REGION 2 NPDES
PERMIT QUALITY REVIEW

NEW YORK STATE

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United States Environmental Protection Agency
Region 2
290 Broadway
New York, New York 10007

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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, the EPA promotes national consistency, and identifies successes in implementation of the NPDES program and identifies opportunities for improvement in the development of NPDES permits.

The EPA's review team, consisting of EPA Region 2, EPA Headquarters, and contractor personnel, conducted a review of the New York State Pollutant Discharge Elimination System (SPDES) permitting program which included an on-site visit to the New York State Department of Environmental Conservation (NYSDEC) office in Albany on February 29, 2012 and March 1, 2012.

The 2012 New York State (NYS) 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 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 NYS SPDES 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 specific issues or types of permits in all states. The core topics reviewed in the NYS SPDES program were: nutrients, the pesticide general permit, pretreatment, and stormwater.

Special focus area reviews target regionally-specific permit types or particular aspects of permits. The special focus areas selected by EPA Region 2 included: shale gas, concentrated animal feeding operations (CAFOs), flue gas desulphurization/coal combustion residue, and combined sewer overflows (CSOs). These reviews provide important information to NYSDEC, Region 2, EPA HQs and the public on specific program areas.

It is infeasible to review all of the thousands of SPDES permits issued by NYS. Instead, a small selection of permits is reviewed to provide a snapshot view of the NYS SPDES program. A total of 24 permits (all issued since the previous NYS PQR in 2008) were reviewed as part of the 2012 NYS PQR. Sixteen permits were reviewed for the core review - of these, 12 permits were also reviewed for special focus areas. Permits were selected based on issue date and the review categories that they fulfilled (Appendix A).

II. STATE PROGRAM BACKGROUND

A. NPDES Program Structure

The NYSDEC, Office of Water Resources, Division of Water (DOW) manages the Bureau of Water Permits. The Bureau of Water Permits is organized by sections that develop and issue general permits, and individual wastewater permits. NYSDEC has one central office in Albany and nine regional offices. The central office administers the Division of Water programs including developing SPDES policy, providing technical support for regional offices, and drafting permits for major dischargers. Bureau of Water Permits staff in the regional offices are responsible for drafting permits for minor dischargers, conducting inspections, and responding to complaints. The Bureau of Water Permits has 15 permit writers in the central office and 1 or 2 permit writers in each regional office. The NYSDEC Office of Regional Affairs and Permitting, Division of Environmental Permits is also involved in the administration of the NY SPDES program. The responsibilities of each division are further discussed in the following section, *II. B. Universe and Permit Issuance*.

Permit conditions are developed by water quality engineers and permit writers in the DOW. Water quality engineers are responsible for conducting water quality analyses and total maximum daily loads (TMDLs). The water quality engineers provide the analysis, created by using a standardized spreadsheet to develop effluent limitations, to the permit writer to assist the permit writer in the development of the draft permit. The mass balance of a pollutant for a specific water body is developed by the water quality engineer through an informal process similar, but not equitable, to the development of a TMDL. More recently, NYSDEC provided training to permit writers to conduct water quality analyses themselves, which will allow a transition to a more fully-integrated permit development role. The permit writers will continue to consult water quality engineers to ensure they are applying a consistent approach in developing water quality analyses. Water quality engineers continue to develop the mass balance limits, where applicable.

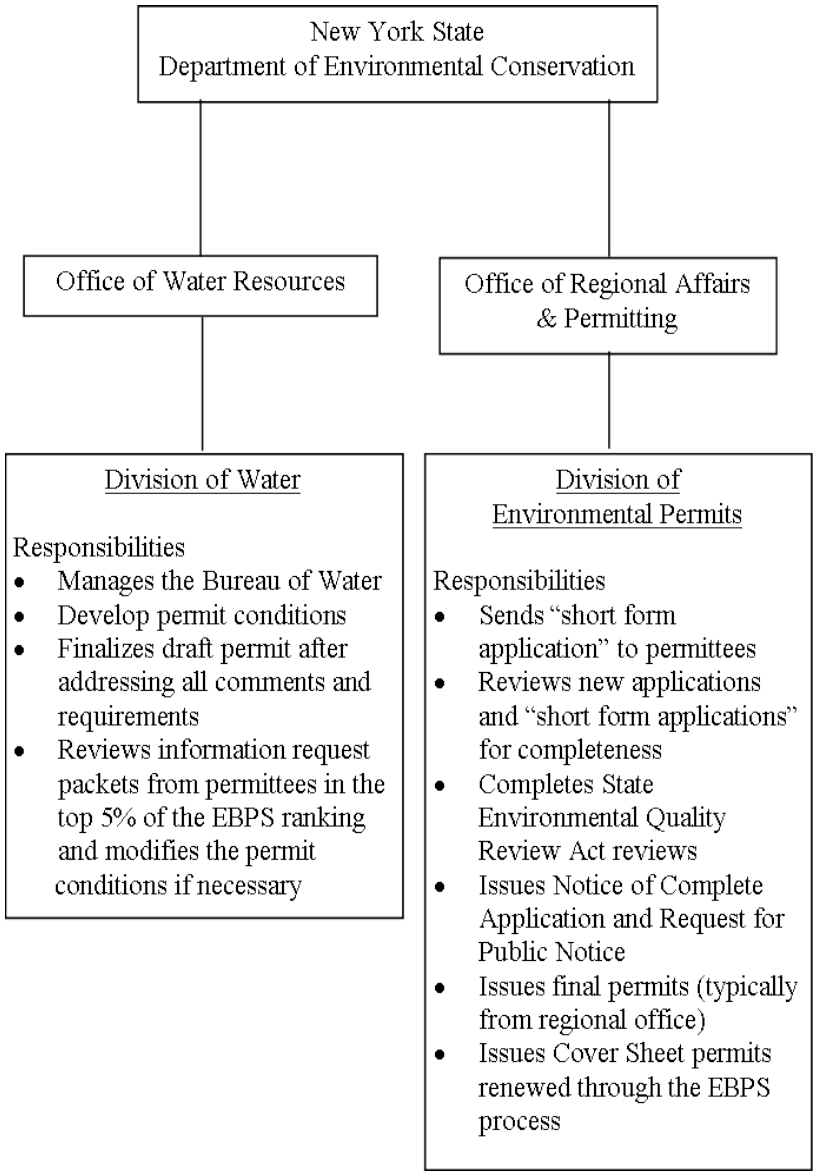
Permit writers develop draft permits using forms and standard language and track permit development in standardized spreadsheets. NYSDEC maintains templates for permits and fact sheets on their shared computer network which are updated periodically; the most recent update was in December 2011. The EPA did not review these templates as part of the 2012 NYS PQR. In addition, permit writers use a NYSDEC permit writers' guidance manual that contains administrative information that guides a permit writer through the process of how to draft a permit, but also contains example permit language and permit requirements. The manual provides permit writers, especially those in the regional offices, a reference guide that facilitates consistency in permit development.

Permit writers use standardized spreadsheets and their SPDES Information System ("SIS") Database to evaluate if a pollutant may discharge at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any water quality standard. Further, water quality engineers use CORMIX and spreadsheet models to calculate appropriate mixing zones.

NYSDEC maintains an extensive collection of technical guidance in their Technical Operations and Guidance Series ("TOGS") (http://www.dec.ny.gov/regulations/2652.html). NYSDEC uses internal databases to assist in prioritizing permitting goals and tracking permits, the SIS database to manage monitoring results and statistics, and GIS applications during water quality reviews. NYSDEC tracks permits issuance and renewals in SIS and is responsible for updating the Integrated Compliance Information System (ICIS) database.

The NYSDEC ensures consistency and accuracy in permit development by requiring that permit writers use current permit pages and fact sheet templates to draft permits and to confer with water quality engineers regarding water quality evaluations. As of 2011, permit staff in the central office have been conducting monthly peer review sessions for project reviews. Prior to the public notice of a draft permit, the Director of the Bureau of Water and section chiefs review permit tracking logs. In addition, section chiefs and regional facility inspectors review all draft permits developed in the central office. Permits developed by permit writers in the regional offices are reviewed by staff in the regional offices.

The administrative records are maintained in the office (either at the Office of Water Resources or Office of Regional Affairs and Permitting) in which the permit was developed and may be housed in both hard copy and electronic format. NYSDEC maintains the Centralized Electronic Document Repository ("CEDR"), where permit files are housed electronically after NYSDEC scans a hard copy of the document (e.g., Discharge Monitoring Reports). Permit development documentation and monitoring and reporting records are maintained in hard copy and electronic (CEDR and SIS); correspondence file and compliance records are maintained in hard copy and electronically (CEDR).



B. Universe and Permit Issuance

As of October 2011, NYSDEC is responsible for administering approximately 3,500 individual permits, including approximately 335 major permits (approximately 235 POTWs and 100 non-POTWs). NYSDEC administers seven general permit categories (e.g., CAFO, Pesticides, MS4), covering approximately 10,500 dischargers. As of October 2011, NYSDEC had approximately 492 backlogged permits meaning that the NYS SPDES program is 88.5% current.

NYS SPDES permit administration occurs within two divisions at NYSDEC – the Division of Water (DOW) and the Division of Environmental Permits (DEP). The DOW, within the Office of Water Resources, is responsible for developing permit conditions and finalizing draft permits. DEP, within the Office of Regional Affairs and Permitting, is responsible for reviewing permit applications for completeness, publishing public notices, and issuing finalized permits. The adjacent chart indicates the major responsibilities of each Division.

1. Environmental Benefit Permitting Strategy

NYSDEC currently uses an Environmental Benefit Permit Strategy (EBPS) to modify permits. The EBPS strategy is described in detail in NYSDEC's Technical and Operation Guidance (TOGS) 1.2.2 *Administrative Procedures and the Environmental Benefit Permit Strategy for Individual Permits*. EBPS was designed to establish a system that provides for timely renewal of SPDES permits and avoids a backlog of pending permit renewal applications and identify and prioritize permits which have the greatest potential for causing significant environmental harm. Only permits in the top 5% of the EBPS priority ranking, published in the Environmental Notice Bulletin (http://www.dec.ny.gov/enb/20120718_spdes.html), receive a full technical review by the Division of Water when reissued. Permits that are not in the top 5% of the EBPS ranking are administratively renewed by the Division of Environmental Permits.

However, NYSDEC is changing the process for all facilities categorized as major dischargers using the EPA's categorization standards. The new process is described in full in NYSDEC's TOGS 1.2.2, finalized in January 2012, available at www.dec.ny.gov/regulations/2652.html. Under the new process, all EPA major facilities will undergo a full technical review at renewal by DOW staff. Facilities classified as EPA minors will still be able to be administratively renewed under the EBPS process.

2. Permit Processing Procedures

NYSDEC permit processing procedures are described in detail in the current and proposed draft TOGS 1.2.2. In summary, applications for new permits (first-time dischargers) are received by the DEP and reviewed for completeness. If more information is required, DEP contacts the applicant. Once the application is deemed complete, DOW can begin to develop the draft permit.

For permits that are not in the top 5% of the EBPS ranking, DOW sends an application packet, known as the "short form application" to the permittee approximately 10 months before the expiration date of the permit. The application is returned to the DEP for completeness review. If the application is incomplete, DEP contacts the permittee for the remainder of the information.

Once the application is deemed complete, a notice is published in the Environmental News Bulletin (ENB) stating that DEP intends to issue a renewed permit with no substantive changes to the permit provisions and provides the public with a 30-day comment period. If no substantive comments are received, DEP issues a cover sheet that renews the existing permit and is intended to be stapled on top of the existing permit. DEP provides a copy of the cover sheet to DOW. In the 2012 NYS PQR, the EPA found that the "short application form" does not include the application information required by the federal regulations, including information about current operations and effluent screening data assessing pollutants present in the discharge. NYSDEC indicated to the EPA that their proposed modified TOGS 1.2.2 requires effluent sampling and that NYSDEC will begin requiring effluent sampling during 2012.

