBELs were generally well documented in the fact sheets, and appropriate TBELs were applied in the permits. The non-POTW permits that were reviewed generally applied the appropriate category for the type of processes employed, and the appropriate technology-based requirements were evaluated for the permit, although there was not always enough information explaining the ELG’s applicability and constraints. Some FSs did not provide a discussion of the applicable ELGs and how they were evaluated or applied in the permit, and some non-POTW permits maintained effluent limitations from the previous permit with no identification in the fact sheet as to how the previous limits were derived. Refer to Section V.G. of this report for proposed action items related to fact sheet documentation. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Suggested Practices:

1. PADEP may want to consider a reporting mechanism for major POTWs to document their actual percent removal rates for TSS and BOD5. (Category 3)

C. Water Quality-Based Effluent Limitations

PADEP fact sheets clearly described the receiving waters, designated uses and 303(d) impairment status, TMDL requirements, and generally provide documentation of RP evaluations and WQBEL determinations based on applicable federal and state regulations and water quality standards. Where other water quality regulations (such as those for DRBC) are more stringent, PADEP applies the most stringent regulation in developing permit limits. PADEP's SOPs for deriving effluent limits for industrial and sewage permits, and for WET (discussed in Sections II.B. and III.C. of this report) appear to have provided for improved consistency in the derivation of WQBELs amongst the ROs.

The WQBEL development and evaluation tools were not always available for review with the public record, and fact sheets did not always fully document RP evaluations. Generally background levels are assumed to be zero, but in some instances background information was available and was not used in the WQBEL calculation. In some instances, a WET failure was noted and no reasonable potential was determined, while another permit fact sheet did not evaluate the most recent WET data provided by the facility. In all cases, the site-specific fact sheet did not contain any discussion on how the permit writer considered the narrative water quality criteria. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Critical Findings:

1. 40 CFR 122.44(d)(1)(iv) requires that when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the numeric criterion for WET, the permit must contain effluent limits for WET. A WET test failure was documented, but RP was not determined. Once a WET test failure has occurred, RP is demonstrated and effluent limits should be applied in the permit. (Category 1)

Recommended Actions:

1. It is recommended that PADEP consider background values, where available, for pollutants undergoing a reasonable potential evaluation. (Category 2)
2. While PADEP's WET RP evaluations are an interpretation of PA's narrative criteria, the fact sheets do not explain this. We would recommend that PADEP fact sheets describe how the permit considers narrative criteria, as applicable. (Category 2)

Suggested Practices:

1. We suggest that PADEP consider all recent data for WET, in addition to information submitted with a permit renewal application, in determining RP for WET. (Category 3)

D. Monitoring and Reporting

Monitoring and reporting requirements appear to be adequately addressed in PADEP permits. With respect to the Chesapeake Bay NPDES permits reviewed, increasing the monitoring frequency for the Chesapeake Bay TMDL parameters in the draft permit would improve the representativeness of the data collected, thereby improving the accuracy of the effluent limit calculations and the determination of whether credits are needed for compliance and, if so, how many credits are needed. It would also improve the accuracy of the data used to generate credits, if any, by a facility. As a part of EPA objections to a number of Chesapeake Bay permits (discussed in section IV. of this report), EPA asked PADEP to revise the monitoring frequency for the Chesapeake Bay parameters to at least twice per week. PADEP agreed to do so for all significant Chesapeake Bay dischargers. Additionally PADEP revised its Phase 2 WIP Wastewater Supplement to document this change, and such requirements are now being placed into relevant permits. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Recommended Actions:

1. We recommend that PADEP revise the monitoring frequency for the Chesapeake Bay parameters to twice per week. (Category 2)

E. Standard and Special Conditions

PADEP's standard permit conditions were at least as stringent as federal regulations, and some were more stringent (i.e., PADEP does not recognize "upsets" and does not include these conditions in its standard condition language). PADEP's special conditions, including conditions for WET, implementing stormwater BMP requirements, compliance schedules, etc. were adequate and appropriately included in permits. There are no proposed action items to help PADEP strengthen its NPDES permit program regarding standard and special conditions.

F. Administrative Process (including public notice)

PADEP's records demonstrate that the majority of the administrative process and public notice procedures are properly implemented. PADEP's public notice documents do not meet some of the minimal federal requirements. These areas include a brief description of the comment procedures required by 40 CFR 124.11 and 124.12 and a statement of procedures to request a hearing (unless a hearing has already been scheduled) (40 CFR 124.10(d)(1)(v)), and a description of sludge use/disposal practices and the location of each sludge treatment works treating domestic sewage and use or disposal sites (40 CFR 124.10(d)(1)(vii)). Additionally, it was not always evident whether permit comments were received and how or if they were addressed. No specific response to comment documents were observed during the core review; however, some final fact sheets did note that changes were made based on comments received. It was noted that a permit was amended without EPA's review, and a draft permit

that was previously reviewed EPA were revised and issued without EPA being notified of changes made to the final permit. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Critical Findings:

