

NPDES Core Review Checklist Companion

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Introduction

This document serves as a companion to the NPDES Core Review Checklist and provides details for each of the sections and questions in the checklist. The Core Review Checklist verifies that the information expected in an NPDES permit is included in the permit package (permit, fact sheet, and supporting attachments). The PQR checklist was developed using the Central Tenets <<https://www.epa.gov/npdes/central-tenets-npdes-permitting-program>>, and discussions between United States Environmental Protection Agency (EPA) headquarters and regions. Additional guidance for NPDES permit development is provided in EPA's 2010 NPDES Permit Writers' Manual (PWM) <<https://www.epa.gov/npdes/npdes-permit-writers-manual>>.

The information requested for the checklist will be based on the review of a complete permit record that includes the final or draft permit, the fact sheet or statement of basis ("fact sheet" in this document includes both types of documents), and supplemental attachments such as maps, line drawings of the wastewater treatment process, completed applications, discharge monitoring reports (DMRs), and correspondence between the permitting authority and the facility operator.

The checklist is intended to be completed electronically. Reviewers will select an answer for each question from the drop-down list (shown as "choose an item") alongside each question. Reviewers that cannot clearly answer the question with "Yes" or "No," should select "Uncertain." If "Uncertain" is selected, provide an explanation of the reasoning in the comment field within the checklist section. If reviewers anticipate that information missing during the desktop review will be available onsite during the state visit, place a checkmark in the column labeled "Follow Up" along the left-hand side of the checklist. Indications of "Uncertain" and "Follow Up" will signal the onsite reviewer to seek additional clarifying information from the permit record during the state visit.

1. General Information

This section of the checklist includes general information about the permit and dates associated with the PQR.

1. Name of facility

Enter the full name of the facility. The name of the facility is found on the cover page and is not to be confused with the name of the *permittee*. The facility is the place *from which* the *permittee* is *authorized to discharge*.

2. NPDES Permit number of facility

Enter the EPA NPDES permit number. This number is usually found near the top of the cover page and consists of a two letter state abbreviation followed by 7 digits. The state might also have a separate numbering system; if so, make note of this number as well.

3. Type of facility

Check one box per row (for a total of three) to characterize the facility that is permitted.

New or Existing

A facility may either be a new facility for which this is the first NPDES permit (initial issuance) or an existing facility with a permit renewal (reissuance). A permit might also include a permit modification that occurred during the permit term but did not require a revocation and reissuance. Section 11.4.2 of the Permit Writer's Manual (PWM) provides additional information about modification or revocation and reissuance of permits. Check the box for *new* if this is the first permit or for *existing* if this is a permit renewal.

Major or Non-major

A facility may either be a major or a non-major facility as defined on page 2-17 of the PWM or as identified in the fact sheet, often in the facility description. Designation could be based upon one of the following:

- If the facility is a POTW with a design flow of one million gallons per day or greater.
- If the facility is a POTW serving a population of 10,000 or more.
- If the facility is a POTW causing significant water quality impacts.
- If the facility is a non-POTW that scores as a major on the NPDES Permit Rating Worksheet.

A facility that is not designated as a major is considered a non-major facility. Check the box for *major* or *non-major* facility, as applicable, and indicate in the comments how the designation was determined.

POTW or Non-POTW

A facility may either be a publicly owned treatment works (POTW) as defined in section 403.3(q) of Title 40, Code of Federal Regulations (§403.3(q)) or a non-POTW facility. Facilities that are not publicly owned (i.e., federally-owned, privately-owned) are not POTWs. Permit writers might inadvertently classify a facility as a POTW if it treats sewage and apply secondary treatment standards; however, if the treatment works are not publicly owned, then the facility would be subject to Best Professional Judgment (BPJ) for technology-based effluent limitations (TBELs).

4. State contact or permit writer

The state contact or permit writer is the staff person responsible for the permit and may be interviewed during the state visit or if there are any permit-specific questions.

Enter the name of the contact at the permitting authority responsible for the permit and their contact information.

5. Desktop Permit Reviewer

Desktop reviews for the pre-state visit involve reviewing the final permit prior to visiting the state. If reviewing final permits for the PQR, enter the name of the reviewer who performed the desktop pre-State visit final permit review and the date of the desktop review.

6. State Visit Reviewer

State visit reviews are when EPA performs a visit to the office of the state permitting authority. Enter the name of the reviewer who performed the state visit review and date of state review.

2. Permit and Facility Information

This section of the checklist includes the permit dates, discharge authorizations, and basic facility and receiving water information. Generally, the information found on the permit cover page and pertaining to the facility is assessed prior to the state visit.

2.1 Basic Permit Information

This section of the checklist includes information typically found on the Cover Page. Page 3-2 of the PWM indicates that the cover page contains the name and location of the permittee, a statement authorizing the discharge, and a listing of the specific locations for which a discharge is authorized.

1. Did the permit contain appropriate issuance, effective and expiration dates and authorized signatures?

The regulations at §122.46 require permit duration to be for a fixed term not to exceed 5 years and at §122.22 provides the signatories to permit applications and reports.

An authorized signatory for a corporation is defined in §122.22(a)(1) as a responsible corporate officer, such as a president, secretary, treasurer or vice president of a corporation. For a municipality, state, federal, or other public entity, an authorized signatory is defined in §122.22(a)(3) as either a principal executive officer or ranking elected official.

Fill out the dates below and verify that the authorized signature complies with §122.22. Select “Yes”, “No”, or “Uncertain” to indicate whether the permit contained appropriate dates and authorized signatures.

a) What was the permit issuance/effective date?

The permit issuance date is the date that the permit was signed and issued by the permitting authority. The permit issuance date is often found with the signature. The permit effective date is the date that the permit becomes effective. Permitting authorities might choose the beginning of the following month or a future date to permit multiple facilities at the same time when implementing a watershed approach.

Enter the date that the permit was issued and became effective. If the permit was unsigned select “N/A”.

b) Was the permit effective 5 years or less?

The regulations at §122.46 require permit duration to be for a fixed term not to exceed 5 years. In some cases, for example, when a permitting authority is implementing a watershed approach, the permit term might be less than 5 years.

Select “Yes”, “No”, or “Uncertain” after calculating the duration of the permit.

2. Did the permit contain specific authorization-to-discharge information?

The NPDES program requires permits for the discharge of *pollutants* from any *point source* into *waters of the United States*.¹ A permitting authority authorizes a permittee to discharge. Example language includes: [PERMITTING AUTHORITY NAME] authorizes [OPERATOR OF FACILITY NAME] to discharge at [NAME OF FACILITY] from [OUTFALL NUMBER(S)] to [NAME OF RECEIVING WATER].

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit contained the language authorizing the discharge and included the specifics of: from where, to where, and by whom.