When a permit is in the top 5% of the EBPS ranking, the permit is given a department-initiated permit modification. The department-initiated review process begins when DOW (or the regional office) sends an information request packet to the permittee. This packet requires much more detailed responses than the "short form application". The information request packet is returned to the DOW (or regional office) where a full technical review is performed. If modifications are necessary, the DOW (or regional office in coordination with DOW) develops a draft permit. When ready, the DEP transmits the draft permit to the permittee and the EPA and then publishes a notice of a 30-day public notice period if applicable. After all comments have been addressed, the DOW finalizes the permit and the DEP issues the modified permit.

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) because it 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.

The 16 permits reviewed for the core review consistently included identification of outfalls and receiving waters. The permits that were a final version, including modified permits, included permit issuance, effective dates, expiration dates, authorized signatures, and contained specific authorization-to-discharge information. Not all of the permits reviewed included a clear description of the activities and operations, including wastewater treatment. The core review demonstrated that fact sheets developed for POTWs and non-POTWs contained an adequate description of facility location and treatment processes.

NYSDEC indicated during the on-site review they have recently updated their fact sheet template language to include more complete descriptions of facility activities and treatment. The

EPA did not review the updated template, or any permits developed using the template, as part of the NYS 2012 PQR.

2. Permit Application Requirements

Federal regulations at 40 CFR122.21 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.

NYSDEC's implementation of a streamlined administrative permit renewal process allows permittees to submit a "short application form" that does not require submittal of the same type of data as required by EPA permit applications. Through the administrative permit renewal process, the timeline for submittal of renewal applications does not align with federal requirements. During the core review, it was difficult to ascertain if permit applications were submitted in a timely manner, in accordance with federal regulations. The on-site review of supporting files revealed that permit applications were not consistently available in the administrative record. Applications that were reviewed consisted of forms NY-2A and NY-2C and did not include the same level of data as required by the EPA application forms, as identified in 40 CFR 122.21(a)(2). For example, the state forms require only one sample for priority pollutants and do not require whole effluent toxicity (WET) testing. None of the applications reviewed for POTWs contained three sets of priority pollutant scans or WET data as required by 40 CFR 122.21. During the on-site review, NYSDEC indicated that requests for effluent sampling data would be a part of the application process in summer 2012 through recent revision of their TOGS. The revision of the TOGS, however, will likely not fully address the inadequacies of the NY application forms.

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 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 12 POTW permits were reviewed as part of the NYS 2012 PQR.

The EPA found that the permits and available fact sheets provided a minimal description of wastewater treatment processes and discussions of the basis of TBELs. Some of the fact sheets included a summary table displaying applicable numeric effluent limitations and standards; however, the summary table did not provide a narrative discussion of the basis for the numeric

limitations. However, the permits reviewed did consistently apply secondary treatment standards appropriately. Effluent limitations were established using the appropriate units, averaging periods, and expression (i.e., concentration or mass; average weekly and average monthly), and included the appropriate percent removal requirements.

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).

The non-POTW permits reviewed consisted of two steam electric power generating facilities, an inorganic chemical producer, and a paper mill facility, all of which are subject to ELGs. None of the permit records reviewed for these facilities included documentation of the calculations used to develop the effluent limitations based on ELGs. The fact sheets for these facilities were not consistent in their explanation of facility categorization and determination of applicable ELGs. It was difficult to determine if the permit writers evaluated whether ELGs were applicable to these facilities. In addition, for one of the steam electric power generating facilities, it appeared the final effluent limitations for iron were less stringent than what is required by the ELG and the fact sheet lacked a rationale for the final effluent limitation for iron. Both permits developed for the steam electric power generating facilities included a daily maximum effluent limitation only; a monthly average effluent limitation was not established, as required by the steam electric generating ELGs at 40 CFR Part 423.

The administrative records lacked documentation of development of TBELs; therefore, it was unclear how the final effluent limitations were developed. Documentation did not include a discussion of the applicability of ELGs or illustration of calculations used to develop the technology-based effluent limitations. In some cases, it was difficult to discern if final effluent limitations were technology- or water quality-based limitations. The summary table included with some of the fact sheets provided little detail as to the basis for the numerical effluent limitation and in some cases, was confusing as to what was labeled as a technology-based effluent limitation.

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 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. A total of 16 permits were evaluated for their WQBELs – 12 POTW permits and 4 non-POTW permits.

The NYS 2012 PQR assessed the processes employed by permit writers and water quality modelers to implement these requirements. Specifically, the PQR reviewers looked at permits, fact sheets, and other documents in the administrative record to evaluate how permit writers and water quality modelers:

- 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; and
- 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 TMDLs.

Permits reviewed as part of the core review consistently identified the receiving stream and for the most part identified the designated uses or class of the receiving stream. Permits and fact sheets reviewed did not consistently discuss impairment status or identify if a TMDL had been developed for the receiving water body; some fact sheets presented a table or list, whereas other fact sheets lacked any mention of impairments or TMDLs. In some cases, fact sheets appeared to include an incomplete table listing impairments; suggesting perhaps that artifact language from a template document was not revised prior to issuance. While standard language regarding water body impairment status is in the fact sheet, the language had not been tailored to the facility and this suggests an oversight during the quality assurance/quality control process.

The core review revealed NYSDEC applies a TMDL-like approach to WQBEL development. Fact sheets reviewed during the core review included a general statement that the TMDL-like process is carried out separately for each pollutant and, that the process provides the basis for a reasonable potential analysis and subsequent WQBEL development. However, the fact sheets did not list the pollutants detected or any detailed information regarding the wasteload allocation (WLA) development. During discussion with NYSDEC during the on-site review, it was determined that NYSDEC's use of the term "TMDL" in its permit fact sheets is not the same as the EPA's TMDL process under section 303(d) of the CWA. Instead, NYSDEC's TMDL-like process is more accurately described as a watershed level assessment for a particular pollutant. While a watershed approach makes sense in many cases, it is unclear what assumptions go into NYSDEC's analyses and if near-field effects are considered in the assessment of reasonable

potential and development of permit conditions. In addition, the fact sheets are not explicit in identifying if effluent limitations are based on EPA-approved TMDLs or NYSDEC's TMDL-like analyses.

Discussions or demonstrations that water quality assessments had been conducted during the permit development process were absent from materials reviewed during the PQR. It was unclear if an analysis was conducted, and if so, for what pollutants, and what the final determination was. Additionally, some permits reviewed contained action levels for specific parameters in lieu of effluent limitations. Permits were unclear as to what the resulting action would be if action levels were exceeded. In some cases, action levels were increased in a renewal permit, without rationale for the increased action level.

The fact sheets reviewed consistently lacked facility- and discharge-specific details regarding water quality assessments. While the fact sheet includes sections for "Reasonable Potential Analysis", "Procedure for Deriving WQBELs", and "Pollutant-Specific Analysis", these sections appeared to include general and higher-level discussions while providing little, if any, facility- or discharge-specific information. The standard language in the fact sheets appears accurate, but did not fully document the process for determining if WQBELs were necessary and subsequent development of WQBELs. The summary tables included with the fact sheet list some data and numerical standards and effluent limitations; however, the table is brief in content and there are no calculations to illustrate development of effluent limitations. It was difficult to re-create how effluent limitations were developed based on the content of the fact sheet and supporting record. In addition, it was found that many permits did not established effluent limitations consistent with the requirements of 40 CFR 122.45(d) which states that, for continuous discharges, all permits effluent limitations shall, unless impracticable, be stated as maximum daily and average monthly limitations for all dischargers other than POTWs. For POTWs, 40 CFR 122.45(d) states that average weekly and average monthly discharge limits must be established. As explained in the EPA's Technical Support Document (TSD), EPA considers the 7-day average limit for POTWs to be impracticable for the purpose of controlling the discharge of toxics and therefore, requires a maximum daily limit for toxics.

D. Monitoring and Reporting

NPDES regulations at 40 CFR 122.41(j) require facilities discharging pollutants to waters of the US 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, require 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, developed on a case-by-case basis, with a frequency dependent on the nature and effect of the discharge.

Not all of permits reviewed included appropriate monitoring requirements based on the facility type, type of discharge and corresponding limit basis. In some cases, the analytical method was specified in footnotes to the Effluent Limits, Levels, and Monitoring tables in the permit; otherwise, the permit contained a general requirement that monitoring must be conducted according to test procedures approved under 40 CFR Part 136. However, for mercury, the most sensitive analytical EPA Method 1631E was not always required. The EPA Method 1631E is capable of detecting mercury to a level of 0.5 ng/L, and is therefore the most sensitive method available for determining reasonable potential to cause or contribute to an exceedance of the state's water quality standard of 0.7 ng/L for mercury pursuant to 40 CFR 122.44(d)(1). See also the August 23, 2007 memo from James Hanlon of the EPA's Office of Wastewater Management to the EPA Water Division Directors Regions 1-10. Some of the permits reviewed included maps or flow diagrams that identified monitoring locations; however, this was not a consistent feature. Most of the permits reviewed required monitoring for whole effluent toxicity.

E. Special and Standard 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 (e.g., pollutant management plan, 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.

The permits reviewed did not have separate sections specifying standard permit conditions or special conditions; however, permits were organized to include separate sections for monitoring requirements, pretreatment program requirements, and best management practices.

Standard conditions established at 40 CFR 122.41 and 122.42 were not included in the 16 permits reviewed in the core review. The *Recording, Reporting and Additional Monitoring Requirements* section of the permits simply states that "permittees shall also refer to 6 NYCRR Part 750 concerning additional monitoring and reporting requirements", which does not adequately meet the requirements of 40 CFR 122.41 and 122.42. The EPA is working with

NYSDEC to incorporate the standard conditions consistent with federal requirements in SPDES permits, as required by 40 CFR 122.41 and 122.42.

The management of biosolids in NYS is governed by the Solid Waste Program under 6 NYCRR Part 360. All biosolids facilities must obtain a Part 360 permit prior to operations. NYS SPDES permits do not currently state that facilities must comply with Part 360 for sludge management or include conditions related to the management of biosolids. Although facilities must still comply with Part 360 even if it is not stated in the SPDES permit, it is a sound practice to include language requiring compliance with Part 360 as a special condition where appropriate.

NYSDEC's use of compliance schedules for the development and implementation of high-intensity monitoring plans is not consistent with the federal use of compliance schedules as a timeline of actions to achieve compliance with final effluent limits. The term "compliance schedule" is associated with specific reporting requirements, milestones, and a date by which compliance with final effluent limitations is required by 40 CFR 122.47. Additionally, as described in the May 10, 2007 memo from James Hanlon of the EPA's Office of Wastewater Management to Alexis Strauss, Director of the EPA Region 9's Water Division, compliance schedules longer than one year in duration must set forth interim requirements and dates for their achievement. Most of the compliance schedules reviewed in the permits did not include final numerical effluent limitations or appropriate interim dates. In the months since the NYS 2012 PQR onsite visit in February 2012, NYSDEC has begun using a Schedule of Submittals (SoS) to request deliverables that do not fall within the federal definition of a compliance schedule, such as short term, high intensity monitoring programs or the development of a pollution prevention plan.

F. Administrative Process

The administrative process includes documenting the basis of all permit decisions (40 CFR 124.5 and 40 CFR 124.6), coordinating the 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). The EPA discussed each element of the administrative process with NYSDEC, and reviewed materials from the administrative process as they related to the core permit review.