1. PADEP should ensure that its public notice documents include the description of the comment procedures required by 40 CFR 124.11 and 124.12 and a statement of procedures to request a hearing (unless a hearing has already been scheduled) (40 CFR 124.10(d)(1)(v)), and a description of sludge use/disposal practices and the location of each sludge treatment works treating domestic sewage and use or disposal sites (40 CFR 124.10(d)(1)(vii)) for draft permits. (Category 1)
2. 40 CFR 124.17(a) and (c) requires that states create a response to comments document when a final permit is issued, and that this document be available to the public. The administrative record should contain copies of any comments received on a proposed draft permit, and a response to comment should be included in PADEP's permit development procedures to document how comments were addressed and any revisions that were made to the draft permit as a result. (Category 1)
3. 40 CFR 123.43(a)(2) requires transmission of information to EPA in accordance with the Memorandum of Agreement on every action taken by the State agency related to the consideration of any permit application or general permit, except those for which permit review has been waived. 40 CFR 122.62 requires that a draft permit must be prepared in accordance with the procedures of 40 CFR 124 (including public notice requirements), unless the modification is considered a minor modification. The MOA between PADEP and EPA states that unless the proposed final permit is the same or more stringent than the draft permit defined in the public notice, PADEP should send a copy of the proposed final permit and related information to EPA in accordance with 40 CFR 123.44. PADEP must ensure that any major permit modifications, and proposed final permits not meeting the conditions of the MOA noted above are sent to EPA for review. (Category 1)

G. Documentation (including fact sheet)

PADEP's administrative record includes the majority of necessary documents including permit applications, public notice documents, draft permits, fact sheets, final permits, and related correspondence. PADEP consistently documents the receiving streams, impairments, and applicable TMDLs. However, the record was sometimes incomplete in describing the basis for permit development. A comparison of TBELs and WQBELs was not always clearly and directly compared in the record. Some permits did not adequately document changes between the previous and proposed draft permit to address anti-backsliding concerns. Fact sheets were not always fully documented, and sometimes lacked printouts of the modeling or other WQBEL development tools. In some cases, the site-specific fact sheet did not mention whether or not

the effluent characterization complies with the antidegradation requirements. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Critical Findings:

1. 40 CFR 124.8 and 124.56 provide the requirements for Fact Sheets, including the basis for draft permit conditions, references to applicable statutory or regulatory provisions, and appropriate supporting references. Fact sheets should document all relevant ELGs, their applicability, and adequate information to document how the permit's TBELs were derived. (Category 1)
2. 40 CFR 122.44(l)(1) and (2) state that reissued permits cannot contain effluent limitations, standards, or conditions that are less stringent than the previous permit, unless specific exceptions are applicable. Fact Sheets need to fully document that antibacksliding requirements are being met. (Category 1)
3. 40 CFR 124.8(b)(4) requires that Fact Sheets include appropriate supporting references to the administrative record. The evaluation of RP and the derivation of WQBELs regularly occurs in permit development, but these evaluations were not always fully documented in the Fact Sheets. PADEP should consistently include all supporting documents for WQBEL development, including any previous WQBEL evaluations (if limits are being carried over in a subsequent permit term), to fully document RP analyses and WQBEL development. (Category 1)

Suggested Practices:

1. It is suggested that permits provide a clear and direct comparison of any developed TBELs and WQBELs in the fact sheet, to document that the most stringent effluent limit is placed in the permit. (Category 3)

H. National Topic Areas

Proposed actions items for core topic areas are provided below.

1. Nutrients

Overall, PADEP has implemented a strong program to protect surface waters from nutrients where local TMDLs are in place. Where TMDLs are not in place, PADEP can use its regulatory authority to impose phosphorus limits when a discharge contributes or threatens to impair existing or designated uses. PADEP's regulations also indicate that for lentic systems and other impoundments, PADEP will develop a TMDL with necessary WLAs and LAs. There are no proposed action items to help PADEP strengthen its NPDES permit program regarding nutrients.

2. Pesticides

PADEP is using existing resources to support its pesticide program. Both PADEP's general and individual permits are fully compliant with federal regulations. There are no proposed action items to help PADEP strengthen its NPDES permit program regarding pesticides.

3. Pretreatment

While the State of Pennsylvania issues NPDES permits directly to POTWs, it does not have approval to implement the pretreatment program, and the pretreatment program is therefore implemented by EPA Region 3. Proposed action items to help the Pretreatment Program include the following:

Recommended Actions:

1. Region 3 should ensure that it meets CMS goals for conducting inspections and audits at POTWs in Pennsylvania. (Category 2)
2. Region 3 should ensure that all data are entered correctly into ICIS and reconcile numbers of SIUs/CIUs reported during PCIs and PCAs versus numbers reported in annual reports. (Category 2)
3. Region 3 should revise the permit reopener clause for non-program permits to specifically mention that they could be reopened to require a pretreatment program if deemed necessary. (Category 2)

Suggested Practices:

1. Region 3 should ensure that all fact sheets for POTWs with pretreatment programs designate that a pretreatment program is required and designate the date the program was approved. (Category 3)
2. Region 3 should ensure that all the fact sheets for POTWs with pretreatment programs describe types of industrial dischargers and volume(s) of discharge. (Category 3)
3. Region 3 should discuss in all fact sheets for POTWs with approved pretreatment programs whether the reasonable potential analysis conducted to develop water quality-based limits included analysis of all pollutants common for the types of industries discharging to the POTW. (Category 3)

4. Stormwater

PADEP grants permit coverage for five years from the date of their authorization, which at times is not consistent with the effective and expiration dates of the permit. The Department allows coverage beyond the expiration date of a general permit. Similarly, "Sample" permits are made available to the public by PADEP which do not contain an effective or expiration date nor an authorized signature. In addition, a couple of the general permits do not address discharges to impaired waters in advance of a TMDL; they only have requirements to discharges to TMDL waters.