3. Note any other program areas applicable to the discharger (e.g., pretreatment, CAFO, 316).

Additional special conditions or program areas can be included in the permit. Section 2.3.2.3 of the PWM discusses stormwater associated with industrial activity, and section 2.3.1.6 of the PWM discusses municipal separate storm sewer systems. Section 9.1.1 of the PWM provides additional information about additional monitoring and special studies, including Toxicity Identification Evaluation/Toxicity Reduction Evaluation (TIE/TRE) and mixing studies. For POTWs, specific special conditions apply and are discussed in section 2.3.1 and 9.2 of the PWM, including the National Pretreatment Program < <https://www.epa.gov/npdes/national-pretreatment-program>>, the sewage sludge (biosolids) program < <https://www.epa.gov/biosolids>>.

¹ Clean Water Act sections 301 and 402; 40 CFR Part 122 (e.g., § 122.1(b)(1)).

combined sewer overflows (CSOs) <<https://www.epa.gov/npdes/combined-sewer-overflows-csos>>, and sanitary sewer overflows (SSOs) <<https://www.epa.gov/npdes/sanitary-sewer-overflows-ssos>>. Section 5.2.2.7 of the PWM discusses CWA section 301(h) variances.

The reviewer should indicate the other permit requirements included in the permit. Often, these additional requirements are included in a special conditions section of the permit.

2.2 Facility and Receiving Water Information

This section of the checklist evaluates whether the permit includes particular elements regarding basic facility and receiving water information. This information is often found on the cover page of the permit and in the beginning of the fact sheet.

1. Did the record or permit describe the physical location of the facility?

The permit should indicate the location of the facility so that permitting authorities and the public are able to identify the facility or activity responsible for the discharge. In most cases, this would be the physical address for the facility. In cases where there is not a specific address, the permit should indicate the nearest cross streets, latitude/longitude coordinates, or identifying parameters to accurately locate the facility.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit identified the facility address or identifying parameters with latitude/longitude coordinates.

2. Did the record include a description of the type of activities and wastewater treatment process at the facility?

The permit record should include descriptions of the type of facility that will discharge, including if the facility is a POTW or specific type of industry. The discussion of type of industrial category might be included in its own section of the fact sheet or with the discussion about effluent limitations guidelines. The discussion of wastewater treatment might be included in its own section or as a line drawing that is required as part of the application and could be included in the permit record.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit or fact sheet included a description of the activities performed at the facility and the treatment process.

3. Were all outfalls that the record indicated are present at the facility identified and authorized in the permit?

An *outfall* (or “permitted feature”) is the location where a point source releases a pollutant to a water of the United States. Outfalls are often authorized on the cover page (see question II.A.2. above) or might be specified in the effluent limitations section with a separate sentence (e.g., “During the period beginning on [PERMIT ISSUANCE DATE] and lasting through midnight on [PERMIT EXPIRATION DATE], the permittee is authorized to discharge from [OUTFALL NUMBER] treated wastewater.”

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit identified and authorized all of the outfalls, including stormwater and combined sewer overflow outfalls (if appropriate).

a) Did the permit identify the physical location of outfalls?

The discharger is required to specify the outfall location in the permit application. Often, the fact sheet includes a section about the location of the discharge, which indicates the outfall number and United States Geological Service (USGS) coordinates of latitude and longitude to accurately locate the outfall.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit included a physical location for each of the outfalls.

4. Did the record clearly identify the name of the receiving water(s)?

An NPDES receiving water is the water of the United States or water of the state into which the permittee discharges. The receiving water name is often identified on the cover page or in a separate section in the fact sheet. The permit should include receiving water names for each outfall identified in the permit.

A discussion of the specific location of the discharge within the receiving water is often provided in the fact sheet. The specific location within the receiving water is useful for permit writers and reviewers to identify if the receiving water is impaired or if total maximum daily loads (TMDLs) have been established (<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/>). The USGS uses hydrologic unit codes (HUCs) to catalog watersheds and for EPA’s Surf Your Watershed (<http://water.epa.gov/type/watersheds/index.cfm>).

Select “Yes”, “No”, or “Uncertain” to indicate whether the receiving water was identified.

3. Permit Application

This section of the checklist summarizes the requirements of an NPDES permit application. Chapter 4 of the PWM provides additional information about the NPDES permit application process.

1. Was the current, appropriate application submitted?

The appropriate application for a discharger depends on the type of facility discharging. The following table presents application requirements for specific types of facilities. Section 4.3 of the PWM details application forms and requirements for individual permits. Authorized states are not required to use the EPA application forms; however, any alternative form used by an authorized state must include the federal requirements at a minimum.

Table 1. Application Forms

Type of facility or program area	Status	Forms
Municipal facilities POTWs with design flows greater than or equal to 0.1 million gallons per day (mgd)	New and existing	Form 2A , Parts A, B and C; Parts D, E, F, or G, as applicable
	POTWs with design flows less than 0.1 mgd	Form 2A , Parts A and C; Parts D, E, F, or G, as applicable
TWTDS (sewage sludge)	New and existing	Form 2S
Concentrated animal production facilities Concentrated animal feeding operations Concentrated aquatic animal production facilities	New and existing	Form 1 and Form 2B
Industrial facilities Manufacturing facilities Commercial facilities Mining activities Silvicultural activities	Existing	Form 1 and Form 2C
	New (process wastewater)	Form 1 and Form 2D
	New and existing (non-process wastewater)	Form 1 and Form 2E
Stormwater discharges associated with industrial	New and existing	Form 1 and

activities (except stormwater discharges associated with construction activity)		Form 2F
Stormwater discharges associated with construction activity	New and existing	Form 1
Stormwater discharges from MS4s serving a population greater than 100,000	New and existing	None
Stormwater discharges from small MS4s	New and existing	None
Cooling water intake structures	New and existing	None

Select “Yes”, “No”, or “Uncertain” to indicate whether the correct application form that corresponds to the appropriate type of facility and status was submitted. If the state used forms different than the federal forms, verify that the correct form was used for the specific state.

2. Was the complete permit application submitted at least 180 days prior to permit expiration?

The regulations at §122.21(c) and (d) require that complete applications are submitted at least 180 days prior to discharge commencement of discharge or 180 days prior to permit expiration, respectively. The regulations at §122.21(e) state that the Director, “[must] not issue a permit before receiving a complete application...” At a minimum, the application form must have all applicable spaces filled in. Instructions for the application form state that all items must be completed and that applicants use the statement *not applicable* (NA) to indicate that the item had been considered.

Select “Yes”, “No”, or “Uncertain” to indicate whether the month and day of the application date occurred at least six months prior to the previous permit expiration date.

a) If no, is there proof that permission for a later date has been granted by the Director?

The regulations at §122.21(c) and (d) allow the Director to grant permission for applications to be submitted at a later date (i.e., within the window of 180 days prior to commencement of discharge or permit expiration); however, the Director shall not provide permission for applications to be submitted later than the expiration date of the existing permit. The fact sheet should include a discussion regarding the timing of the application submittal; however, at a minimum, the administrative record should contain documentation that demonstrates that the Director provided the permittee permission to submit the application at a later date.

3. Was the permit application documented by the Permitting Authority as being complete (including all attachments, diagrams, signature, etc.)?