Four draft permits were reviewed as part of the core review; therefore, records documenting public notice procedures, response to comments, and public hearing requests were not available. For the twelve finalized permits that were reviewed, the supporting record did not include documentation that demonstrated that public notice procedures were implemented accordingly (e.g., a copy of the public notice announcement) or that comments had been received and addressed. Discussions with NYSDEC DOW staff during the on-site visit indicated that some of these records may be maintained by the DEP. In one case, the on-site review revealed that a final permit was issued without incorporating a change on which the EPA had commented and NYSDEC supplied the EPA with a proposed permit indicating the changes would be incorporated. In discussions with NYSDEC during the on-site review, NYSDEC stated it was an

oversight because of a lack of QA/QC immediately prior to issuing the final permit. NYSDEC issued a revised permit for the facility that incorporated the change EPA had commented on and indicated they would ensure all permits' comments and response to comments would be reviewed by section chiefs prior to final issuance.

G. Administrative Record

The administrative record is the foundation that supports the NPDES permit. If the EPA issues the permit, the contents of the administrative record are prescribed by regulation, with 40 CFR 124.9 identifying the required content of the administrative record for a draft permit and 40 CFR 124.18 describing the requirements for final permits. 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 the EPA issues the permit, any Environmental Assessment, Environmental Impact Statement, or Finding of No Significant Impact.

For the 16 permits reviewed, the administrative record was often incomplete in describing the basis for development of the permit. While the administrative record contained the fact sheet and draft permit, specific information such as facility operations, effluent data, water quality analysis, and reasonable potential analysis was not adequately documented in the record. In addition, some administrative records lacked documentation to demonstrate that public notice requirements were adequately addressed.

1. Fact Sheet or Statement of Basis

Under 40 CFR 124.8 and 124.56 fact sheets are required for major NPDES permits, general permits, permits that incorporate a variance or warrant an explanation of certain conditions, and permits subject to widespread public interest. All 13 major permits reviewed were accompanied by a fact sheet while only two of the three minor permits had fact sheets and the level of detail varied significantly between each. No Statement of Basis' were reviewed.

The fact sheet generally did not provide complete documentation of the decision-making process (i.e., did not adequately include all information required by 40 CFR 124.8 or 124.56) employed during permit development or the rationale for and calculation of final effluent limitations. In some cases, permits were accompanied by only a summary table of the effluent limitation development process that was incomplete and did not clearly describe the reasonable potential analysis. Furthermore, the table did not clearly distinguish between limits that were derived from state or federal technology-based standards.

The fact sheets that did contain narrative discussions in addition to the summary table provided discrete sections such as: Plant Description, Effluent Limitations, Technology-based Evaluation, Reasonable Potential Evaluation, Procedure for Deriving WQBELs, and Pollutant-Specific

Analysis. The sections contained a foundation for a discussion of the topics but contained general, broad discussions and did not contain the necessary details that provided the basis for permit conditions. The citation to guidance documents used to develop permit conditions were often not provided in the fact sheet. Fact sheets reviewed lacked facility- and discharge-specific information which would allow for a clear understanding of the basis for development of effluent limitations and permit conditions. The fact sheets reviewed did not discuss pollutants of concern specific to the facility and did not provide adequate documentation of a water quality assessment, as discussed in Section III.C, *Water Quality Based Effluent Limitations*. As discussed previously in Section III.B.2., *TBELs for Non-POTW Dischargers*, the fact sheets also lacked documentation of the development of TBELs.

While NYSDEC has indicated that water quality impacts are considered during permit development (i.e., reasonable potential analysis), the record does not clearly indicate that all possible impacts were considered. It is difficult to translate what NYSDEC considers during effluent limitation development to the final permit document. The fact sheets and summary table included with the fact sheet do not provide an explanation or illustration of the decision-making process permit writers employ during permit development.

The fact sheet did not contain documentation that an evaluation of the most stringent applicable effluent limitation was made and included as the final effluent limitation. Additionally, effluent limitations in the permits reviewed were sometime found to be inconsistent with those provided in the fact sheet, and also with information contained in the administrative record. Overall, the records reviewed did not provide transparency as to how effluent limitations were developed and did not allow for a straightforward duplication of the development of the effluent limitations.

Fact sheets that had been developed since the NYS 2008 PQR contained standard language addressing implementation of NYSDEC's antidegradation policy. However, the fact sheets did not provide a discussion of the antidegradation analysis specific to the discharge to ensure that the antidegradation policy has been met. Furthermore, there is no standard language for anti-backsliding in the fact sheets and therefore, it is not clear whether anti-backsliding was considered in developing permit limitations.

H. Core Topic Areas

Core topic areas are specific aspects of the NPDES permit program that are reviewed based on the specific requirements applicable to the selected topic areas. Four topic areas have been determined to be important on a national level and include: permitting for nutrients, the pretreatment program, the pesticide general permit, and stormwater permitting**.** The same core topic areas are reviewed for all state PQRs.

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, the EPA has worked at reducing the levels and impacts of nutrient pollution and, as a key part in this effort, has provided support 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. To assess how nutrients are addressed in the SPDES permitting program in New York and implementation of this framework, the EPA reviewed nine of the 16 permits (eight POTWs and one non-POTW) as part the core topic review.

Background

In NYS water quality impacts from nutrient over-enrichment are addressed through implementation of a narrative water quality standard, a statewide numeric guidance value for total phosphorus for lakes, and several waterbody-specific numeric total phosphorus values that apply to Lakes Erie, Ontario and Champlain, and the New York City watershed reservoirs. Specifically, NYS regulations at 6 NYCRR 703.2 provide a narrative ambient water quality criterion for phosphorus and nitrogen to protect the designated uses of specific classes of inland and coastal waters. The criterion provides that phosphorus and nitrogen concentrations shall not be "in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages." At this time, NYS does not have numeric water quality criteria for total nitrogen or total phosphorus.

In translating the narrative water quality standard, NYS has established an ambient water quality guidance value of 20 ug/l for phosphorus in TOGS 1.1.1 to protect the aesthetic recreational use that applies to Classes A, AA, A-S, AA-S, and B waters for which the letter "P" (ponds, lakes, and reservoirs) appears in the Water Index Number. The state also has established numeric treatability limitations (0.5 or 1.0 mg/l) for phosphorus for wastewater discharges into lakes and watersheds that is applied as technology-based effluent limitations based on the size of the discharge (see TOGS 1.3.6, *Phosphorus Removal Requirements for Wastewater Discharges to Lakes and Lake Watersheds*). In addition, TOGS 1.2.1, *Industrial Permit Writing*, provides guidance for establishing requirements for phosphorus if used as a water treatment chemical in industrial processes. For nitrogen, NYS has established monitoring requirements for municipal discharges over 1.0 MGD in TOGS 1.3.3, *SPDES Permit Development for POTWs*, dependent on whether the discharge is to fresh or saline water.

Program Strengths

NYSDEC has long recognized the impact of nutrient pollution to the waters of the State and has taken specific steps beyond its existing water quality standards and guidance values to further reduce nutrient impacts. This includes establishing nutrient TMDLs in priority watersheds (e.g., Long Island Sound and Lake Champlain), implementing statewide municipal stormwater permitting and CAFO programs to address priority sources of nutrients, conducting "reasonable potential" analyses for new or increased discharges in accordance with TOGS 1.3.6, working with the agricultural community (through the NYS Department of Agriculture and Markets and

the NYS Farm Bureau) to identify Best Management Practices, and reaching out to local stakeholders through Soil and Water Conservation Districts and nonpoint source workgroups to achieve effective nutrient reductions. In 2011, NYSDEC developed a NYS Nutrient Standards Plan that sets forth a path for establishing numeric water quality guidance values for nutrients for lakes, reservoirs, flowing waters, and estuaries. In this plan, NYSDEC anticipates adopting numeric guidance values for total phosphorus and total nitrogen for rivers and streams, and total phosphorus for lakes and reservoirs in 2013. NYSDEC also anticipates establishing numeric guidance values for total nitrogen for estuaries in 2016. According to the plan, NYSDEC has indicated that it may adopt these guidance values as part of their water quality standards. The EPA is currently working with NYSDEC in the development of numeric guidance values and/or criteria for nutrients.

Critical Findings

Based on the review of nine permits for the special topic review of nutrients, the EPA presents the following findings.

General

- Fact sheets for the municipal and industrial permits generally addressed whether the receiving water was impaired or where nutrients were a concern. Six of the eight fact sheets reviewed (review package for one facility did not include a fact sheet) for nutrients identified whether the receiving water was impaired for any pollutant parameter; three of the six fact sheets identified nutrients as an issue. If the fact sheet addressed the impairment of the waterbody, the fact sheets provided a list of impaired parameters. If the receiving water was not identified specifically as impaired, the fact sheet provided the basis of the limits (such as the Chesapeake Bay Program or Long Island Sound Study where nutrients have been identified as pollutants of concern).
- All nine permits reviewed generally contained effluent limitations or monitoring requirements for phosphorus and/or nitrogen; five of the nine permits reviewed contained limitations or monitoring requirements for both phosphorus and nitrogen (mostly in the speciated form such as orthophosphate, TKN or nitrite-nitrate).
- All eight fact sheets reviewed generally provided the basis of the effluent limitation or monitoring requirements, although the basis for establishing action levels was not clear.

Nitrogen

- All eight POTW permits established numeric limitations, monitoring requirements or action levels for nitrogen in accordance with TOGS 1.3.3 (one permit established a numeric maximum daily limit for TKN and seven permits established a maximum daily limit in terms of monitoring only requirements for TKN; two POTW permits that discharge into saline water also established nitrite-nitrate monitoring only requirements in addition to the TKN monitoring only limitation).

- Fact sheets for the POTW permits generally addressed nitrogen and referred to TOGS 1.3.3 as the basis for the TKN and/or nitrite-nitrate monitoring only requirements.
- The non-POTW permit established numeric action levels for total nitrogen or TKN depending on the outfall; the permit also established monitoring only requirements for nitrate-nitrogen.
- The fact sheet for the one non-POTW permit reviewed provided general discussions of nitrogen requirements for all outfalls but there were discrepancies found between what was listed in the fact sheet to be established in the permit and what was actually established in the permit. The fact sheet indicated that nitrate-nitrogen monitoring will be required for Outfall Nos. 2 and 3 but the permit did not establish this requirement. The fact sheet also indicated monitoring for TKN for Outfall No. 5 but there is no such monitoring required in the permit. The fact sheet also implied that the permit requirements for nitrogen were included as TBELs yet were instead imposed as action levels. Similarly, the fact sheet provided a numeric value for TKN in the TBELs section of the fact sheet and yet the permit established the numeric value as an action level.
- For permits with nitrogen action levels, it was unclear from both the fact sheet and permit what action would be triggered if a violation of an action level occurred. Although the permits reviewed had general language outside the action level section that specified that additional monitoring requirements would apply, it would be good permitting practice and provide a more enforceable permit to specify in the section establishing the action level the additional monitoring and reporting requirements that would apply (e.g., if triggered, the permittee is required to implement a high-intensity effluent monitoring of biweekly sampling to better characterize the effluent for nutrients).

Phosphorus

- Four of the eight POTW permits established numeric limitations, monitoring requirements or action levels for phosphorus (two permits established maximum daily limits of 1.0 mg/l for total phosphorus based on “Best Treatment Technology” requirements in TOGS 1.3.6; one permit established monitoring only requirements for total phosphorus and orthophosphate; one permit established a numeric action level for total phosphorus).
- It was not clear from the fact sheets when the 1.0 mg/l total phosphorus based on “Best Treatment Technology” requirements in TOGS 1.3.3 and 1.3.6 applied to the specific discharge; two of the eight POTW permits reviewed established a 1.0 mg/l total phosphorus limit based on Best Treatment Technology.
- A fact sheet for one POTW permit identified the receiving water as impaired for phosphorus with no approved TMDL and did not establish phosphorus monitoring. None of the POTW or non-POTW permits were subject to the ambient water quality guidance value of 20 ug/l total phosphorus due to the location of the discharge (one permit

authorized the discharge into a Class A water with no corresponding "P" in the Water Index Number; six permits authorized discharges to Class C waters; and two permits authorized discharges into Class SB waters).