Due to Pennsylvania's local government system, the number of permittees requiring coverage is voluminous, including a large number of individual permittees. We have included recommendations to assist PADEP in converting some of those individual permit requirements to general permits to address resource issues. Proposed action items to help Pennsylvania strengthen its NPDES permit program include the following:

Critical Findings:PAG-03

1. Provide a process description for how to terminate permit coverage in the permit document. (Category 1) (40 CFR 122.64)
2. Make a fact sheet available for this permit or develop a fact sheet if not already completed. (Category 1) (40 CFR 124.8)
3. Address discharges to impaired waters in advance of a TMDL in addition to discharges to waters with a TMDL. For the latter, an individual permit is required. (Category 1) (40 CFR 122.44(d))

PAG-02

1. Include issuance and expiration dates in the final permit. (Category 1) (40 CFR 122.46)
2. Include language in the permit that specifies when new permittees must submit an NOI for renewal of coverage. (Category 1) (40 CFR 122.21(d)(2)); (40 CFR 122.28(b)(2)(iii))
3. Address discharges to impaired waters in advance of a TMDL in the permit. (Category 1) (40 CFR 122.44(d))
4. Incorporate the TBELs in the permit as enforceable conditions instead of by reference to 40 C.F.R. § 450 only. (40 CFR 122.44(a)(1)) Also, incorporate them in ways that make them clear and enforceable (instead of incorporating them verbatim). For example, the permit should include permit conditions for controlling peak flow rates and total volume, minimizing soil exposure, minimizing disturbance of steep slopes, and providing and maintain natural buffers. (Category 1)
5. Include anti-degradation language/requirements in the permit. (Category 1) (40 CFR 131.12))

PAG-13

1. Include specific nutrient and sediment reduction targets and performance measures for CB Pollutant Reduction Plans. (Category 1) (40 CFR 122.44(d)(1)(vii)(B))

Recommended Actions:PAG-03

1. Make a final permit available that contains an authorized signature in addition to the individual Authorizations to Discharge that are sent to permittees which are signed and dated. (Category 2)
2. Include a requirement for permit coverage for co-located activities, similar to the EPA MSGP. (Category 2)
3. Provide a mechanism for the public to access NOI information. (Category 2)
4. Specify in the permit that corrective actions are necessary and what those actions might be. (Category 2)
5. Include requirements for PPC Plan contents in the permit document. (Category 2)
6. Include a requirement in the permit that the PPC Plan be made available to the public, similar to all other records. (Category 2)

PAG-02

1. Provide a mechanism for the public to access NOI information. (Category 2)
2. Include requirements in the permit for dewatering control and surface outlets. (Category 2)

Suggested practices:

PAG-03

1. Provide language in the permit discussing good housekeeping and reduction of dust and vehicle tracking. (Category 3)

PAG-02

1. Include a requirement in the permit for BMPs to be implemented for equipment and vehicle washing, since these discharges are prohibited unless managed by an appropriate control. (Category 3)
2. Include a requirement in the permit requiring BMPs to be developed to minimize exposure to building materials, since the permit requires that building materials be properly recycled. (Category 3)
3. Specify how an inspection must be conducted in the permit instead of only referring the permittee to the inspection checklist and instructions. (Category 3)

PAG-13

1. Develop a separate general permit for non-traditional type MS4s since they do not have the same jurisdictional controls as municipal entities. (Category 3)
2. Consider a method to encourage the use of a watershed based permitting system due to the large number of permittees. (Category 3)
3. Provide guidance for the preparation of local TMDL Plans. (Category 3)

I. Regional Topic Areas

Proposed action items for special focus areas are provided below.

1. *Chesapeake Bay*

PADEP permits properly implement the TMDL individual WLAs for significant Chesapeake Bay dischargers. PADEP also maintains a spreadsheet of all non-significant dischargers and documents actual nutrient concentrations and loads, in order to verify the assumptions of the aggregate nutrient WLAs in the TMDL. Although EPA objected to fourteen Chesapeake Bay draft permits in 2014, the specific issues surrounding the objections were resolved with PADEP as of March 2015. Since that time, EPA has been lifting the permit objections as revised draft permits, which incorporate the agreed upon changes, as they are submitted for EPA review. Therefore, there are no proposed action items to help PADEP strengthen its NPDES permit program.

2. *CAFOs*

PADEP's CAFO regulations predated the promulgation of the 2008 CAFO Rule. PADEP has worked closely with EPA to make revisions to its NPDES CAFO general permit (PAG-12) to conform to the 2008 CAFO Rule. PADEP also requires individual permits for operations that meet specific criteria. As a result of Pennsylvania's efforts and the changes made to its CAFO permits, there are no proposed action items to help PADEP strengthen its NPDES permit program.