The regulations at §122.21(e) state that the Director, “[must] not issue a permit before receiving a complete application...” At a minimum, the application form must have all applicable spaces filled in. Instructions for the application form state that all items must be completed and that applicants use the statement *not applicable* (NA) to indicate that the item had been considered.

The following table summarizes the regulatory citations and required components applicable to each type of facility or program area. Section 4.3 of the PWM details application forms and requirements for individual permits.

Table 2. Summary of application components

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
Municipal facilities	New and existing Form 2A §122.21(a)(2)(i)(B) §122.21(j)	Part A–Facility Information; Applicant Information; Existing Environmental Permits; Collection System Information; Indian Country; Flow; Types of Collection Systems; Discharges and Other Disposal Methods; Outfall Descriptions; Description of the Receiving Waters; Descriptions of Treatment; and Effluent Testing Information Part B (POTWs > 0.1 mgd only)–Inflow and Infiltration; Topographic Map; Process Flow Diagram or Schematic; Operation/Maintenance Performed by Contractor(s); Scheduled Improvements or Schedules of Implementation; and Effluent Testing Data Part C–Certification Part D–Expanded Effluent Testing Data Part E–Toxicity Testing Data Part F–Industrial User Discharges and RCRA/CERCLA Wastes Part G–Combined Sewer Systems
TWTDS (sewage sludge)	New and existing Form 2S §122.21(a)(2)(i)(H) §122.21(q)	Part 1, Facilities with a Currently Effective NPDES Permit Section A–Facility Information; Applicant Information; Sewage Sludge Amount; Existing Sewage Sludge Monitoring Data; Sludge Treatment Provided; Sewage Sludge Sent to Other Facilities; Use and Disposal Sites; Certification Part 2, Facilities that have been directed by the permitting authority to submit a full permit application at this time. Section A–General Information Section B–Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge Section C–Land Application of Bulk Sewage Sludge Section D–Surface Disposal Section E–Incineration

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
<p>Concentrated animal production facilities Concentrated animal feeding operations Concentrated aquatic animal production facilities</p>	<p>New and existing</p> <p>Form 1 and Form 2B</p> <p>§122.21(a)(2)(i)(A) and (C) §122.21(f) and (i)</p>	<p>Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification</p> <p>Form 2B</p> <p>Part 1, General Information–Type of Business; Contact Information; Facility Operation Status; Facility Information</p> <p>Part 2, Concentrated Animal Feeding Operation Characteristics–Type and Number of Animals; Manure, Litter, and/or Wastewater Production and Use; Topographic Map; Type of Containment, Storage and Capacity; Nutrient Management Plan; Land Application Best Management Practices</p> <p>Part 3, Concentrated Aquatic Animal Production Characteristics–Outfall and flow characteristics; Number of ponds, raceways, and similar structures; Receiving water and source water information; List of fish species or aquatic animals held</p> <p>Part 4, Certification</p>
<p>Industrial facilities Manufacturing facilities Commercial facilities Mining activities Silvicultural activities</p>	<p>Existing</p> <p>Form 1 and Form 2C</p> <p>§122.21(a)(2)(i)(A) and (D) §122.21(f) and (g)</p> <p>New process wastewater</p> <p>Form 1 and Form 2D</p> <p>§122.21(a)(2)(i)(A) and (E) §122.21(f) and (k)</p> <p>New and existing non-process wastewater</p> <p>Form 1 and Form 2E</p> <p>§122.21(a)(2)(i)(A) and (F) §122.21(f) and (h)</p>	<p>Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification</p> <p>Form 2C–Outfall Location; Flows, Sources of Pollution, and Treatment Technologies, Line Drawings; Intermittent or Seasonal Discharges; Production Information; Scheduled Improvements; Intake and Effluent Characteristics; Potential Discharges Not Covered by Analysis; Biological Toxicity Testing Data; Contract Analysis Information; and Certification</p> <p>Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification</p> <p>Form 2D–Outfall Location; Commencement of Discharge; Flow, Sources of Pollution, and Treatment Technologies; Line Drawings; Intermittent or Seasonal Discharges; Production Information; Effluent Characteristics; Engineering Report on Wastewater Treatment; Other Information; and Certification</p> <p>Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification</p> <p>Form 2E–Outfall Location and Receiving Water; Commencement of Discharge; Types of Waste Discharged; Effluent Characteristics; Intermittent or Seasonal Discharges; Treatment System Characteristics; Other Information; and Certification</p>

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
Stormwater discharges associated with industrial activities (except stormwater discharges associated with construction activity)	New and existing Form 1 and Form 2F §122.21(a)(2)(i)(A) and (G) §122.21(f) §122.26(c)	Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification Form 2F–Outfall Location and Receiving Water; Scheduled Improvements; Site Drainage Map; Narrative Description of Pollutant Sources; Certification of Nonstormwater Discharges; Significant Leaks or Spills Narrative, General Effluent Characteristics; Effluent Characteristics for Pollutants Limited by ELGs; Effluent Characteristics of Storm Water Discharges Associated with an Industrial Activity; Storm event(s) which resulted in the maximum values for the flow-weighted composite sample; Biological Toxicity Testing Data; Contract Analysis Information; and Certification
Stormwater discharges associated with construction activity	New and existing Form 1 §122.21(a)(2)(i)(A) §122.21(f) §122.26(c)(1)(ii)	Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification 40 CFR 122.26(c)(1)(ii)–Narrative description of the location (including a map) and the nature of the construction activity; the total area of the site and the area of the site that is expected to undergo excavation during the life of the permit; proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements; proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements; an estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and the name of the receiving water
Stormwater discharges from MS4s serving a population greater than 100,000	No form §122.26(d)	Part 1–General Information; Legal Authority; Source Identification; Discharge Characterization; Management Programs; Fiscal Resources Part 2–Adequate Legal Authority; Source Identification; Characterization Data; Proposed Management Program; Assessment of Controls; Fiscal Analysis

Type of facility or program area	Type of discharger, forms and reg. cites	Required components
Stormwater discharges from small MS4s	No form §122.33 §122.34 §122.21(f)	Form 1–Facility Information; SIC Codes; Operator Information; Existing Environmental Permits; Topographic Map; Nature of Business; and Certification §122.34(d)–BMPs that you or another entity will implement for each of the storm water minimum control measures; the measurable goals for each of the BMPs the person or persons responsible for implementing or coordinating your storm water management program An estimate of square mileage served by the small MS4 Any additional information that the NPDES permitting authority requests
Cooling water intake structures	New facilities (other than offshore oil and gas extraction facilities), new offshore oil and gas extraction facilities, and Phase II existing facilities No Form §122.21(r)	Source water physical data Cooling water intake structure data Source water baseline biological characterization data Cooling water system data

a) Was it signed by the appropriate official?

The regulations at §122.22 specify the signatories and certification for all permit applications. For a corporation, the signatory is a responsible corporate officer. For a partnership, the signatory is a general partner. For a sole proprietorship, the signatory is the proprietor. For a municipality, the signatory is the principal executive officer or ranking elected official.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit application was signed by the appropriate representative.

b) Did the permit application provide all required analytical data?