In summary, based on the review of eight fact sheets and nine permits, NYSDEC seems to generally address nutrients in its SPDES program.

2. Pesticide General Permit

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 Cir. 2009)) in which the court vacated the 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. Approximately 40 delegated state NPDES authorities, including NYS, have issued state pesticide general permits as of November 2011.

Background

On January 7, 2009, the Sixth Circuit vacated the EPA's 2006 NPDES Pesticides Rule under a plain language reading of the CWA. 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, the 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 the EPA the two-year stay of the mandate. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted the 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. The EPA proposed a draft pesticide general permit on June 4, 2010 to cover certain discharges resulting from pesticide applications. The EPA Regional offices and State NPDES authorities may issue additional general permits or individual permits if needed.

On November 1, 2011, the NYSDEC issued its own SPDES General Permit for Point Source Dischargers to Surface Waters of New York State from Pesticide Applications (SPDES No. GP-0-11-001). The general permit is effective from November 1, 2011 to October 31, 2016. Eligibility criteria are contained within Part I of the General Permit.

For the 2012 NYS PQR, the EPA reviewed the NYSDEC's PGP with a focus on verifying its consistency with NPDES program requirements.

Program Strengths

The implementation of the NYS PGP appears to be proceeding without any significant issues. NYSDEC has received approximately 20 Notices of Intent (NOIs) for coverage under the permit. More NOIs are expected as the aquatic pest control season continues. NYSDEC has developed a system to transmit letters to operators acknowledging receipt of the NOI.

NYSDEC has already conducted several education and outreach activities on PGP requirements and plans to continue these efforts. Individuals listed on the NYSDEC's PGP webpage (http://www.dec.ny.gov/chemical/70489.html) or the DEC Regional pest control specialists serve as contacts for questions from operators and pesticide applicators. Two Frequently Asked Questions (FAQs) guidance documents have been developed and are posted on the PGP website. These FAQs address general PGP Issues, and NOI completion issues. NYSDEC has also conducted outreach to its statewide DEC regional water and pesticides staff and expects to continue agency staff outreach. The EPA and NYSDEC have also participated in special meetings or conferences of specific pesticide user groups (e.g. Right-of-Way users), and expect to have more opportunities for this type of outreach as the pest control season gets underway. Outreach to public water supply users of algaecides will be conducted through the State Department of Health. Outreach has also been provided to U.S. military facilities through a special coordination group for all U.S. military environmental management issues.

Critical Findings

Based on our review, the EPA has determined that the NYS PGP is broader in scope than the federal NPDES PGP and the current level of implementation is adequate. The EPA's more specific findings are discussed below.

The NYS PGP allows for coverage of pesticide applications where the pesticide is labeled for aquatic use that results in a discharge to any surface waters of New York; however, it does not authorize discharges to surface waters from applications of pesticides that are not labeled for aquatic uses. Pesticide use patterns do not limit the types of discharges required to have permit coverage for discharges of aquatic pesticides.

Discharges not eligible for coverage in the NYS PGP are:

- Discharges to water quality impaired waters;
- Discharges currently or previously covered by an individual SPDES permit;
- Discharges determined to require an individual SPDES permit or another SPDES general permit; and
- Discharges adversely affecting endangered or threatened species.

The requirement to submit a NOI is not dependent on exceeding a threshold. All discharges to waters of the State are required to obtain a permit (submit a NOI) except for discharges to groundwater and discharges from aquatic pesticide applications to small private ponds. Small private ponds are defined as waters that have no outlet to other waters and which are one acre or

less in size and which lie wholly within boundaries of lands privately owned or leased by the individual making or authorizing the pesticide treatment.

3. Pretreatment

The general pretreatment regulations (40 CFR 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 New York State, as well as assess specific language in POTW permits. The State of New York is not authorized to implement the pretreatment or sludge NPDES program components. 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 NYS 2012 PQR also summarizes the following: Program Oversight (number of audits and inspections conducted; numbers of significant industrial users (SIUs) in approved pretreatment programs; numbers 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 pretreatment universe in NYS includes 58 approved local industrial pretreatment programs, which regulate over 1,100 SIUs and over 40 CIUs which are under direct oversight by the EPA. For categorical industrial users where the EPA has oversight, the EPA issues information request letters under section 308 of the CWA, requiring the industries to report at least semiannually.

The EPA meets the EPA Office of Enforcement and Compliance Assurance's Compliance Monitoring Strategy goal of performing one pretreatment compliance audit every five years for each of the 58 approved programs in NYS. Effective November 14, 2005, the EPA made changes to the general pretreatment regulations at 40 CFR Part 403. The changes include

clarifications of existing regulations, such as including implementation of slug control plans in industrial user permits.

As part of pretreatment compliance audits, the EPA inspector reviews local rules and regulations to ensure that the current ordinance reflect the 2005 clarifications. Industrial user permits are reviewed to ensure that, if a slug control plan is required, that implementation of the plan is included in the permit. The EPA inspector also reviews compliance (over a three year period) with SPDES toxics limits to determine if local limits need to be revised.

Program Strengths

Effective March 16, 2003, New York State Law (Chapter 506, Laws of New York, 2002) requires that all dentists recycle mercury and mercury amalgam waste generated in their practices. The law also requires that dentists use encapsulated mercury and prohibits, in the practice of dentistry, the use or possession of elemental mercury not in capsules. Effective May 12, 2006, dental facilities are required to install amalgam separators that remove waste amalgam from the dental facilities' wastewater. When a separator is installed at a dental facility, the dental facility provides written notification to the appropriate sewage treatment works or sewer authority where the wastewater is discharged. For dental facilities that begin operations after May 12, 2006, notification must be submitted within 30 days from the date the separator is placed into service. For dental facilities operating prior to May 12, 2006, notification must have been submitted no later than June 12, 2008. Dental facilities where dental amalgam is not placed or removed, including facilities where the specialties of orthodontics, periodontics, prosthodontics, oral surgery, and maxillofacial surgery are exclusively performed, are exempt from the requirements to install an amalgam separator.

NYSDEC's TOGS 1.3.10 includes a multiple discharge variance for mercury developed in accordance with 6 NYCRR Part 702.17(h). In accordance with the guidance, NYSDEC has begun to include a requirement in some SPDES permits that the permittee must inspect dental facilities at least once every five years to verify compliance with the wastewater treatment and notification elements of 6 NYCRR Part 374.4. Mercury Minimization Programs included in high priority POTW permits. High priority permits include all POTWs with a design flow of 5 MGD or greater (which is the same universe as the approved pretreatment programs).

Critical Findings

Based on the reviews of the pretreatment program in NYS, the EPA presents the following findings regarding regulatory updates and mercury.

Regulatory Updates

The EPA sent a letter dated January 19, 2005 to the NYSDEC proposing language to be incorporated into permits requiring a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1). The EPA sent a letter dated November 6, 2006 notifying the NYSDEC that the EPA had made changes to the general pretreatment regulations and requesting that NYS update its code to reflect the changes to the federal regulations. The letter also included

additional citations to the NYS regulations that are incorporated by reference (including 40 CFR Parts 122 and 136) that are also incorporated by reference and are not reflected in the current version of 6 NYCRR Part 750. NYS has not updated the state regulations to update CFRs that are incorporated by reference into 6 NYCRR Part 750.

Mercury

Starting in December 2010, as part of EPA's pretreatment audits, the inspector has conducted inspections that consist of visiting one or two dental practices per audit to assess compliance with the state's regulations for dental amalgam separators. The dentists are given advance notice of the EPA's visits. Between December 2010 and April 2012, the EPA visited 29 dental practices. Among the findings from the visits are:

- At least five dentists admitted disposal of amalgam waste with medical waste;
- At least eleven dentists used a line cleaner with a pH that is acidic and not recommended for use with the amalgam separators; and
- At least five dentists had not replaced the cartridges on their amalgam separators in accordance with the manufacturers requirements (e.g., above the fill line) at the time of the EPA visit. In at least two instances, the separator was maintained just prior to the EPA's announced visit.

As a result of the dental facility inspections, the EPA inspector has recommended during the course of pretreatment program audits that the local pretreatment programs issue non-SIU permits to dentists. The permits can require the dentists to provide records, on a semi-annual or annual basis, from the collection service or recycler documenting the name of the collection service, weight of dental amalgam waste, and name and address where the dental amalgam waste are ultimately recycled, as well as the date that the separator cartridge is changed out and the Material Safety Data Sheet for the line cleaner used at the facility showing the pH of the line cleaner and indicating whether or not the line cleaner contains chlorine.

4. Stormwater

The NPDES program requires stormwater discharges from certain municipal separate storm sewer systems (MS4s), industrial activities, and construction sites to be permitted. Generally, the EPA and NPDES-authorized states issue individual permits for medium and large MS4s and general permits for smaller MS4s, industrial activities, and construction activities. NYSDEC is authorized to issue stormwater permits under the SPDES program.

Background

At this time, NYS has three general permits associated with the regulation of stormwater discharges from construction activities, municipalities, and industrial facilities. A general permit regarding the regulation of stormwater discharges from High Volume Hydraulic Fracturing (HVHF) is still in draft. These permits were all reviewed as part of the NYS 2012 PQR and are listed below:

- New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001);
- New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) (Permit No. GP-0-10-002);
- New York State Department of Environmental Conservation SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (Permit No. GP-0-06-002); and
- DRAFT New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from High Volume Hydraulic Fracturing (Permit No. GP-XXXXXX)

General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001)

Background

On January 29, 2010, the EPA completed its review of NYSDEC's draft General Permit for Stormwater Discharges from Construction and transmitted comments on the draft permit. The NYSDEC Construction General Permit (CGP) was reviewed by the EPA permitting program and compliance staff, Office of Regional Counsel, and the EPA Headquarters. The EPA utilized the national the EPA 2008 NPDES General Permit for Stormwater Discharges from Construction Activities to review the NYSDEC CGP for completeness. In January 2010, NYSDEC issued the CGP and it became effective on January 29, 2010. In 2011, the NYSDEC CGP covered approximately 7800 facilities.

Critical Findings

Based on our review of the 2010 draft CGP, the EPA presents the following findings:

- NYSDEC's permit cycle for the CGP occurred as the EPA was promulgating the Construction and Development Effluent Guidelines located at 40 CFR Part 450. The EPA advised NYSDEC to begin work on analogous regulations and permit requirements immediately or possibly modifying the CGP prior to its expiration date;
- The NYS' Storm Water Pollution Prevention Plan (SWPPP) needed strengthening in the following areas: to identify five more items found in the federal permit, to supply a deadline for modification of the SWPPP when required, and the pollutants listed under the "pollution prevention measures" section of SWPPP needed to be expanded to reflect the federal permit;
- The CGP should be more consistent with section 3 of the EPA's 2008 CGP and needs requirements for oil and hazardous substances, preservation of vegetation, existing trees, or riparian areas, and off-site sediment clean-up;

- The NYSDEC CGP Appendix B contained language that seemed to exempt certain construction sites from post-construction controls; and
- Although states are not required to adopt the federal endangered species requirements, the EPA suggested language that would strengthen the draft conditions of the CGP that address impacts to endangered and other sensitive species.