3. *TMDLs*

Most of the permits reviewed during this PQR properly included effluent limitations to comply with the assigned WLAs and were consistent with the assumptions of the approved TMDLs. One permit reviewed was affected by a TMDL that did not assign a WLA for the discharge. In this instance, PADEP included monitoring for the TMDL parameters of concern in order to collect data to inform any potential future TMDL revisions. Proposed action items to help PADEP strengthen its NPDES permit program include the following:

Suggested Practices:

1. It is suggested that PADEP continue to require monitoring for TMDL pollutants of concern, as appropriate, where no TMDL WLA is assigned. It is also suggested that PADEP continue to work with its TMDL program and EPA to discuss TMDL implementation in permits where these scenarios arise. (Category 3)

Appendix A

Central Office and Regional Offices	Address
PADEP Central Office (CO)	Rachel Carson State Office Building, 400 Market Street , Harrisburg, PA 17101
PADEP Northeast Regional Office (NERO)	2 Public Square , Wilkes-Barre, PA 18711
PADEP Northcentral Regional Office (NCRO)	208 West Third Street, Suite 101, Williamsport, PA 17701
PADEP Northwest Regional Office (NWRO)	230 Chestnut Street , Meadville, PA 16335
PADEP Southeast Regional Office (SERO)	2 East Main Street, Norristown , PA 19401
PADEP Southcentral Regional Office (SCRO)	909 Elmerston Avenue, Harrisburg, PA 17110
PADEP Southwest Regional Office (SWRO)	400 Waterfront Drive, Pittsburgh, PA 15222

District Offices	Address
Altoona District Office	3001 Fairway Drive, Altoona, PA 16602
Beaver Falls District Office	206 Municipal Building, 8th Avenue and 15th Street, Beaver Falls, PA 15010
Bethlehem District Office	4530 Bath Pike, Bethlehem, PA 18017
California District Office	25 Technology Drive, California Technology Park, Coal Center, PA 15423
Cambria District Office	286 Industrial Park Road, Ebensburg, PA 15931
Knox District Office	White Memorial Building, P.O. Box 669, Knox, PA 16232
Lancaster District Office	1661 Old Philadelphia Pike, Lancaster, PA 17602
Mansfield District Office	600 Gateway Drive, Mansfield, PA 16933
Moshannon District Office	186 Enterprise Drive, Philipsburg, PA 16866
New Castle District Office	121 North Mill Street, New Castle, PA 16101
New Stanton District Office	131 Broadview Road, New Stanton, PA 15672
Pocono District Office	HC 1 Box 95-B, Swiftwater PA 18370
Pottsville District Office	5 West Laurel Boulevard, Pottsville, PA 17901
Reading District Office	1005 Cross Roads Boulevard, Reading, PA 19605
Scranton District Office	321 Spruce Street, Suite 300, Scranton, PA 18503
Sunbury District Office	309 North Fifth Avenue, Sunbury, PA 17801
Warren District Office	321 North State Street, North Warren, PA 16365
York District Office	150 Roosevelt Avenue, York, PA 17404

Appendix B

Bureau of Waterways Engineering and Wetlands (BWEW)

The BWEW contains four main programs: Dam Safety, Water Obstructions and Encroachments, Erosion and Sedimentation Control/Stormwater Management and Flood Protection. The mission of these programs is to provide for the comprehensive regulation and supervision of dams, reservoirs, and water obstructions and encroachments in order to protect the health, safety, welfare and property of the people, and to protect and maintain the natural resources of Pennsylvania. BWEW operates one of the few state-level comprehensive flood protection programs in the United States. The program evaluates flood prone areas, designs stream improvement and flood protection facilities, and manages the construction of these projects. It also coordinates the planning, design and construction of federal flood control and bank stabilization projects. The program provides protection to communities during high water events by ensuring that Pennsylvania's existing flood protection projects are in a state of readiness and will function as designed. The Dam Safety Program oversees the regulation of approximately 3,400 dams and reservoirs throughout Pennsylvania in order to protect the health, safety and welfare of people and property downstream of dams. The goal is to assure proper planning, design, construction, maintenance, operation, monitoring and supervision of dams and reservoirs. The Division of Waterways, Wetlands and Training administers the Waterway and Wetland Protection, the Erosion and Sediment Pollution Control, the NPDES Stormwater Discharge from Construction Activities, and, the Submerged Lands License Agreement Programs through the development of regulations, procedures, manuals and guidance for program implementation in the DEP regional offices and the county conservation districts. This division is also responsible for the coordination of Sand and Gravel Royalty Agreements between commercial dredging operations and the Pennsylvania Fish and Boat Commission.

Bureau of Safe Drinking Water (BSDW)

The BSDW is charged with managing the federally delegated drinking water program and implements both the federal and state Safe Drinking Water Act and associated regulations. To carry out this mission, the Safe Drinking Water Program: Protects all Pennsylvania residents and visitors from microbiological, chemical and radiological contaminants in drinking water served at nearly 9,200 public water systems; conducts surveillance, compliance, enforcement and permitting activities at public water systems to ensure compliance with safe drinking water standards; protects Pennsylvania's drinking water sources through proper planning and management of water resources and their uses; responds to water supply emergencies, such as floods, droughts, chemical spills or waterborne disease outbreaks; and maintains a web-based reporting application to allow accredited laboratories and public water suppliers to report drinking water sample results electronically. The bureau also trains and certifies drinking water and wastewater treatment operators for over 10,000 plants.