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit application included required analytical data. Additional discussion of specific requirements for new vs. existing dischargers is described below.

i. New Dischargers

POTW

The application requirements for new and existing POTWs are established at §122.21(j) (see table above). The permit application should include all required analytical data or “N/A” when there are no data Reported as greater than zero.

Enter “N/A” if the facility was an existing POTW or a non-POTW. Select “Yes”, “No”, or “Uncertain” to indicate whether the application provided all the required analytical data for a new POTW.

Non-POTW

Application requirements for new manufacturing, commercial, mining, and silvicultural sources and new discharges are established at §122.21(k) (see table above).

Application requirements for new and existing concentrated animal feeding operations and aquatic animal feeding operations and aquatic animal production facilities are established at §122.21(i) (see table above).

Enter “N/A” if the facility was a new or existing POTW or an existing non-POTW. Select “Yes”, “No”, or “Uncertain” to indicate whether the application provided all the required analytical data for a new non-POTW discharger.

ii. Existing Dischargers

POTW: Have 3 pollutant scans been performed within the existing permit term?

All new and existing POTW applicants must sample and analyze for the parameters contained in Table 1A of Appendix J to Part 122, including biochemical oxygen demand (BOD₅ or CBOD₅), fecal coliform, design flow rate, pH, temperature, and total suspended solids (TSS). [§122.21(j)(4)(ii)]

POTWs with a flow greater than 0.1 mgd must additionally sample and analyze for the parameters contained in Table 1 of Appendix J to Part 122, including ammonia (as N), chlorine (total residual, TRC), dissolved oxygen, nitrate/nitrite, Kjeldahl nitrogen, oil and grease, phosphorus, and total dissolved solids [§122.21(j)(4)(iii)].

POTWs with a design flow greater than 1 mgd, POTWs with an approved pretreatment system, and other POTWs as required by the Director must additionally sample and analyze for the parameters contained in Appendix J, Table 2 to Part 122, including hardness, metals (total recoverable), cyanide and total phenols: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, total phenolic compounds, volatile organic compounds: acrolein, acrylonitrile, benzene, bromoform, carbon tetrachloride, chlorobenzene, chlorodibromomethane, chloroethane, 2-chloroethylvinyl ether, chloroform, dichlorobromomethane, 1,1-dichloroethane, 1,2-dichloroethane, trans-1,2-dichloroethylene, 1,1-dichloroethylene, 1,2-dichloropropane, 1,3-dichloropropylene, ethylbenzene, methyl bromide, methyl chloride, methylene chloride, 1,1,2,2-tetrachloroethane, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, vinyl chloride, acid-extractable compounds: p-chloro-m-creso, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-o-cresol, 2,4-dinitrophenol, 2-nitrophenol, 4-nitrophenol, pentachlorophenol, phenol, 2,4,6-trichlorophenol, base-neutral compounds, acenaphthene, acenaphthylene, anthracene, benzidine, benzo(a)anthracene, benzo(a)pyrene, 3,4 benzofluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, bis (2-chloroethoxy) methane, bis (2-chloroethyl) ether, bis (2-chloroisopropyl) ether, bis (2-ethylhexyl) phthalate, 4-bromophenyl phenyl ether, butyl benzyl phthalate, 2-chloronaphthalene, 4-chlorophenyl phenyl ether, chrysene, di-n-butyl phthalate, di-n-octyl phthalate, dibenzo(a,h)anthracene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 3,3-dichlorobenzidine, diethyl phthalate, dimethyl phthalate, 2,4-dinitrotoluene, 2,6-dinitrotoluene, 1,2-diphenylhydrazine, fluoranthene, fluorine, hexachlorobenzene, hexachlorobutadiene, hexachlorocyclo-pentadiene, hexachloroethane, indeno(1,2,3-cd)pyrene, isophorone, naphthalene, nitrobenzene, n-nitrosodi-n-propylamine, n-nitrosodimethylamine, n-nitrosodiphenylamine, phenanthrene, pyrene, 1,2,4,-trichlorobenzene [§122.21(j)(4)(iv)].

The regulations at §122.21(j)(4)(vi) require a minimum of three samples taken within 4 and a half years prior to permit application.

Enter “N/A” for new POTWs or non-POTW facilities. Select “Yes”, “No”, or “Uncertain” to indicate whether the permit application provided the results from at least 3 pollutant scans including all required analytical data or “NA” when there were no data reported as greater than zero.

POTW: Did the permit application provide the results of at least 4 quarterly whole effluent toxicity (WET) tests or 4 years of annual data?

POTWs with design rates equal to or greater than 1 MGD, all POTWS with approved pretreatment programs, and other POTWs as required by the Director must submit results of at least 4 quarterly tests for a year from the year preceding the permit application, or results from four annually tests performed in the four and a half years prior to application. [§§122.21(j)(5)(ii) and (iv)]

Enter “N/A” for new POTWs or non-POTW facilities. Select “Yes”, “No”, or “Uncertain” to indicate whether the application provided the results from at least 4 quarterly WET tests.

Non-POTW: Based on the industrial category, have the correct Form 2C analytical requirements been met?

Application requirements for existing manufacturing, commercial, mining and silviculture dischargers are established at §122.21(g). All applicants must provide at least one analysis of BOD₅, COD, TOC, TSS, Ammonia (as N), Temperature (both winter and summer), pH [§122.21 (g)(7)(iii)].

All applicants must indicate whether believed present or believed absent and provide at least one analysis if believed present and regulated by applicable effluent guidelines [§122.21(g)(7)(v)(B):

- Antimony (total), Arsenic (total), Beryllium (total), Cadmium (total), Chromium (total), Copper (total), Lead (total), Mercury (total), Nickel (total), Selenium (total), Silver (total), Thallium (total), Zinc (total), Cyanide (total), and Phenols (total) [§122 table III of appendix D]
- Bromide, Chlorine (total residual), Color, Fecal Coliform, Fluoride, Nitrate-Nitrite, Nitrogen, Total Organic, Oil and Grease, Phosphorus (total), Radioactivity, Sulfate, Sulfide, Sulfite, Surfactants, Aluminum (total), Barium (total), Boron (total), Cobalt (total), Iron (total), Magnesium (total), Molybdenum (total), Manganese (total), Tin (total), Titanium (total) [§122 table IV of appendix D]
- Asbestos, Acetaldehyde, Allyl alcohol, Allyl chloride, Amyl acetate, Aniline, Benzonitrile, Benzyl chloride, Butyl acetate, Butylamine, Captan, Carbaryl, Carbofuran, Carbon disulfide, Chlorpyrifos, Coumaphos, Cresol, Crotonaldehyde, Cyclohexane, 2,4-D (2,4-Dichlorophenoxy acetic acid), Diazinon, Dicamba, Dichlobenil, Dichlone, 2,2-Dichloropropionic acid, Dichlorvos, Diethyl amine, Dimethyl amine, Dintrobenzene, Diquat, Disulfoton, Diuron, Epichlorohydrin, Ethion, Ethylene diamine, Ethylene dibromide, Formaldehyde, Furfural, Guthion, Isoprene, Isopropanolamine, Dodecylbenzenesulfonate, Kelthane, Kepone, Malathion, Mercaptodimethur, Methoxychlor, Methyl mercaptan, Methyl methacrylate, Methyl parathion, Mevinphos, Mexacarbate, Monoethyl amine, Monomethyl amine, Naled, Napthenic acid, Nitrotoluene, Parathion, Phenolsulfonate, Phosgene, Propargite, Propylene oxide, Pyrethrins, Quinoline, Resorcinol, Strontium, Strychnine, Styrene, 2,4,5-T (2,4,5-Trichlorophenoxy acetic acid), TDE (Tetrachlorodiphenylethane), 2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid], Trichlorofan, Triethanolamine dodecylbenzenesulfonate, Triethylamine, Trimethylamine, Uranium, Vanadium, Vinyl acetate, Xylene, Xylenol, Zirconium [[§122 table V of appendix D]