General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) (GP-0-10-002)

Background

On March 2, 2010, the EPA completed its review of NYSDEC's draft SPDES Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s) and transmitted the EPA's comments on the draft permit. The MS4 permit was reviewed by the EPA permitting program and compliance staff, Office of Regional Counsel, and the EPA Headquarters. The EPA utilized the EPA's *Model Small MS4 General Permit* and the draft *MS4 Permit Improvement Guide* to review the NYSDEC MS4 Permit for completeness.

The NYSDEC MS4 general permit (GP) covered 516 permittees in 2011. The permit was finalized, effective May 1, 2010, and expires April 30, 2015. In June 2010, the permit was challenged by Natural Resources Defense Council (NRDC) and other petitioners. In January 2012, the New York State Westchester County Supreme Court ruled in favor of the petitioners against the 2010 NYSDEC MS4 Permit. The complaint targeted the lack of NYSDEC oversight of permittees and compliance schedules for discharges to impaired waters, and insufficient public participation specifically with regards to a proposed municipal stormwater pollution management programs. The decision annulled the entire permit rather than only the portions that NRDC challenged. Both parties have since petitioned the court to remove the annulment and stay the 2010 permit - which the court has done, therefore the 2010 permit is currently in effect pending the outcome of the appeal. NYSDEC filed their intent to appeal a few months ago and a "perfected appeal" (the supporting information for the appeal) had been due in July but NYSDEC filed for an extension and it is now due in early August. New York filed its appeal on August 22, 2012.

New York City Phase 1 Municipal Separate Storm Sewer System Permit

In November 1990, the EPA issued the Phase 1 stormwater rule which addressed stormwater discharges from medium and large MS4s. Communities with populations of at least 100,000 qualify to be permitted under the Phase 1 rule. New York City was permitted as a Phase 1 MS4 under those requirements and is the only Phase 1 MS4 in NYS.

There are 14 publicly-owned treatment plants in New York City, each with an individually-issued SPDES permit. Most of New York City is serviced by combined sewer systems; however a portion of the city is serviced by separate storm sewer systems. The MS4 permit requirements imposed on New York City are included in one of the SPDES permits issued to the City. The 2008 NYS PQR found that the permit conditions that apply to the MS4 programs are vague and

do not require the implementation of a Stormwater Management Plan. This deficiency has not yet been corrected.

The MS4 requirements in the Phase 1 MS4 permit are the following:

- Review sewer use bylaws;
- Undertake a discharge characterization study which includes largely conventional, polycyclic aromatic hydrocarbons and some metals;
- Develop and submit for approval a stormwater monitoring plan;
- Conduct follow-up to track down illicit discharges detected during the characterization study, if necessary; and
- Inventory industrial facilities.

Phase 1 MS4 permits are required to establish controls to the Maximum Extent Practicable (MEP) and effectively prohibit non-stormwater discharges to the MS4. MEP is intended to be flexible enough to allow for site specific permit conditions to be developed. Information submitted as part of the application process should be used to develop updated permit conditions which are enforceable and reduce the discharge of pollutants to the MEP.

Critical Findings

Based on our review of the draft NYSDEC MS4 GP and comments submitted to NYSDEC in March 2010, the following are select findings:

- Some requirements could have been more stringent than the previous permit. For example, the six minimum control measures could have been addressed more specifically. In some provisions of the permit, NYSDEC required the permittee to "develop" and "implement" plans which was identical language to the previous permit. The Illicit Discharge Detection and Elimination minimum control measure, for example, did not build upon the initial MS4 permit's requirements to "map outfalls";
- The EPA also suggested including requirements in the Illicit Discharge Detection and Elimination control measure for education and outreach that would address/promote sound management of on-site/decentralized wastewater treatment systems;
- Although NYSDEC addressed green infrastructure/low impact development in its MS4 permit and *New York State Stormwater Design Manual*, the EPA advised that language stronger than "encourage" and "consider" be used within the permit when discussing these methods and NYSDEC should look for opportunities to require such actions within the permit;
- The EPA recommended that language addressing the control and removal of marine debris should be included in the Pollution Prevention and Good Housekeeping minimum

control measure; floatables control also needed to be added to the list of requirements in this section;

- The EPA noted that NYSDEC has made very positive changes to its *New York State Stormwater Design Manual* and believes that NYSDEC will drive its MS4 program with the design manual but needed to more explicitly make connections within the permit to the design manual;
- NYSDEC was vague with regards to its requirement to have MS4s "conduct an annual evaluation of its program compliance, the appropriateness of its identified BMPs, and progress towards achieving its identified goals…" and should clarify deadlines and where these items should be reported.

Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (GP-0-06-002)

Background

On August 16, 2006, the EPA completed its review of NYSDEC's draft SPDES Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity and transmitted comments on the draft permit. The MSGP was reviewed by the EPA permitting program and compliance staff and the Office of Regional Counsel. The EPA utilized the national draft the *EPA 2008 NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* to review the NYSDEC MSGP for completeness.

The NYSDEC MSGP covered approximately 1500 permittees in 2011. The permit was issued March 2007 and expired in March 2012. NYSDEC issued an interim permit for a six month period as it had not completed work on the permit it originally intended to issue for renewal. The interim permit was effective March 2012, expires September 2012, and is identical to NYSDEC's 2007 MSGP. The interim permit allows current permittees to maintain coverage without taking any action. New permittees have to submit an NOI to gain coverage under the six month NYSDEC MSGP. The EPA received a proposed draft MSGP from NYSDEC on March, 28, 2012. The comment period ended on June 28, 2012 and EPA has submitted comments.

Critical Findings

Based on our review, the EPA presents the following findings on the draft MSGP:

- NYSDEC redefined "waters of the US" to "waters of the state" and the EPA is concerned that the NYSDEC definition does not include all water bodies that the federal definition does;
- In the EPA's 2008 MSGP some pollutants have limits based on a water hardness range. The NYSDEC MSGP did not base these limits on a hardness range but established a constant limit. At a hardness value of 100 or less, the limit is less stringent than EPA's MSGP limit;

- NYSDEC did not include all site map requirements in both the main section of the permit and in the Sector for Mineral Mining and Dressing; and
- NYSDEC did not include a total mercury limit and the total cyanide limit was less stringent than the EPA's MSGP limit in the Sector for Hazardous Waste Treatment, Storage and Disposal Facilities of the NYSDEC MSGP.

NYSDEC issued the final MSGP on September 28, 2012 and adequately addressed all of EPA's submitted comments.

General Permit for Stormwater Discharges Associated with High Volume Hydraulic Fracturing (HVHF)

Background

More than 75,000 oil, gas and solution salt mining wells have been drilled in NYS since the late 1800's. About 14,000 of these are still active and new drilling continues. Wells are also drilled in NYS for underground gas storage, geothermal heating/cooling, stratigraphic exploration, and brine disposal. NYSDEC's Division of Mineral Resources administers regulations and a permitting program for drilling and well operation.

In 1992, NYSDEC developed an Environmental Impact Statement (EIS) for hydraulic fracturing (<80,000 gallons). The development of a potentially significant natural gas resource in the Marcellus Shale, located partially in NYS, would necessitate the use of horizontal drilling and a high-volume hydraulic fracturing. This technique requires large volumes of water. NYSDEC determined that a review under the State Environmental Quality Review Act (SEQRA) was necessary before any well permits can be issued. NYSDEC issued a draft Supplemental Generic Environmental Impact Statement (SGEIS) in September 2009. The draft SGEIS addresses permit conditions required for gas drilling in Marcellus Shale and other areas of the state. The EPA provided comments on the draft SGEIS on December 30, 2009 and NYSDEC received more than 13,000 public comments in total.

As a result of the comments on the September 2009 draft SGEIS, NYS developed a Revised SGEIS on the Oil, Gas and Solution Mining Regulatory Program in September 2011. At the same time, NYSDEC also proposed changes to their state regulations at 6 NYCRR Parts 52, 190, 550-556, 560, and 750 and issued a draft general permit to authorize stormwater discharges to waters of the state from the construction and industrial operation of HVHF operations. The comment period for the revised SGEIS, regulation changes, and general permit closed on January 11, 2012. The EPA provided comments to the state on the revised SGEIS, regulation changes, and general permit after consultation with EPA Headquarters. The EPA's comments can be found at: http://www.epa.gov/region2/newsevents/hydro.html.

Critical Findings

The EPA provided the following comments to NYSDEC:

- The EPA recommended that wetlands qualifiers needed to be strengthened and the permit should note that Section 404 of the CWA might require a separate permit for sites located within federally regulated wetlands;
- The "Obtaining General Permit Coverage" section of the NYSDEC HVHF permit needs to better specify responsible parties and secure locations for the site's SWPPP. A condition in this section also seems to allow operations at the site to commence 60 days after the State receives the NOI, even if the SWPPP was not prepared in conformance with the State's requirements – the EPA has asked for this condition to be removed;
- In the section describing the SWPPP, NYSDEC should be more specific by what is meant by the terms "minimize", "sensitive", and "infeasible". Also it was suggested that NYSDEC require that the site map include site specific waste management controls and indicate where stormwater discharges to the waters of the U.S. or wetlands;
- Within the inspection, maintenance and recordkeeping part of the HVHF permit, NYSDEC needed to require that the site notify the state when soil disturbing activities have been temporarily suspended, strengthen reporting for providing weather information, and provide inspection reports for the condition of all natural surface waterbodies within or adjacent to the site; and
- The EPA advised that the HVHF SWPPP should require that a map with locations of horizontal drilling locations be identified relative to aquifers and unfiltered water supply, identify possible issues regarding hydrologic connectivity to surface waters, and locations of all surface waterbodies within one mile of the well site. Also, the NYSDEC should strengthen record keeping and employee training requirements.

NYSDEC has indicated that the final HVHF general permit will address all of EPA's comments listed above.

IV. SPECIAL FOCUS AREA FINDINGS

The EPA special focus area reviews addressed the following areas: the regulation of the shale gas extraction industry, Confined Animal Feeding Operations (CAFOs), review of facilities with Flue Gas Desulfurization (FGD)/coal combustion residual (CCR) waste streams, and Combined Sewer Overflows (CSOs).

A. Shale Gas

Background
The Regional Administrator of EPA Region 2 has identified hydraulic fracturing as a high-priority issue for the region. More detailed background information is provided in the previous section regarding the General Permit for Stormwater Discharges Associated with HVHF.

Critical Findings

Based on our review, the EPA presents the following findings regarding the notice of the introduction of new pollutants associated with extraction of shale gas and the City of Watertown (NY0025984) permit.

Notice of New Introduction of Pollutants

As noted in "Natural Gas Drilling in the Marcellus Shale NPDES Program Frequently Asked Questions (FAQs)" dated March 16, 2011 (developed by the EPA Headquarters), POTWs must provide adequate notice to the Director of any new introduction of pollutants into the POTW from an indirect discharger which would be subject to effluent guidelines if it were directly discharging those pollutants and also provide notice of any substantial change in the volume or character of pollutants being introduced into that POTW. In cases such as NYS, where the state is the permitting authority and the EPA is the approval authority for pretreatment, the POTW must submit the required information to both agencies. The EPA provided all approved pretreatment programs and mini-pretreatment programs in NYS with a copy of the FAQs in a letter dated April 7, 2011. The EPA is working with NYSDEC to modify POTW permits to explicitly require this notification to the EPA so that the EPA is aware as soon as possible of any POTWs that wish to accept wastewater from hydraulic fracturing operations.

As of January 13, 2012, the EPA has commented on four draft permits that the permits must explicitly include the requirement at 40 CFR 122.42(b) including the requirement that POTWs must provide adequate notice to the state and the EPA of any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants. NYSDEC has been consistently including this requirement, where applicable, on the Recording, Reporting and Monitoring page of SPDES permits since early 2012.