Bureau of Interstate Waters Office (BIWO)

The BIWO coordinates PADEP's responsibilities as a member of interstate river basin organizations and develops strategies to utilize established river basin commissions and interstate association as vehicles to advance partnerships. This Office encourages and promotes multi-state cooperation to solve common problems. It works to implement existing policies of the Commonwealth in a consistent manner; links economic progress, watershed management, and sustainability; and strengthens both the relationships and visibility of the Pennsylvania Department of Environmental Protection with interstate and intrastate organizations and the communities they serve. The Office coordinates and implements the Department's Coastal Resources Management Program (CRM). These functions includes a federally funded approved management program for Pennsylvania's two coastal areas, the Delaware Estuary and Lake Erie. The office also coordinates with regional staff in managing a Great Lakes Program that provides oversight of the Commonwealth's international and regional level Great Lakes water quality and watershed-related initiatives and commitments.

Appendix C

General Permit (GP) Application and Issuance

New and Reissuance PAG-03 NOIs (Industrial Stormwater Discharges)

This SOP describes how the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Industrial Stormwater General PAG-03 NPDES permits. The authorization type covered by this SOP is "NSA3" (PAG-03 Discharge of Stormwater Associated with Industrial Activities). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New PAG-03 NOIs ARE part of the PDG, with a guaranteed permit decision within 57 business days. Renewal PAG-03 NOIs are not part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-03 permit coverage with other permits.

New and Reissuance PAG-04 NOIs (Small Flow Sewage Treatment Facility Discharges)

This SOP describes the procedures by which application managers in the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) small flow treatment facility PAG-04 NPDES permits. The authorization types covered by this SOP are "PAG4R" (PAG-04 SRSTP) and "PAG4F" (PAG-04 SFTF). Since coverage under the statewide PAG-04 General Permit does not expire, and a renewal NOI is not typically required, essentially all NOIs will be for new small flow treatment facilities (SFTFs). However, if DEP receives an application from an SFTF for renewal of an individual permit, and DEP determines that the SFTF is now eligible for PAG-04 General Permit coverage, DEP will convert the individual permit application to an NOI in eFACTS. If this is done, DEP will notify the applicant of the conversion by phone or in writing, but will not require submission of an NOI by the applicant or reconcile differences in fees with the applicant (if necessary, the amount due on the fee transaction in eFACTS will be adjusted accordingly). SFTFs are those with design flows of 2,000 gallons per day (GPD) or less. Single residence sewage treatment plants (SRSTPs) are a subset of SFTFs and are facilities for single homes with a typical design flow of 400 GPD. All non-SRSTPs with design flows between 401 and 2,000 GPD are called SFTFs. The distinction is made because different fees apply to SRSTPs vs. SFTFs. This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. PAG-04 NOIs are not subject to the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-04 permit coverage with other permits.

New and Reissuance PAG-05 NOIs (Petroleum Product Groundwater Cleanup Discharges)

This SOP describes the procedures by which the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Petroleum-Product Contaminated Groundwater Remediation System General PAG-05 NPDES permits. The authorization type covered by this SOP is "GRGP5" (PAG-05 Discharge from Gasoline Contaminated Ground Water Remediation Systems). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New and renewal PAG-05 NOIs are not part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-05 permit coverage with other permits.

New and Reissuance PAG-06 NOIs (Combined Sewer Systems)

This SOP describes the procedures by the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Combined Sewer System General PAG-06 NPDES permits. The authorization type covered by this SOP is "NCSO6" (PAG-06 Wet Weather Overflow Discharge from Combined Sewer Sys). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. PAG-06 NOIs are not subject to the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-06 permit coverage with other permits.

New and Reissuance PAG-10 NOIs (Hydrostatic Test Water Discharges)

This SOP describes the procedures by the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Industrial Stormwater General PAG-10 NPDES permits. The authorization type covered by this SOP is "HTG10" (PAG-10 Discharge Resulting from Hydrostatic Testing of Tanks & Pipelines). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New PAG-10 NOIs ARE part of the PDG, with a guaranteed permit decision within 43 business days. Renewal PAG-10 NOIs ARE NOT part of the PDG. Central Office will review PAG-10 NOIs for projects spanning multiple counties and will follow this SOP. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-10 permit coverage with other permits.

New and Reissuance PAG-11 NOIs (Aquaculture Discharges)

This SOP describes the procedures by the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Aquaculture General PAG-11 NPDES permits. The authorization type covered by this SOP is "PAG11" (PAG-11 Aquatic Animal Production Facility Discharges). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. PAG-11 NOIs ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-11 permit coverage with other permits.

New and Reissuance PAG-12 NOIs (CAFOs)

This SOP describes the procedures by which application managers in the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Concentrated Animal Feeding Operation (CAFO) General PAG-12 NPDES permits. The authorization type covered by this SOP is "CAF12" (PAG-12 Concentrated Animal Feed Operations). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New CAFO PAG-12 NOIs ARE part of the PDG, with a guaranteed permit decision within 43 business days. Renewal CAFO PAG-12 NOIs ARE NOT part of the PDG.

New and Reissuance PAG-13 NOIs (Stormwater Discharges from Regulated Small MS4s)

This SOP describes the procedures by which the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) MS4 General PAG-13 NPDES permits. The authorization type covered by this SOP is "MS4GP" (PAG-13 Stormwater Discharges from Small Muni Separate Storm Sewer Sys MS4). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New and renewal PAG-13 NOIs ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of PAG-03 permit coverage with other permits. NOTE – If an application manager receives a waiver request application and believes there is a compelling basis for a waiver, the application manager will generally contact the Central Office Division of Planning and Permitting for consultation to ensure that waiver requests are reviewed consistently. If Central Office agrees that a waiver may be granted, this SOP still applies except that (1) a waiver letter will be issued in lieu of a permit, (2) the disposition of the authorization will be set to "Waived" instead of "Issued" in eFACTS, and (3) the public notice that is prepared upon issuance of the waiver will be placed in the MS4 Waiver section of the PA Bulletin.