Each applicant with processes in one or more primary industry category must report quantitative data for the organic toxic pollutants in the fractions designated in the table below (§122 Table I of appendix D).

Table 3. Non-POTW Organic Toxic Pollutant Testing

Primary Industries and Required GC/MS Fractions	Gas Chromatography/Mass Spectrometry (GC/MS) Fraction			
	Industry Category	Volatile	Acid	Base/Neutral
Adhesives and sealants	X	X	X	–
Aluminum forming	X	X	X	–
Auto and other laundries	X	X	X	X
Battery manufacturing	X	–	X	–
Coal mining	–	–	–	–
Coil coating	X	X	X	–
Copper forming	X	X	X	–
Electric and electronic compounds	X	X	X	X
Electroplating	X	X	X	–
Explosives manufacturing	–	X	X	–
Foundries	X	X	X	–
Gum and wood (all subparts except D and F)	X	X	X	X
Subpart D - tall oil rosin	X	X	X	–
Subpart F - rosin-based derivations	X	X	X	–
Inorganic chemicals manufacturing	X	X	X	–
Iron and steel manufacturing	X	X	X	–
Leather tanning and finishing	X	X	X	X
Mechanical products manufacturing	X	X	X	–
Nonferrous metals manufacturing	X	X	X	X
Ore mining (applies to the base and precious metals/Subpart B)	–	X	–	–
Organic chemicals manufacturing	X	X	X	–
Paint and ink formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum refining	X	–	–	–
Pharmaceutical preparations	X	X	X	–
Photographic equipment and supplies	X	X	X	X
Plastic and synthetic materials manufacturing	X	X	X	X
Plastic processing	X	–	–	–
Porcelain enameling	–	–	–	–
Printing and publishing	X	X	X	X
Pulp and paperboard mills	X	X	X	X
Rubber processing	X	X	X	–
Soap and detergent manufacturing	X	X	X	–
Steam electric power plants	X	X	X	–
Textile mills (Subpart C-Greige Mills are exempt)	X	X	X	X

Primary Industries and Required GC/MS Fractions	Gas Chromatography/Mass Spectrometry (GC/MS) Fraction			
	Industry Category	Volatile	Acid	Base/Neutral
Timber products processing	X	X	X	X

The specific organic toxic pollutants in each fraction are specified below (§122 table II of appendix D).

Table 4. Non-POTW Organic Toxic Pollutant GC/MS Fractions

Volatiles	Acid Compounds	Base/Neutral	Pesticides
1V acrolein	1A 2-chlorophenol	1B acenaphthene	1P aldrin
2V acrylonitrile	2A 2,4-dichlorophenol	2B acenaphthylene	2P alpha-BHC
3V benzene	3A 2,4-dimethylphenol	3B anthracene	3P beta-BHC
5V bromoform	4A 4,6-dinitro-o-cresol	4B benzidine	4P gamma-BHC
6V carbon tetrachloride	5A 2,4-dinitrophenol	5B benzo(a)anthracene	5P delta-BHC
7V chlorobenzene	6A 2-nitrophenol	6B benzo(a)pyrene	6P chlordane
8V chlorodibromomethane	7A 4-nitrophenol	7B 3,4-benzofluoranthene	7P 4,4'-DDT
9V chloroethane	8A p-chloro-m-cresol	8B benzo(ghi)perylene	8P 4,4'-DDE
10V 2-chloroethylvinyl ether	9A pentachlorophenol	9B benzo(k)fluoranthene	9P 4,4'-DDD
11V chloroform	10A phenol	10B bis(2-chloroethoxy)methane	10P dieldrin
12V dichlorobromomethane	11A 2,4,6-trichlorophenol	11B bis(2-chloroethyl)ether	11P alpha-endosulfan
14V 1,1-dichloroethane		12B bis(2-chloroisopropyl)ether	12P beta-endosulfan
15V 1,2-dichloroethane		13B bis (2-ethylhexyl)phthalate	13P endosulfan sulfate
16V 1,1-dichloroethylene		14B 4-bromophenyl phenyl ether	14P endrin
17V 1,2-dichloropropane		15B butylbenzyl phthalate	15P endrin aldehyde
18V 1,3-dichloropropylene		16B 2-chloronaphthalene	16P heptachlor
19V ethylbenzene		17B 4-chlorophenyl phenyl ether	17P heptachlor epoxide
20V methyl bromide		18B chrysene	18P PCB-1242
21V methyl chloride		19B dibenzo(a,h)anthracene	19P PCB-1254
22V methylene chloride		20B 1,2-dichlorobenzene	20P PCB-1221
23V 1,1,2,2-tetrachloroethane		21B 1,3-dichlorobenzene	21P PCB-1232
24V tetrachloroethylene		22B 1,4-dichlorobenzene	22P PCB-1248
25V toluene		23B 3,3'-dichlorobenzidine	23P PCB-1260
26V 1,2-trans-dichloroethylene		24B diethyl phthalate	24P PCB-1016
27V 1,1,1-trichloroethane		25B dimethyl phthalate	25P toxaphene
28V 1,1,2-trichloroethane		26B di-n-butyl phthalate	
29V trichloroethylene		27B 2,4-dinitrotoluene	
31V vinyl chloride		28B 2,6-dinitrotoluene	
		29B di-n-octyl phthalate	
		30B 1,2-diphenylhydrazine (as azobenzene)	
		31B fluoranthene	
		32B fluorene	
		33B hexachlorobenzene	
		34B hexachlorobutadiene	
		35B hexachlorocyclopentadiene	
		36B hexachloroethane	
		37B indeno(1,2,3-cd)pyrene	
		38B isophorone	
		39B naphthalene	
		40B nitrobenzene	
		41B N-nitrosodimethylamine	