City of Watertown (NY0025984)

The City of Watertown Water Pollution Control Plant permit was reviewed as part of the NYS 2012 PQR. From January 5 through 7, 2010, with approval from the NYSDEC, the City of Watertown accepted approximately 33,000 gallons of wastewater from a vertical hydraulic fracturing operation from Utica Shale deposits in Otsego County. NYSDEC required that the City of Watertown perform monitoring for total solids, total dissolved solids (TDS), chloride, toluene, and acute toxicity. NYSDEC has provided the monitoring data to the EPA.

City of Watertown's SPDES permit was renewed effective February 1, 2011. City of Watertown did not seek permission to accept hydraulic fracturing wastewater on a regular basis. Instead, City of Watertown sought to accept hydraulic fracturing wastewater with case-by-case approval from NYSDEC. The permit issued to City of Watertown requires twice a week monitoring for TDS and states that, "The permittee is not permitted to accept flowback waters (i.e., drilling fluids from hydrofracturing operations) for treatment at a rate which exceeds one (1) percent of the Daily Average flow on a daily basis without prior approval by the EPA, based on a headworks analysis performed in accordance with 40 CFR 403.5, that demonstrates that the discharge(s) will not cause pass through or interference." and "Flowback waters cannot be

accepted for treatment without a case-by-case approval by the Department. If flowback waters are approved by the Department for acceptance for treatment, the monitoring frequency shall increase to 3 [times per] day for the period that such wastewaters are being treated at the treatment facility."

B. Concentrated Animal Feeding Operations

Background

Federal regulations at 40 CFR 122.23 define an animal feeding operation as a lot or facility where animals are confined and fed and where crops are not sustained. Concentrated Animal Feeding Operations (CAFOs) are large facilities where animals are raised or confined and are defined as point sources by federal regulations. The regulations also 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 U.S.

The EPA first developed federal effluent 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. As a result, 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 regulations became effective on December 22, 2008 and require 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 incorporated into the permit, making it a requirement to public notice the NMP. Pursuant to 40 CFR 123.62(e), states permitting authorities are required to update state law and regulations to be consistent with the 2008 CAFO regulations by December 4, 2010.

NYSDEC issued their first state CAFO general permit in July 1999. The general permit covered large facilities with 1,000 animals or more in addition to those operations with 300 to 999 animals, medium CAFOs. NYSDEC's state CAFO permit requires all permittees to develop a Comprehensive Nutrient Management Plan (CNMP). The CNMP must be prepared in accordance with NRCS Conservation Practice Standard No. 312-NY and approved by a certified Agricultural Environmental Management Planner. The plan must be certified every five years such that it is in accordance with NRCS Conservation Practice Standard 312-NY. The permittee is required to amend the CNMP prior to commencing any changes to the operation that would potentially affect discharge.

NYSDEC re-issued their CAFO general permit on July 1, 2004 (GP-04-02) which met the requirements set forth in the 2003 rule by incorporating the necessary changes in the permit. NYSDEC submitted a draft permit and supporting documents to the EPA for review and comment. Based on information for NYSDEC, approximately 622 facilities have obtained coverage under the 2004 CAFO general permit. In response to the EPA's 2008 CAFO regulations, NYSDEC reviewed their 2004 general permit and decided to have both a general permit to address federal CAFO requirements, which NYSDEC refers to as the "CWA Permit", and an additional permit for those facilities that would not be regulated under the federal

regulations, which the state refers to as the "State Permit". The CWA permit (GP-04-02) was public noticed in 2009 and received a significant number of comments. There are approximately 146 large CAFOs and 123 medium CAFOs permitted under GP-04-02 which has been administratively extended pending the issuance of the State permit. NYSDEC has not finalized the CWA permit to date and therefore has missed the compliance date of December 4, 2010 that is specified in 40 CFR 123.62(e).

The State permit (GP-0-09-001) was issued in July 2009 and requires that all medium and large CAFOs who discharge or propose to discharge to seek State permit coverage (NYS law governs the creation of a point source). The State permit implements the waste retention requirement from the ELGs and requires the development and implementation of NMPs. Specifically, the permit requires an AWMP to be developed in accordance with the *Natural Resource Conservation Service (NRCS) - Conservation Practice Standard - Waste Management System No. 312 - NY.* The permit also requires that the AWMP be approved by a Certified Agricultural Planner. NYSDEC's general permit includes facilities as low as 300 Animal Units, and they have been able to cooperate with the agricultural sector to include small farms in their permitting program. Under the State Permit, there are approximately 11 large CAFOs and 291 medium CAFOs covered by the permit.

Critical Findings

Based on our review, the EPA presents the following finding:

- NYSDEC has not finalized the CWA permit to date and therefore has missed the compliance date of December 4, 2010 that is specified in 40 CFR 123.62(e).

C. Flue Gas Desulphurization/ Coal Combustion Residue

Background

The EPA Headquarters is currently working on an update of the ELGs for Steam Electric Power Plants (40 CFR Part 423). In development of the ELGs, newer air pollution control equipment, specifically wet flue gas desulphurization (FGD) units, or wet scrubbers, have shown to be an important source of concentrated pollutants that should be considered. In addition, failure of ash ponds in Tennessee and releases from ash ponds in Alabama has prompted the EPA to conduct physical assessments and monitoring at a number of sites. This closer examination of discharges from ash ponds containing coal combustion residue (CCR) showed that they may have impacts on water quality. Given these concerns, reasonable potential to exceed water quality standards must be assessed for these discharges and the permit must establish appropriate water quality-based limits where necessary.

On June 7, 2010, the EPA issued guidance entitled *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization and Coal Combustion Residuals Impoundments at Steam Electric Power Plants.* On October 28, 2011, the EPA provided the NYSDEC with this guidance document and recommended the following when developing permits for power plants:

- Ensure that permit applications require the identification and monitoring of waste streams from FGD, CCR, or gas slag handling sources;
- Establish a permit requirement to use the more sensitive methods for monitoring mercury, such as EPA Methods 1631E and 245.7, in these waste streams;
- Use the current ELG to set limits for pollutants and waste streams that were considered and regulated by the guideline, use best professional judgment (BPJ) to set technology-based limits for pollutants and waste streams that were not considered by the applicable ELG; and
- Assess reasonable potential to exceed state water quality standards from FGD and CCR waste streams, and establish appropriate water quality-based limits where necessary.

As part of the 2012 PQR, two permits were reviewed with special focus on the permit requirements related to FGD and CCR waste streams.

Program Strengths

Both permits adequately establish water quality-based effluent limitations for metals and mercury. One permit reviewed for FGD and CCR established a requirement that the permittee use the most sensitive analytical EPA Method 1631E for analysis of mercury in accordance with the requirements of the *Technical Operational Guidance Series 1.3.10 Mercury - SPDES Permitting, Multiple Discharger Variance, and Water Quality Monitoring*. The second permit reviewed for FGD and CCR did not require that the EPA Method 1631E be used to analyze mercury because no effluent limit for mercury was established. The EPA Method 1631E is capable of detecting mercury to a level of 0.5 ng/L, and is therefore the most sensitive method available for determining reasonable potential to cause or contribute to an exceedance of the state's water quality standard of 0.7 ng/L for mercury.

Critical Findings

Based on our review, the EPA presents the following findings:

While NYSDEC established water quality-based effluent limitations for metals and mercury in both power plant permits, it is not clear from the fact sheet the assumptions used to develop the conditions of the permit such as dilution. It is also not clear whether the potential discharges from the overflow of the CCR impoundments were considered. The installation of FGD units at the facility that did not have an effluent limit for mercury are not anticipated and the fact sheet did not include this information that would have provided the rationale for why this waste stream is not addressed for this facility.

In a more recent preliminary draft permit for the same facility, the fact sheet indicated that while the detected level of mercury in the effluent was above the water quality standard, the level was so low that no minimization efforts at the facility would lower the levels of mercury and therefore no monitoring or permit requirements would be established. It should be explicitly

noted in the fact sheet whether or not NYSDEC found that there was reasonable potential as a basis for establishing permit conditions for mercury. It is also not clear whether NYSDEC was analyzing for reasonable potential to exceed the state water quality standard of 0.7 ng/L for mercury or the effluent level of 50 ng/L specified in TOGS 1.3.10 for the multiple discharger variance. The unlikelihood that minimization efforts at the site will reduce mercury levels in the discharge is not an appropriate justification for the absence of an effluent limit. Additionally, the previous permit included a numeric effluent limitation for mercury. The removal of this limitation must be justified in the fact sheet in accordance with antibacksliding requirements at CWA 402(o) and 40 CFR 122.44(l).

D. Combined Sewer Overflows (CSOs)

Background

Combined sewer overflows (CSOs) present environmental and health problems because they discharge untreated wastewater that contain microbial pathogens, suspended solids, toxic chemicals, trash and other pollutants into waterways. CSO discharges are subject to CWA section 402(q), which requires that any permit, enforcement order or decree for discharges from combined sewer systems shall conform to the EPA's 1994 CSO Control Policy (59 Fed. Reg. 18688, April 19, 1994, 33 U.S.C. 1342(q)).

The CSO Control Policy identifies permit requirements for the development and implementation of CSO controls using a two-phase approach. Initial Phase I permits must include requirements for the implementation of nine minimum controls and development of a Long-Term CSO Control Plan (LTCP). Phase II permits must contain requirements for implementation of the LTCP.

The following are the major elements of Phase I and II permits to implement the 1994 CSO Control Policy and ensure protection of water quality.

1. Phase I Permits – Requirements to implement nine minimum controls and develop a LTCP:
    a. Immediately implement the nine minimum controls;
    b. Develop and submit a report documenting the implementation of the nine minimum controls;
    c. Comply with applicable water quality standards, expressed in the form of a narrative limitation; and
    d. Develop and submit, based on a schedule in an appropriate enforceable mechanism, a LTCP.
2. Phase II Permits – Requirements for Implementation of a LTCP:
    a. Requirements to implement the technology-based controls, including the nine minimum controls determined on a BPJ basis;

b. Narrative requirements which ensure that the selected CSO controls are implemented, operated and maintained as described in the LTCP;
c. Water quality-based effluent limits under 40 CFR 122.44(d)(1) and 122.44(k), requiring compliance with, no later than the date allowed under the state water quality standards, the numeric performance standards for the selected CSO controls. This can be expressed as a maximum number of overflow events per year or a minimum percentage capture of combined sewage by volume for treatment;

d. A requirement to implement, with an established schedule, the approved post-construction water quality assessment program including requirements to monitor and collect sufficient information to demonstrate compliance with state water quality standards and protection of designated uses as well as to determine the effectiveness of CSO controls;

e. A requirement to reassess overflows to sensitive areas;

f. Conditions establishing requirements for maximizing the treatment of wet weather flows at the POTW facility; and

g. A reopener clause authorizing the permitting authority to reopen and modify the permit upon determination that the CSO controls fail to meet state water quality standards or protect designated uses.

As part of the 2012 PQR, the EPA reviewed three permits with special focus on the CSO requirements and whether the permits met the conditions of the EPA's 1994 CSO Control Policy.

Program Strengths

NYSDEC has made good progress in implementing the EPA's 1994 CSO Control Policy. CSO permittees are required to implement the nine minimum controls (included in the state's 15 CSO Best Management Practices or BMPs) and develop a LTCP. NYSDEC has approved a majority of the LTCPs, and is currently developing Phase II permits and a system to help track the permittees' implementation of the required CSO controls.

NYSDEC has responded to appeals from the New York City Department of Environmental Protection (NYCDEP) on their Phase I permits and together have revised a 2005 CSO Enforcement Order pertaining to CSOs located within the City of New York. The revised order substituted several gray CSO controls with other gray controls and committed NYCDEP to implement a major green infrastructure program to control CSOs using adaptive management techniques. Also, the revised order establishes firm schedules for developing LTCPs and also includes a requirement to evaluate the highest attainable use of each water body, as per the fishable/swimmable goal of the CWA.