New and Reissuance PAG-15 NOIs (Discharges from the Application of Pesticides)

This SOP describes the procedures by which the Clean Water Program will process Notices of Intent (NOIs) for new and reissuance (renewal) Pesticide General PAG-15 NPDES permits. The authorization type covered by this SOP is "PAG15" (NPDES GP Pmt Pesticides). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. PAG-15 NOIs ARE NOT part of the PDG. PAG-15 NOIs may or may not be accompanied by a joint permit application under Chapter 91.38, in which both the PA Fish and Boat Commission (PFBC) and DEP must approve issuance of the permit. Chapter 91.38 permits are required for any direct application of herbicides, algacides or fish control chemicals to waters of the Commonwealth. If a joint Chapter 91.38 permit is required, the authorization will be created in eFACTS and the SOP for Joint Chapter 91.38 Permits will be followed.

Individual Permit (IP) ApplicationNew and Reissuance Industrial Waste and Industrial Stormwater (Individual NPDES Permit Applications)

This SOP describes the procedures by which application managers in the Clean Water Program will process applications for new and reissuance (renewal) industrial waste (IW) and industrial stormwater individual NPDES permits. The authorization types covered by this SOP are "MIIW1" (Minor IW Facility without ELG), "MIIW2" (Minor IW Facility with ELG), "MAIW1" (Major IW Facility < 250 MGD), "MAIW2" (Major IW Facility ≥ 250 MGD), "CAAP1" (CAAP Individual Permit), and "NSIR" (NPDES Pmt Stormwater Industrial Site Runoff (Individual)). Where the only discharges associated with a facility are precipitation-induced, including the containment, treatment and release of stormwater, the authorization type should be "NSIR." Where there is at least one process-related discharge (standalone or commingled with stormwater), including non-contact cooling water, boiler blowdown and other non-stormwater discharges, the authorization type should be one of the other IW authorization types, as applicable. This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New IW individual permit applications (except New Major IW Facility ≥ 250 MGD applications) ARE part of the PDG, with a guaranteed permit decision within 188 business days (this is applicable to MIIW1, MIIW2, MAIW1, MAIW2, CAAP1 and NSIR authorization types). Renewal IW individual permit applications ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of individual NPDES permits with other permits.

New and Reissuance Sewage Individual NPDES Permit Applications

This SOP describes the procedures by which the Clean Water Program will process applications for new and reissuance (renewal) municipal sewage (POTW) and non-municipal sewage individual NPDES permit applications. The authorization types covered by this SOP are "MISF1" (Minor Sewage Facility <0.05 MGD), "MISF2" (Minor Sewage Facility ≥ 0.05 and <1 MGD), "MISF3" (Minor Sewage Facility with CSO), "MASF1" (Major Sewage Facility ≥ 1 and <5 MGD), "MASF2" (Major Sewage Facility ≥ 5 MGD) and "MASF3" (Major Sewage Facility with CSO). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New individual sewage permit applications ARE part of the Permit Decision Guarantee (PDG), with a guaranteed permit decision within 188 business days (this is applicable to MISF1, MISF2, MISF3, MASF1, MASF2 and MASF3 authorization types). Renewal sewage individual permit applications ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of individual NPDES permits with other permits.

New and Reissuance CAFO Individual NPDES Permit Applications

This SOP describes the procedures by which the Clean Water Program will process applications for new and reissuance (renewal) Concentrated Animal Feeding Operation (CAFO) individual NPDES permits. The authorization type covered by this SOP is "NCAF" (Concentrated Animal Feed Operations Individual NPDES Pmt). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New CAFO individual permit applications ARE part of the PDG, with a guaranteed permit decision within 143 business days. Renewal CAFO individual permit applications ARE NOT part of the PDG.

Individual Permit (IP) IssuanceNew and Reissuance Industrial Waste and Industrial Stormwater

This SOP describes the procedures by which application managers in the Clean Water Program will process applications for new and reissuance (renewal) industrial waste (IW) and industrial stormwater individual NPDES permits. The authorization types covered by this SOP are "MIIW1" (Minor IW Facility without ELG), "MIIW2" (Minor IW Facility with ELG), "MAIW1" (Major IW Facility < 250 MGD), "MAIW2" (Major IW Facility ≥ 250 MGD), "CAAP1" (CAAP Individual Permit), and "NSIR" (NPDES Pmt Stormwater Industrial Site Runoff (Individual)). Where the only discharges associated with a facility are precipitation-induced, including the containment, treatment and release of stormwater, the authorization type should be "NSIR." Where there is at least one process-related discharge (standalone or commingled with stormwater), including non-contact cooling water, boiler blowdown and other non-stormwater discharges, the authorization type should be one of the other IW authorization types, as applicable. This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New IW individual permit applications (except New Major IW Facility ≥ 250 MGD applications) ARE part of the PDG, with a guaranteed permit decision within 188 business days (this is applicable to MIIW1, MIIW2, MAIW1, MAIW2, CAAP1 and NSIR authorization types). Renewal IW individual permit applications ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of individual NPDES permits with other permits.