Volatiles	Acid Compounds	Base/Neutral	Pesticides
		42B N-nitrosodi-n-propylamine 43B N-nitrosodiphenylamine 44B phenanthrene 45B pyrene 46B 1,2,4-trichlorobenzene	

For every pollutant expected to be discharged in concentrations of 10 ppb or greater the applicant must report quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, where any of these four pollutants are expected to be discharged in concentrations of 100 ppb or greater the applicant must report quantitative data. For every pollutant expected to be discharged in concentrations less than 10 or in the case of acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, in concentrations less than 100 ppb, the applicant must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Each applicant must report qualitative data, generated using a screening procedure not calibrated with analytical standards, for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) if it uses or manufactures 2,4,5-trichlorophenoxy acetic acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); or knows or has reason to believe that TCDD is or may be present in an effluent. [§122.21(g)(7)(viii)]

Enter "N/A" for POTWs or new non-POTW facilities. Select "Yes", "No", or "Uncertain" to indicate, based on the industrial category, whether the application met the analytical requirements for Form 2C.

c) In general, did it appear that effluent data provided in the permit application were analyzed using 40 CFR Part 136 test methods that were sufficiently sensitive to assess the presence of pollutant parameters?

The standard conditions of the permit [§§122.41(j)(4) and 122.44(i)] require that, when available, permittees use test procedures specified in Part 136 <www.epa.gov/waterscience/methods/basic.htm>. The analytical methods contained in Part 136 are established for conventional, toxic (priority), and some nonconventional pollutants. Without analytical methods for a parameter, the permit writer should specify the analytical method to be used. There are also procedures to apply for approval of alternative test methods in accordance with §136.4.

While Part 136 identifies the analytical methods approved for use in the NPDES program, additional methods information is available through the National Environmental Methods Index (NEMI) <www.nemi.gov/>. NEMI is a Web-based, searchable clearinghouse of methods supported by the U.S. Geological Survey and EPA's Office of Water. NEMI contains summaries of more than 1,100 methods and describes them by their performance characteristics and their regulatory status, relative cost, detection level, detection level type, accuracy, precision, spiking level, instrumentation, lab equipment, and the greenness of analytic methods. Permit writers might find that information useful in comparing the features of Part 136 methods that will be used for assessing compliance with the calculated effluent limitations.

In August, 2014, EPA finalized amendments to regulations at §§122.21(e), 122.44(i), and Part 136, to require the use of sufficiently sensitive methods for analyses conducted for NPDES permit applications and for compliance monitoring (79 FR 49001, August 19, 2014). To ensure that appropriate analytical methods are required and performed, see the most current version of these federal regulations and applicable state analytical method regulations and policy. Section 8.3 of the PWM presents additional discussion about

analytical methods. Review application data to evaluate if it appeared that effluent data provided in the permit application were generally analyzed using 40 CFR Part 136 test methods that were sufficiently sensitive to assess the presence of pollutant parameters.

Select “Yes”, “No”, or “Uncertain” to indicate whether analytical detection levels were sufficiently sensitive to assess compliance with applicable water quality standards.

4. For facilities subject to CWA 316(b) requirements, were the application requirements at 40 CFR 122.21(r) submitted?

NPDES regulations at §122.21(r) present the application requirements for facilities with cooling water intake structures. Facilities must submit a permit application that includes all the information required by §122.21(r), which includes at a minimum, source water physical data and cooling water intake structure data. Applicants may also be required to submit source water baseline characterization data, cooling water system data, method for compliance with the impingement mortality standard, entrainment performance studies, and operational status for each unit that uses cooling water.

Select “Yes”, “No”, or “Uncertain” to indicate whether the application included all information required by §122.21(r).

4. Effluent Limitations

This section of the checklist summarizes the discharger’s effluent limitations and record of limitation development.

4.1 General Elements

This section of the checklist includes an evaluation of the permit writer’s documentation of effluent limitation development, anti-backsliding evaluation, and antidegradation analysis.

1. Did the fact sheet describe the basis (technology or water quality) for each of the final effluent limits?

A fact sheet should be prepared for every draft major permit (§124.8). Regulations at §124.56 specify the information that should be contained in the fact sheet. Section 11.2.2 of the PWM provides additional information about fact sheets and statements of basis.

When determining the final effluent limitations, the permit writer must ensure that all applicable statutory and regulatory requirements, including technology and water quality standards, are fully implemented. The permit writer determines the calculated limitations (TBELs, WQBELs, or some combination of the calculated limitations) that will ensure that all applicable CWA standards are met.

The permit writer should clearly explain in the fact sheet for the permit whether the limitation is technology or water quality-based, how the final limitations in the permit were determined and how those limitations meet both technology and water quality standards (including antidegradation) and, where appropriate, how an anti-backsliding analysis was applied to the final effluent limitations. Often, the permit writer will provide a table in the fact sheet with the final effluent limitations and their basis.

Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet described the technology- or water quality-basis for each of the final effluent limitations.

a) Did the record indicate that a comparison of technology- and water quality-based limits was performed, and the most stringent limit selected?

The fact sheet should indicate that a comparison of technology and water quality-based limits was performed and the most stringent limit selected. Often, the permit writer will provide a table in the fact sheet with the final effluent limitations and their basis.

Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet included a comparison of TBELs and WQBELs and selection of the most stringent.

2. Were all limits at least as stringent as those in the previous permit?

Statutory and regulatory provisions prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limitations, permit conditions, or standards less stringent than those established in the previous permit.

In the fact sheet, a statement comparing the current effluent limits with the previous permit’s limits should be included. For example, the fact sheet might include a table in the effluent limitations discussion that lists all of the final effluent limitations, proposed effluent limitations, and effluent limits from the previous permit or might include a separate section with details supporting changes from the previous permit.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit indicated that limits were less stringent than those in the previous NPDES permit.

a) If no, specify:

If the record indicated that a limit was less stringent than in the previous NPDES permit, then specify which parameters had less stringent limits.

b) If no, did the record discuss whether “anti-backsliding” provisions were met?

In general, the term anti-backsliding refers to statutory and regulatory provisions that prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limitations, permit conditions, or standards less stringent than those established in the previous permit. There are, however, exceptions to the prohibition, and determining the applicability and circumstances of the exceptions requires familiarity with both the statutory and regulatory provisions that address anti-backsliding. CWA sections 402(o) and 303(d)(4) and Section 7.2 of the NPDES Permit Writers’ Manual provide more information about backsliding.

Enter “N/A” if limits were at least as stringent as those in the previous permit. Select “Yes”, “No”, or “Uncertain” to indicate whether the record indicated that anti-backsliding provisions were met.

Specify:

If the record discussed anti-backsliding provisions, then specify the provisions for meeting anti-backsliding prohibitions.