Critical Findings

Based on our review, the EPA findings are listed below.

- For three CSO permits reviewed, the following CSO conditions were missing from the permit:
    - Requirements for compliance with state water quality standards, including narrative criteria; and
    - A topographic map or sketch showing CSO discharge locations.
- One CSO permit reviewed did not include all Phase I CSO requirements. Although the satellite communities own the individual CSOs, the permit did not include the following NYSDEC CSO BMPs (nine minimum controls):
    - Review of pretreatment requirements to minimize CSO Impacts; and
    - Characterization and monitoring of the portions of the collection system owned or operated by the POTW (e.g., interceptors, regulators) to help maximize use of the collection system for storage and maximize flow to the POTW for treatment.
- Two CSO permits reviewed did not establish the appropriate Phase II permit requirements including the following:
    - Narrative requirements to ensure that the selected CSO controls are implemented, operated and maintained as described in the LTCP;
    - Water quality-based effluent limits requiring compliance with state water quality standards and numeric performance standards for CSO controls (e.g., percent capture of combined sewer flows, maximum number of overflows/year); and
    - A requirement to reassess overflows to sensitive areas.

V. ACTION ITEMS

This section provides a summary of the main findings of the NYS 2012 PQR and describes the action items that were developed as part of the PQR to improve NYSDEC's SPDES permitting program. The action items will serve as the basis for ongoing discussions between the EPA and NYSDEC. These discussions will focus on developing strategies to address each action item to eliminate program deficiencies and improve program performance.

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

- **Critical Findings** (Category 1) - Most Significant: action items will address a current deficiency or noncompliance with a federal regulation.
- **Recommended Actions** (Category 2) - Recommended: action items will address a current deficiency with the EPA guidance or policy.

- **Suggested Practices** (Category 3) - Suggested: proposed action items are listed as recommendations to increase the effectiveness of NYSDEC's SPDES permit program.

Action items based on critical findings and recommended actions should be used to augment the list of "follow up actions" currently established as indicator performance measures and tracked under the EPA's Strategic Plan Water Quality Goals.

A. Basic Facility Information and Permit Application

NYSDEC's streamlined administrative permit renewal process is not consistent with federal application requirements at 40 CFR 122.21 since it allows permittees to submit abbreviated application information during permit renewal. As a result, applications reviewed were often incomplete with lack of whole effluent toxicity data or the required amount of sampling data (e.g., at least three sets). However, in January 2012, NYSDEC finalized TOGS 1.2.2 that amends the implementation of the administrative permit renewal process.

The following is an action item to help NYDEC strengthen their NPDES permit program:

- NYSDEC must implement the January 2012 revised TOGS 1.2.2 –Administrative Process of EBPS, including requiring data and other application information in order to be consistent with the EPA regulations at 40 CFR 122.21 as part of the application process. (Category 1)

B. Technology-based Effluent Limitations

Fact sheets for POTWs provided a minimal description of wastewater treatment processes and discussion of the basis of technology-based effluent limitations. Therefore, the EPA was unable to determine whether federal technology-based standards were appropriately applied.

Fact sheets for non-POTWs did not consistently provide an explanation of facility categorization and determination of applicable ELGs. Where ELGs were believed to be applicable, the administrative records did not provide documentation of the calculations used to develop technology-based effluent limitations.

An action item to help NYSDEC strengthen their NPDES permit program includes the following:

- NYSDEC must clearly identify in fact sheets the basis for technology-based effluent limitations and provide the appropriate regulatory citations (e.g.; state and federal) and calculations supporting all effluent limits in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56, particularly where final effluent limitations are expressed differently from what is contained in state or federal technology-based standards. (Category 1)

C. Water Quality-Based Effluent Limitations

Evaluations of reasonable potential were not apparent in the materials reviewed during the NYS 2012 PQR. The EPA found it confusing between NYSDEC's terminology for watershed-based

analyses and wasteload allocation development and implementation compared to similar terms defined in federal regulation at 40 CFR 130.2(i) or the EPA guidance or policy. Fact sheets lacked discussion of specific pollutants of concern, receiving stream impairment status, TMDL applicability, and more importantly, documentation of reasonable potential analyses and WQBELs calculations.

Action Items to help NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must clearly identify in fact sheets the basis for water quality-based effluent limitations, including the basis of dilution ratios, and provide the appropriate regulatory citations and calculations supporting all effluent limits in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56. (Category 1)
- NYSDEC must ensure that all water quality-based limits are expressed as both average monthly and maximum daily limitations in order to be consistent with 40 CFR 122.45(d). (Category 1)
- NYSDEC should cease referring to their internal process for developing pollutant-specific analyses and wasteload allocations as a TMDL since NYSDEC's internal process does not conform with the TMDL process as described in 40 CFR Part 130. (Category 2)

D. Monitoring and Reporting

Review of monitoring and reporting conditions in POTW and non-POTW permits were generally determined to be adequate; however, site maps and flow diagrams inconsistently identified internal and external effluent monitoring locations. Also, action levels for monitoring specific pollutants were included in certain permits without the rationale for the action levels or the consequence of exceedance an action level.

Action items to help NYSDEC strengthen their NPDES permit program:

- NYSDEC must provide a detailed discussion in the fact sheet the basis of action levels that are either expressed as a numeric value or monitoring only requirement (i.e., no numeric value) in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56. (Category 1)
- NYSDEC must establish EPA Method 1631E for monitoring of mercury in all permits with the potential to discharge mercury in order to be consistent with the EPA regulations at 40 CFR 122.44(d)(1). (Category 1)
- NYSDEC should establish in the permit conditions that more clearly specify the steps the permittee must take if the action level is triggered. (Category 3)

E. Special and Standard Conditions

NYSDEC uses of compliance schedules for the development and implementation of high intensity monitoring plans is not consistent with the federal definition of compliance schedules at

40 CFR 122.47. Some permits inappropriately referred to special studies, specific monitoring requirements, or requirements to develop an implementation plan as compliance schedules.

Standard conditions established at 40 CFR 122.41 and 122.42 were not included in the permits reviewed as part of the core review. Permits indicate that the permittee should refer to 6 NYCRR Part 750 concerning additional monitoring and reporting requirements. This reference does not adequately incorporate the federal requirements by reference.

Action items to help NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must ensure that all conditions or references to compliance schedules in permits are consistent with the EPA regulations at 40 CFR 122.47. (Category 1)
- NYSDEC must incorporate general conditions either expressly or by reference in all SPDES permits in order to be consistent with the EPA regulations at 40 CFR 122.41 and 122.42. (Category 1)
- NYSDEC should incorporate into POTW permits, where appropriate, a condition requiring compliance with 6 NYCRR Part 360 for sludge management. (Category 2)

F. Administrative Process (including public notice)

The administrative records reviewed did not consistently include documentation that demonstrated that public notice procedures were implemented accordingly or that comments had been received and addressed. While parts of an administrative record may have been maintained in another NYDEC office, the administrative record should contain a reference to where the additional information could be located to support the permitting decision.

In addition, during the on-site visit of the NYS 2012 PQR, the final permit a facility was issued without incorporating a change on which the EPA had commented and NYSDEC responded in their response to comments on the draft permit and proposed permit that the change would be incorporated. NYSDEC issued a revised permit that addressed EPA's comments shortly after the on-site visit.

Action items to help NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must ensure that any changes to a draft permit as a result of a response to comment be incorporated into the final permit in order to be consistent with the EPA regulations at 40 CFR 124.2 and 40 CFR 124.6. (Category 1)
- NYSDEC must ensure the administrative record includes a written response to all significant comments received on a draft permit during the comment period in order to be consistent with the EPA regulations at 40 CFR 124.17. (Category 1)

G. Administrative Records

Fact sheets did not meet the federal requirements at 40 CFR 124.8 and 124.56. Fact sheets did not adequately describe the type of facility or activity which is subject to the permit, the type and

quantity of wastes or pollutants of concern, applicability of federal technology-based standards, the receiving water quality, or the applicable TMDL and water quality standards. Fact sheets also do not clearly provide documentation of the reasonable potential analysis or a determination of calculated effluent limitations (both technology- and water quality-based). The administrative record did not contain sufficient information to support the basis of the draft permit conditions include references to applicable statutory or regulatory provisions or other appropriate supporting information.

Action items to help NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC should make improvements to their fact sheet and permit templates to include a more robust discussion and documentation of the basis of permit conditions such as the development of effluent limitations. (Category 2)
- NYSDEC should ensure the administrative record contains a clear timeline of permit issuance and development to allow for easy identification of the current permit, draft permit, or subsequent modifications. (Category 3)

H. Core Topic Areas

1. Nutrients

Action items to help the NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC should ensure that fact sheets provide a more detailed rationale when action levels for nutrients are established in lieu of effluent limitations. (Category 2)
- NYSDEC should establish in the permit conditions that more clearly specify the steps the permittee must take if the action levels for nutrients are triggered. (Category 2)
- NYSDEC should ensure that fact sheets provide a detailed rationale when the BAT of 1.0 mg/l total phosphorus provided in TOGS 1.3.6 does not apply to a particular discharger. (Category 2)

2. Pesticide General Permit

NYSDEC should continue with the implementation of the PGP. No action items for the PGP are established at this time.

3. Pretreatment

The following action item has been established to help NYSDEC strengthen their NPDES permit program:

- NYSDEC must update 6 NYCRR Part 750-1.24(c) to reflect the most current revisions of federal regulations to be consistent with 40 CFR Part 403. (Category 1)

4. Stormwater

No action items for the NYS CGP, NYS MS4, and NYS MSGP are established at this time. For the general permit for HVHF, the following action item has been established to help NYSDEC strengthen their NPDES permit program:

- NYSDEC must provide the EPA with a proposed permit for review before issuing the final general permit for stormwater associated with hydraulic fracturing operations in order to be consistent with 40 CFR 123.44. (Category 1)

I. Special Focus Areas

1. Shale Gas

Action items to help the NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must continue to ensure that all permits for POTWs establish a pretreatment notification requirement in order to be consistent with the EPA regulations at 40 CFR 122.42(b). (Category 1)
- NYSDEC should notify the EPA within two weeks when contacted by a POTW requesting approval of the discharge of gas extraction wastewater (from either horizontal or vertical drilling). (Category 3)

2. Concentrated Animal Feeding Operations

Action items to help the NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must revise 6 NYSCRR Part 750 to reflect the changes in the federal CAFO regulations at 40 CFR Parts 122 and 412. (Category 1)
- NYSDEC should target the public notice of the draft State CAFO permit by December 30, 2012 and provide the EPA with an interim report detailing their progress toward the December 30, 2012 goal. (Category 2)

3. Flue Gas Desulphurization/ Coal Combustion Residue

Action items to help the NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must establish a requirement in permits for steam electric power plants, and all POTW and non-POTW facilities where there is the reasonable potential to exceed mercury standards, to monitor mercury in the effluent using EPA Method 1631E in order to be consistent with the EPA regulations at 40 CFR 122.44 and NYSDEC TOGS 1.3.10. (Category 1)

- NYSDEC must include in the fact sheets for steam electric power plants a rationale for the absence of establishing a mercury effluent limit and the decision to exclude waste streams for FGD/CCR units in order to be consistent with the EPA regulations at 40 CFR 122.44, 124.8 and 124.56. (Category 1)

- NYSDEC must discuss in the fact sheet when effluent limitations are established to be less stringent than the previous permit and demonstrate in the fact sheet that the anti-backsliding requirements at CWA section 402(o) and/or 40 CFR 122.44(l) have been met. (Category 1)