New and Reissuance Sewage Individual NPDES Permit Applications

This SOP describes the procedures by which the Clean Water Program will process applications for new and reissuance (renewal) municipal sewage (POTW) and non-municipal sewage individual NPDES permit applications. The authorization types covered by this SOP are "MISF1" (Minor Sewage Facility <0.05 MGD), "MISF2" (Minor Sewage Facility >=0.05 and <1 MGD), "MISF3" (Minor Sewage Facility with CSO), "MASF1" (Major Sewage Facility >=1 and <5 MGD), "MASF2" (Major Sewage Facility >=5 MGD) and "MASF3" (Major Sewage Facility with CSO). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New individual sewage permit applications ARE part of the Permit Decision Guarantee (PDG), with a guaranteed permit decision within 188 business days (this is applicable to MISF1, MISF2, MISF3, MASF1, MASF2 and MASF3 authorization types). Renewal sewage individual permit applications ARE NOT part of the PDG. The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of individual NPDES permits with other permits.

New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications

This SOP describes the procedures by which the Clean Water Program will process applications for new and renewal small flow treatment facility (SFTF) individual NPDES permit applications. The authorization types covered by this SOP include "SFTF" and "SRSTP." SFTFs are those with design flows of 2,000 gallons per day (GPD) or less. Single residence sewage treatment plants (SRSTPs) are a subset of SFTFs and are facilities for single homes with a typical design flow between 400 and 800 GPD. All SFTFs that are for multiple homes or for businesses with design flows of less than or equal to 2,000 GPD are called SFTFs. The distinction is made because different fees apply to SRSTPs vs. SFTFs. If DEP receives an application from an SFTF for renewal of an individual permit, and DEP determines that the SFTF is now eligible for PAG-04 General Permit coverage, DEP will convert the individual permit application to an NOI in eFACTS. If this is done, DEP will notify the applicant of the conversion by phone or in writing, but will not require submission of an NOI by the applicant or reconcile differences in fees with the applicant (if necessary, the amount due on the fee transaction in eFACTS will be adjusted accordingly). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New and renewal individual SFTF and SRSTP permit applications ARE NOT part of the Permit Decision Guarantee (PDG). The Clean Water Program will refer to existing guidance and the Bureau of Point and Non-Point Source Management's Program Clarification Memo on Permit Coordination (March 5, 2013) when evaluating the need to coordinate issuance of individual NPDES permits with other permits.

New and Reissuance CAFO Individual NPDES Permit Applications

This SOP describes the procedures by which the Clean Water Program will process applications for new and reissuance (renewal) Concentrated Animal Feeding Operation (CAFO) individual NPDES permits. The authorization type covered by this SOP is "NCAF" (Concentrated Animal Feed Operations Individual NPDES Pmt). This SOP is intended to comply with DEP's Policy for Implementing the Department of Environmental Protection (Department) Permit Review Process and Permit Decision Guarantee (021-2100-001) ("PDG Policy"). Only certain types of applications are subject to the Permit Decision Guarantee (PDG) described in the PDG Policy. New CAFO individual permit applications ARE part of the PDG, with a guaranteed permit decision within 143 business days. Renewal CAFO individual permit applications ARE NOT part of the PDG.

Appendix D

Standard Operating Procedure (SOP)¹ for Clean Water Program	
Activity	Code
New and Reissuance PAG-03 NOIs (Industrial Stormwater Discharges)	SOP No. BPNPSM-PMT-009
New and Reissuance PAG-04 NOIs (Small Flow Sewage Treatment Facility Discharges)	SOP No. BPNPSM-PMT-010
New and Reissuance PAG-05 NOIs (Petroleum Product Groundwater Cleanup Discharges)	SOP No. BPNPSM-PMT-011
New and Reissuance PAG-06 NOIs (Combined Sewer Systems)	SOP No. BPNPSM-PMT-012
New and Reissuance PAG-07 NOIs (Beneficial Use of Exceptional Quality Biosolids by Land Application)	SOP No. BPNPSM-PMT-013
New and Reissuance PAG-08 NOIs (Beneficial Use of Biosolids by Land Application)	SOP No. BPNPSM-PMT-014
New and Reissuance PAG-09 NOIs (Beneficial Use of Residential Septage by Land Application)	SOP No. BPNPSM-PMT-015
New and Reissuance PAG-10 NOIs (Hydrostatic Test Water Discharges)	SOP No. BPNPSM-PMT-016
New and Reissuance PAG-11 NOIs (Aquaculture Discharges)	SOP No. BPNPSM-PMT-017
New and Reissuance PAG-12 NOIs (CAFOs)	SOP No. BPNPSM-PMT-018
New and Reissuance PAG-13 NOIs (Stormwater Discharges from Regulated Small MS4s)	SOP No. BPNPSM-PMT-019
New and Reissuance PAG-15 NOIs (Discharges from the Application of Pesticides)	SOP No. BPNPSM-PMT-020
New and Reissuance Industrial Waste and Industrial Stormwater (Individual NPDES Permit Applications)	SOP No. BPNPSM-PMT-001
New and Reissuance Sewage Individual NPDES Permit Applications	
New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Applications	SOP No. BPNPSM-PMT-003
New and Reissuance CAFO Individual NPDES Permit Applications	SOP No. BPNPSM-PMT-006
New and Reissuance MS4 Individual NPDES Permit Applications	SOP No. BPNPSM-PMT-004
New and Reissuance Pesticide Individual NPDES Permit Applications	SOP No. BPNPSM-PMT-005
Joint Chapter 91.38 Permits (Algaecides, Herbicides and Fish Control Chemicals)	SOP No. BPNPSM-PMT-021
Water Quality Management General Permits for Small Flow Treatment Facilities (WQG-01)	SOP No. BPNPSM-PMT-022
Water Quality Management General Permits for Sewers and Pump Stations (WQG-02)	SOP No. BPNPSM-PMT-023
Water Quality Management Permits for Industrial Waste Treatment Facilities	SOP No. BPNPSM-PMT-024
Water Quality Management Permits for Sewage Treatment Facilities	SOP No. BPNPSM-PMT-027
Water Quality Management Permits for Land Application of Sewage and Industrial Wastewaters	
Water Quality Management Permits for Manure Storage Facilities	SOP No. BPNPSM-PMT-026
Water Quality Management Permits for Sewage Collection Systems and Pump Stations	SOP No. BPNPSM-PMT-028
Applications for Amendments and Transfers of NPDES and WQM Permits	SOP No. BPNPSM-PMT-029
Establishing Effluent Limitations for Individual Industrial Permits	SOP No. BPNPSM-PMT-032
Establishing Effluent Limitations for Individual Sewage Permits	SOP No. BPNPSM-PMT-033
Chemical Additives	SOP No. BPNPSM-PMT-030
Whole Effluent Toxicity (WET)	SOP No. BPNPSM-PMT-031
NPDES, WQM and Biosolids Permit Numbering for New Permits	SOP No. BPNPSM-PMT-034
New and Reissuance Individual Generator Permit Applications for Beneficial Use of Biosolids	SOP No. BPNPSM-PMT-007