3. Did permit limits restrict pollutant loadings to levels at or below those in the previous permit?

The third part of a state’s water quality standards includes an antidegradation policy to ensure that existing instream water uses (see question II.B.6. above) and the level of water quality necessary to protect the existing uses shall be maintained and protected. Water quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate

important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that the highest statutory and regulatory requirements for all new and existing point sources will be achieved and all cost-effective and reasonable best management practices for nonpoint source control will be implemented. Water quality shall be maintained and protected where high quality waters constitute an Outstanding National Resource Water (ONRW), such as waters of national and state parks, wildlife refuges and waters of exceptional recreational or ecological significance. (§131.12) Section 6.1.1.3 of the PWM includes additional information about antidegradation policy.

If the permit indicated that limits in the current permit were not as stringent as in the previous permit (i.e., “No” on question IV.A.2. above), then pollutant loadings were increased and an antidegradation analysis should have been discussed in the fact sheet.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit showed that there would be new or increased loadings.

a) If no, did the record indicate that an “antidegradation” review was performed in accordance with the state’s approved antidegradation policy?

A permit writer should check the state’s antidegradation policy and implementation methods to determine what tier(s) of protection, if any, the state had assigned to the proposed receiving water for the parameter of concern. This antidegradation review, if necessary, should be discussed in the fact sheet. Section 6.6 of the PWM includes additional information about antidegradation reviews.

Based on discussions or a review of the policy, a judgment should be made about whether or not the record indicated that a review was done and whether it was in accordance with the state policy.

Enter “N/A” if the permit did not allow new or increased loadings to the receiving water. Select “Yes”, “No”, or “Uncertain” to indicate whether the record showed that an antidegradation review was performed.

Specify:

Specify how the record indicated that an antidegradation review was performed in accordance with the state’s approved antidegradation policy.

4. Did the permit require development and implementation of a best management practices (BMP) plan or site-specific BMPs?

In general, BMPs are actions or procedures to prevent or reduce the discharge of pollution to waters of the United States. Schedules of activities, prohibitions of practices, maintenance procedures, treatment requirements, operating procedures and practices to control, plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage areas are included in the definition of BMPs (§122.2).

Clean Water Act (CWA) section 304(e) authorizes EPA to require BMPs as part of effluent limitations guidelines and standards (effluent guidelines) to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage that it determines are associated with or ancillary to the industrial manufacturing or treatment process and can contribute significant amounts of pollutants to navigable waters. Where effluent guidelines require specific control measures, including BMPs or development of a BMP plan, permit writers must include such requirements in permits. In addition, CWA section 402(p)(3)(B)(iii) states that permits for discharges from municipal storm sewers must require controls, including management practices, to reduce the discharge of pollutants. Finally, CWA sections 402(a)(1) and (2) give the permitting authority the ability to include BMPs in permits on a case-by-case basis

to carry out the provisions of the CWA. Section 9.1.2 of the PWM provides additional information about BMPs including an example BMP plan.

BMPs should be included in a permit when numeric effluent limitations are infeasible [§122.44(k)(3)]. Pollution Prevention Plans, Stormwater Management Plans, and Nutrient Management Plans are specific examples of BMP plans.

Select “Yes”, “No”, or “Uncertain” to indicate whether there was inclusion of a BMP plan or other BMPs in the permit.

a) If yes, did the permit adequately incorporate and require compliance with the BMPs?

The permit should cite §122.44(k)(3), the effluent limitations guideline for a specific industry, or another regulatory requirement for inclusion of the BMP or BMP plan development. For BMP Plan development, the permit should specify a delivery date and implementation requirements.

Select “N/A” if there were no BMPs in the permit. If the permit required BMPs, select “Yes”, “No”, or “Uncertain” to indicate whether the permit incorporated and required compliance with BMPs.

4.2 Technology-Based Effluent Limits (TBELs)

This section of the checklist includes evaluation of the TBELs included in the permit for both POTWs and non POTWs facilities and the basis for the technology-based effluent limitations. The regulations at §125.3 require that permits contain technology-based treatment requirements, by the deadlines promulgated under the section.

POTWs

The regulations at Part 133 provide the secondary treatment regulation that provides information on the level of effluent quality attainable through the application of secondary or equivalent treatment. Section 5.1 of the PWM includes additional information about technology-based effluent limitations for POTWs.

1. Did the permit contain numeric limits for ALL of the following: BOD₅ (or an alternative; e.g., CBOD₅, COD, TOC), TSS, and pH?

The secondary treatment standards for POTWs require TBELs for BOD₅ [or an alternative; e.g., carbonaceous biochemical oxygen demand (CBOD₅), chemical oxygen demand (COD), total organic carbon (TOC)], total suspended solids, and pH (§133.102).

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit contained limitations for all of the secondary treatment parameters—BOD₅, TSS, and pH.

2. Were technology-based permit limits expressed in appropriate units of measure (i.e., concentration, mass, SU)?

The regulations at §122.45(f)(1) require that all permit limitations, standards, or prohibitions be expressed in terms of mass except in any of the following cases:

- For pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations.
- When applicable standards and limitations are expressed in terms of other units of measure.

- If in establishing permit limitations on a case-by-case basis under §125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation, and permit conditions ensure that dilution will not be used as a substitute for treatment.

pH must be in terms of standard units (su). BOD₅ (or an alternative) and TSS must be concentration-based (i.e., mg/l). Permit writers might choose to include mass-based limits (e.g., lbs/day) for BOD₅ and TSS calculated by:

$$\begin{array}{r} \text{Mass-based limitation} \\ \text{(lbs/day)} \end{array} = \begin{array}{r} \text{POTW design flow} \\ \text{in million gallons per day} \\ \text{(mgd)} \end{array} \times \begin{array}{r} \text{Concentration-based limitation} \\ \text{in milligrams per liter} \\ \text{(mg/L)} \end{array} \times \begin{array}{r} \text{Conversion factor} \\ \text{8.34 with units of} \\ \text{(lbs)(L) / (mg)(millions of gallons)} \end{array}$$

Section 5.1.3.2 of the PWM provides additional information about appropriate units of measure for POTWs.

Select “Yes”, “No”, or “Uncertain” to indicate whether the technology-based limits were expressed in appropriate units of measure.

3. Were permit limits for BOD₅ and TSS expressed in terms of both 30-day (monthly) average and 7-day (weekly) average limits?

The secondary treatment standards are stated as 30-day and 7-day averages, whereas §122.45(d)(2) requires that effluent limitations for POTWs be expressed, unless impracticable, as average monthly and average weekly limitations. The NPDES regulations in §122.2 define average monthly and average weekly limitations on a calendar period basis. Therefore, EPA recommends that permit writers apply the 30-day and 7-day average secondary treatment standards directly as average monthly (calendar month) and average weekly (calendar week) discharge limitations.

Select “Yes”, “No”, or “Uncertain” to indicate whether limits for BOD₅ and TSS were expressed in terms of both monthly average and weekly average limits.

4. Were concentration limitations in the permit at least as stringent as the secondary treatment requirements (30 mg/l BOD₅ and TSS for a 30-day (monthly) average and 45 mg/l BOD₅ and TSS for a 7-day (weekly) average)?