4. Combined Sewer Overflows (CSOs)

Action items to help the NYSDEC strengthen their NPDES permit program include the following:

- NYSDEC must include in all Phase II CSO permits the requirements for implementation of the CSO LTCP as described in the EPA's 1994 CSO Control Policy. (Category 1)

- NYSDEC must ensure that fact sheets must contain the following CSO-related information in order to be consistent with the EPA's 1994 CSO Control Policy:

    - A characterization of the CSO discharges (e.g., volumes, frequency, and percent capture of wet weather) and the identification of the discharge locations and associated control structures on a map;

    - A discussion of technology-based controls such as the evaluation, selection, and implementation of each of the nine minimum controls; and an evaluation of the efficacy of the implementation of the controls and its impact on meeting water quality criteria;

    - A discussion of water quality-based controls such as the implementation, operation, and maintenance of CSO controls identified in the permitee's LTCP; and

    - Post Construction Compliance Monitoring Plan – a discussion of the results of, and adequacy of, the monitoring plan to demonstrate compliance with WQS and protection of designated uses and the effectiveness of CSO controls. (Category 1)

- NYSDEC must include in all Phase I CSO permits a requirement that the permittee develop and implement a CSO Post Construction Compliance Monitoring Plan in order to be consistent with the EPA's 1994 CSO Policy. Permittees must be required, through permit modifications or other enforceable means, to develop and implement CSO Post Construction Compliance Monitoring Plans. (Category 1)

- NYSDEC should track Phase II CSO permit compliance through the implementation of the CSO LTCP. (Category 3)

- NYSDEC should consider requiring permittees to submit the ambient monitoring data required by a CSO Post Construction Compliance Monitoring Plan in an electronic format suitable for inclusion in state water quality tracking systems to facilitate its use in other water quality areas, such as reporting under CWA sections 305(b) and 303(d). (Category 3)

VI. APPENDIX A – Permits Reviewed

NPDES No.	Permit Name	Topics for Review
NY0020290	City of Amsterdam Wastewater Treatment Plant	Core Review; Nutrients; Pretreatment
NY0025984	City of Watertown Water Pollution Control Plant	Core Review; Nutrients; Pretreatment; Shale Gas
NY0027669	Village of Endicott Water Pollution Control Plant	Core Review; Nutrients; Pretreatment
NY0026867	Albany County Sewer District – South Wastewater Treatment Plant	Core Review; Nutrients; Pretreatment; CSOs
NY0002321	Dunkirk Generation Station	Core Review; Flue Gas Desulfurization/Coal Combustion Residue
NY0005118	Astoria Generating Station	Core Review
NY0006262	Danskammer Generating Station	Flue Gas Desulfurization/ Coal Combustion Residue
NY0022713	Village of Victor Sewage Treatment Plant	Core Review; Nutrients; Pretreatment
NY0026778	Port Washington Water Pollution Control Plant	Core Review; Nutrients
NY0028401	Village of Albion Joint Municipal-Industrial Pollution Control Facility	Core Review; Nutrients
NY0021890	Town of Warwick Sewer District #1	Core Review
NY0026328	City of Middletown Sewage Treatment Plant	Core Review
NY0001562	United State Gypsum Company – Oakfield Plant	Core Review; Nutrients
NY0033545	Village of Coxsackie Wastewater Treatment Plant	Core Review
NY0002097	Ferro Electronic Materials – Penn Yan Facility	Core Review
NY0022403	Little Falls Wastewater Treatment Plant	Core Review; CSOs
NY0026689	Yonkers Joint Wastewater Treatment Plant	Core Review; Nutrients; CSOs
General Permits		
GP-0-11-001	NYSDEC SPDES General Permit for Point Source Discharges to Surface Waters of New York from Pesticide Applications	Pesticide General Permit
GP - XXXXXX	Draft NYSDEC SPDEC General Permit for Stormwater Discharges from High Volume Hydraulic Fracturing	Stormwater; Shale Gas
GP-04-02	NYSDEC SPDES General Permit for for Concentrated Animal Feeding Operations (CAFO) ("CWA CAFO permit")	CAFOs
GP-0-09-001	NYSDEC SPDES General Permit for for Concentrated Animal Feeding Operations (CAFO) ("State CAFO permit")	CAFOs
GP-0-10-001	NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity	Stormwater
GP-0-10-002	NYSDEC SPDES General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s)	Stormwater
GP-0-11-009	NYSDEC SPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity	Stormwater

VII. APPENDIX B – Action Items

Critical Findings (Category 1)	
Topic	*Action Item*
Basic Facility Information and Permit Application	NYSDEC must implement the January 2012 revised TOGS 1.2.2 –Administrative Process of EBPS, including requiring data and other application information in order to be consistent with the EPA regulations at 40 CFR 122.21 as part of the application process.
Technology-based Effluent Limitations	NYSDEC must clearly identify in fact sheets the basis for technology-based effluent limitations and provide the appropriate regulatory citations (e.g.; state and federal) and calculations supporting all effluent limits in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56, particularly where final effluent limitations are expressed differently from what is contained in state or federal technology-based standards.
Water Quality-based Effluent Limitations	NYSDEC must clearly identify in fact sheets the basis for water quality-based effluent limitations, including the basis of dilution ratios, and provide the appropriate regulatory citations and calculations supporting all effluent limits in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56.
	NYSDEC must ensure that all water quality-based limits are expressed as both average monthly and maximum daily limitations in order to be consistent with 40 CFR 122.45(d).

Critical Findings (Category 1), continued	
Topic	*Action Item*
Monitoring and Reporting	NYSDEC must provide a detailed discussion in the fact sheet the basis of action levels that are either expressed as a numeric value or monitoring only requirement (i.e., no numeric value) in order to be consistent with the EPA regulations at 40 CFR 124.8 and 124.56.
	NYSDEC must establish EPA Method 1631E for monitoring of mercury in all permits with the potential to discharge mercury in order to be consistent with the EPA regulations at 40 CFR 122.44(d)(1).
Special and Standard Conditions	NYSDEC must ensure that all conditions or references to compliance schedules in permits are consistent with the EPA regulations at 40 CFR 122.47.
Special and Standard Conditions	NYSDEC must incorporate general conditions either expressly or by reference in all SPDES permits in order to be consistent with the EPA regulations at 40 CFR 122.41 and 122.42.
Administrative Process (including public notice)	NYSDEC must ensure that any changes to a draft permit as a result of a response to comment be incorporated into the final permit in order to be consistent with the EPA regulations at 40 CFR 124.2 and 40 CFR 124.6 .
	NYSDEC must ensure the administrative record includes a written response to all significant comments received on a draft permit during the comment period in order to be consistent with the EPA regulations at 40 CFR 124.17.
Pretreatment	NYSDEC must update 6 NYCRR Part 750-1.24(c) to reflect the most current revisions of federal regulations to be consistent with 40 CFR Part 403.
Stormwater	NYSDEC must provide the EPA with a proposed permit for review before issuing the final general permit for stormwater associated with hydraulic fracturing operations in order to be consistent with 40 CFR 123.44.

Critical Findings (Category 1), continued	
Topic	*Action Item*
Shale Gas	NYSDEC must ensure that all permits for POTWs establish a pretreatment notification requirement in order to be consistent with the EPA regulations at 40 CFR 122.42(b).
CAFOs	NYSDEC must revise 6 NYSCRR Part 750 to reflect the changes in the federal CAFO regulations at 40 CFR Parts 122 and 412.
Flue Gas Desulphurization/ Coal Combustion Residue	NYSDEC must establish a requirement in permits for steam electric power plants, and all POTW and non-POTW facilities where there is the reasonable potential to exceed mercury standards, to monitor mercury in the effluent using EPA Method 1631E in order to be consistent with the EPA regulations at 40 CFR 122.44 and NYSDEC TOGS 1.3.10.
	NYSDEC must include in the fact sheets for steam electric power plants a rationale for the absence of establishing a mercury effluent limit and the decision to exclude waste streams for FGD/CCR units in order to be consistent with the EPA regulations at 40 CFR 122.44, 124.8 and 124.56.
	NYSDEC must discuss in the fact sheet when effluent limitations are established to be less stringent than the previous permit and demonstrate in the fact sheet that the anti-backsliding requirements at CWA section 402(o) and/or 40 CFR 122.44(l) have been met.

Critical Findings (Category 1), continued	
Topic	*Action Item*
CSOs	NYSDEC must include in all Phase II CSO permits the requirements for implementation of the CSO LTCP as described in the EPA's 1994 CSO Control Policy.
	NYSDEC must ensure that fact sheets must contain the following CSO-related information in order to be consistent with the EPA's 1994 CSO Control Policy: A characterization of the CSO discharges (e.g., volumes, frequency, and percent capture of wet weather) and the identification of the discharge locations and associated control structures on a map; A discussion of technology-based controls such as the evaluation, selection, and implementation of each of the nine minimum controls; and an evaluation of the efficacy of the implementation of the controls and its impact on meeting water quality criteria; A discussion of water quality-based controls such as the implementation, operation, and maintenance of CSO controls identified in the permitee's LTCP; and Post Construction Compliance Monitoring Plan – a discussion of the results of, and adequacy of, the monitoring plan to demonstrate compliance with WQS and protection of designated uses and the effectiveness of CSO controls.
	NYSDEC must include in all Phase I CSO permits a requirement that the permittee develop and implement a CSO Post Construction Compliance Monitoring Plan in order to be consistent with the EPA's 1994 CSO Policy. Permittees must be required, through permit modifications or other enforceable means, to develop and implement CSO Post Construction Compliance Monitoring Plans.

Recommended Action (Category 2)	
Topic	*Action Item*
Water Quality-Based Effluent Limitations	NYSDEC should cease referring to their internal process for developing pollutant-specific analyses and wasteload allocations as a TMDL since NYSDEC's internal process does not conform with the TMDL process as described in 40 CFR Part 130.
Special and Standard Conditions	NYSDEC should incorporate into POTW permits, where appropriate, a condition requiring compliance with 6 NYCRR Part 360 for sludge management.
Administrative Records	NYSDEC should make improvements to their fact sheet and permit templates to include a more robust discussion and documentation of the basis of permit conditions such as the development of effluent limitations.
Nutrients	NYSDEC should ensure that fact sheets provide a more detailed rationale when action levels for nutrients are established in lieu of effluent limitations.
	NYSDEC should establish in the permit conditions that more clearly specify the steps the permittee must take if the action levels for nutrients are triggered.
	NYSDEC should ensure that fact sheets provide a detailed rationale when the BAT of 1.0 mg/l total phosphorus provided in TOGS 1.3.6 does not apply to a particular discharger.
CAFOs	NYSDEC should target the public notice of the draft State CAFO permit by December 30, 2012 and provide the EPA with an interim report detailing their progress toward the December 30, 2012 goal.

Suggested Practices (Category 3)	
Topic	*Action Item*
Monitoring and Reporting	NYSDEC should establish in the permit conditions that more clearly specify the steps the permittee must take if the action level is triggered.
Administrative Records	NYSDEC should ensure the administrative record contains a clear timeline of permit issuance and development to allow for easy identification of the current permit, draft permit, or subsequent modifications.
Shale Gas	NYSDEC should notify the EPA within two weeks when contacted by a POTW requesting approval of the discharge of gas extraction wastewater (from either horizontal or vertical drilling).
CSOs	NYSDEC should track Phase II CSO permit compliance through the implementation of the CSO LTCP.
	NYSDEC should consider requiring permittees to submit the ambient monitoring data required by a CSO Post Construction Compliance Monitoring Plan in an electronic format suitable for inclusion in state water quality tracking systems to facilitate its use in other water quality areas, such as reporting under CWA sections 305(b) and 303(d).