Standard Operating Procedure (SOP)¹ for Clean Water Program	
Activity	Code
New and Reissuance Individual Site Permit Applications for Beneficial Use of Biosolids	SOP No. BPNPSM-PMT-008
Review of Sewage Facilities Planning Module Component 1	SOP No. BPNPSM-PLNG-003
Review of Sewage Facilities Planning Module Component 2	SOP No. BPNPSM-PLNG-004
Review of Sewage Facilities Planning Module Component 3	SOP No. BPNPSM-PLNG-005
Review of Sewage Facilities Planning Module Component 3s	SOP No. BPNPSM-PLNG-006
Review of Sewage Facilities Planning Module Application Mailer and Requests for Planning Exemptions	SOP No. BPNPSM-PLNG-002
Review of Act 537 Plan, Act 537 Update Revision, and Minor Update Revision	SOP No. BPNPSM-PLNG-007

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Appendix E

PADEP WQBEL References and Tools	
Regulation	Description
Chapter 16.	Water Quality Toxics Management Strategy – Statement of Policy
Chapter 83.	State Conservation Commission
Chapter 92a.	National Pollutant Discharge Elimination System Permitting, Monitoring And Compliance
Chapter 93.	Water Quality Standards
Chapter 95.	Wastewater Treatment Requirements
Chapter 96.	Water Quality Standards Implementation
Chapter 102.	Erosion And Sediment Control
(#361-0100-003)	Water Quality Toxics Management Strategy
(#391-2000-011)	Technical Reference Guide (TRG) PENTOXSD for Windows PA Single Discharge Wasteload Allocation Program for Toxics Version 2.0
(#391-2000-015)	Implementation Guidance Total Residual Chlorine (TRC) Regulation
(#391-2000-017)	Implementation Guidance for Temperature Criteria
	Establishing Effluent Limitations for Individual Industrial Permits SOP
	Establishing Effluent Limitations for Individual Sewage Permits SOP
(#362-0400-001)	Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits
	Whole Effluent Toxicity (WET) SOP
	wet_analysis_spreadsheet.xlsx
	PA WET TST Spreadsheet
(#391-2000-007)	Technical Reference Guide (TRG) WQM 7.0 for Windows Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen Version 1.0
(#391-2000-010)	Implementation Guidance for Section 95.6 Management of Point Source Phosphorous Discharges to Lakes, Ponds, and Impoundments
18 CFR PART 410	DRBC Water Quality Regulations
DEP's Online Library	http://www.elibrary.dep.state.pa.us/dsweb/HomePage
The Pennsylvania Code	http://www.pacode.com/secure/data/025/025toc.html
The Pennsylvania Bulletin	http://www.pabulletin.com/index.asp
Standard Operation Procedures	http://www.portal.state.pa.us/portal/server.pt/community/Permit_Decision_Guarantee/21215/SOPs/1294992#PNPSM
Water Quality Models and Tools	http://www.portal.state.pa.us/portal/server.pt/community/wastewater_management/10582/npdes_and_wqm_electronic_permits_and_permit_application_forms/554182
	http://www.epa.gov/chesapeakebaytmdl/
Chesapeake Bay TMDL	www.depweb.state.pa.us/npdes-bay
	www.depweb.state.pa.us/nutrient_trading
TMDLs	http://www.epa.gov/reg3wapd/tmdl/
	http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR
Code of Federal Regulations	http://www.ecfr.gov/cgi-bin/ECFR?page=browse