The secondary treatment standards require that for BOD₅ and TSS the 30-day average shall not exceed 30 mg/l (25 mg/l for CBOD₅) and the 7-day average shall not exceed 45 mg/l (40 mg/l for CBOD₅) and for pH to be greater than 6.0 and less than 9.0. (§133.102)

Select “Yes”, “No”, or “Uncertain” to indicate whether limits for BOD₅ and TSS were a monthly average of 30 mg/l or less and a weekly average of 45 mg/l or less.

a) If no, did the record provide a detailed justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?

Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD₅ and TSS but might not consistently achieve the secondary treatment standards. Alternative standards apply to facilities that meet all three of the following: (1) the BOD₅ and SS effluent concentrations are consistently achievable through proper operation and maintenance of the treatment works and exceed the minimum level of the effluent quality set forth in the secondary treatment standards, (2) a trickling filter or waste stabilization pond is used as the principal process, and (3) the

treatment works provide significant biological treatment of municipal wastewater (§133.105). Section 5.1.1.2 of the PWM includes additional information about equivalent to secondary treatment.

Enter “N/A” if the TBELs were as stringent as secondary treatment standards. Select “Yes”, “No”, or “Uncertain” to indicate whether there were alternative limitations in the permit and the record provided justification for the alternative limits (e.g. documentation of all three factors that would allow for equivalent to secondary limits).

5. Were the 85 percent removal requirements for BOD₅ (or BOD₅ alternative) and TSS included?

The secondary treatment standards require that for BOD₅ and TSS the 30-day average percent removal must be at least 85 percent [§133.102(a)(3) and (b)(3)] and for CBOD₅ must be at least 65 percent [§133.105(e)(1)(iii)].

Select “Yes”, “No”, or “Uncertain” to indicate whether the POTW permit included percent removal requirements of at least 85 percent as a monthly average for BOD₅ and TSS.

a) If no, did the record indicate the application of more stringent requirements than 85% removal (such as WQBELs or other requirements) or an alternative consistent with 40 CFR 133.103 (e.g. waste stabilization pond, trickling filter, etc.) had been approved?

In some cases, WQBELs might be established or other limits that require more stringent percent removal requirements (greater than 85 percent removal).

Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD₅ and TSS but might not consistently achieve the secondary treatment standards for these parameters (see IV.B.4.a . above). For treatment equivalent to secondary treatment, the 30-day average percent removal for BOD₅ and TSS must not be less than 65 percent. [§133.105(a)(3) and (b)(3)]

Enter “N/A” if percent removal requirements were included. Select “Yes”, “No”, or “Uncertain” to indicate whether the record showed the application of more stringent requirements than 85% removal (such as WQBELs or other requirements) or an alternative consistent with §133.103 have been approved.

Specify:

Provide a description of the development of any alternate limits that are included in the permit.

6. Did the permit require influent monitoring for BOD₅ (or alternative) and TSS?

To determine compliance with the BOD₅ (or alternative) and TSS secondary treatment standards percent removal requirements, permits for POTWs or other facilities that use secondary treatment standards for the basis of BPJ limitations should include influent monitoring. Question IV.B.5. above, discusses percent removal requirements for POTWs, which is calculated by subtracting the 30-day average effluent pollutant concentration (i.e., for BOD₅ and TSS) from the 30-day average influent pollutant concentration and dividing the resultant by 100. To make this calculation, influent monitoring is required.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit required influent monitoring for BOD₅ (or alternative) and TSS.

Specify:

Provide a description of the influent monitoring requirements.

Non POTWs

This section of the checklist includes evaluation of the technology-based effluent limitations for industrial (non-municipal) dischargers, which are based on effluent limitations guidelines (ELG) or the permit writers' best professional judgment for industrial facilities with no ELG.

EPA is required to promulgate technology-based limitations and standards that reflect pollutant reductions that can be achieved by categories, or subcategories, of industrial point sources using specific technologies (including process changes) that EPA identifies as meeting the statutorily prescribed level of control under the authority of CWA sections 301, 304, 306, 307, 308, 402, and 501 (33 United States Code [U.S.C.] 1311, 1314, 1316, 1318, 1342, and 1361). Those national industrial wastewater controls are called effluent limitation guidelines and standards (effluent guidelines) and are promulgated for various industrial categories in 40 CFR, Chapter I, Subchapter N - Effluent Guidelines and Standards - Parts 400-471 <www.epa.gov/lawsregs/search/40cfr.html>. Unlike other CWA tools, such as water quality standards, effluent guidelines are national in scope and establish performance standards for all facilities within an industrial category or subcategory.

When developing TBELs for non-POTW (industrial) facilities, the permit writer must consider all applicable technology standards and requirements for all pollutants discharged. Without applicable effluent guidelines for the discharge or pollutant, permit writers must identify any needed TBELs on a case-by-case basis, in accordance with the statutory factors specified in CWA sections 301(b)(2) and 304(b). The site-specific TBELs reflect the best professional judgment (BPJ) of the permit writer, taking into account the same statutory factors EPA would use in promulgating a national effluent guideline regulation; however, they are applied to the specific circumstances relating to the applicant. The permit writer also should identify whether state laws or regulations govern TBELs and might require more stringent performance standards than those required by federal regulations. In some cases, a single permit could have TBELs based on effluent guidelines, BPJ, and state law, as well as WQBELs based on water quality standards.

Sections 5.2.1 and 5.2.2 of the PWM provide an overview of effluent guidelines and development of TBELs in NPDES permits using the effluent guidelines. Section 5.2.3 of the PWM discusses the development of TBELs in the absence of effluent guidelines (i.e., case-by-case limitations developed using BPJ).

7. Was the facility subject to one or more technology-based effluent limitations guideline (ELG)?

EPA's goal in establishing effluent guidelines is to ensure that industrial facilities with similar characteristics will meet similar effluent limitations representing the best pollution control technologies or pollution prevention practices regardless of their location or the nature of the receiving water into which the discharge is made. In establishing the ELGs, EPA must consider the industry-wide economic achievability of implementing the technology and the incremental costs in relation to the pollutant-reduction benefits.

ELGs can include numeric and narrative limitations, including best management practices (BMPs), to control the discharge of pollutants from categories of point sources. The limitations are based on data characterizing the performance of technologies available and, in some cases, from modifying process equipment or the use of raw materials. Although the regulations do not require the use of any particular treatment technology, they do require facilities to achieve effluent limitations that reflect the proper operation of the model technologies selected as the basis for the ELGs and from which the performance data were obtained to

generate the limitations. Therefore, each facility has the discretion to select any technology design and process changes necessary to meet the performance-based discharge limitations and standards specified by the ELGs.

As of the date of this manual's publication, EPA has issued ELGs for 56 industrial categories, which apply to between 35,000 and 45,000 facilities that discharge directly to waters of the United States and another 12,000 facilities that discharge into POTWs. The regulations prevent the discharge of more than 1.2 billion pounds of toxic (priority) and nonconventional pollutants each year. EPA's Effluent Guidelines Program Website <<https://www.epa.gov/eg>> provides information on existing ELGs, current ELG rulemakings, and the ELG planning process. Section 5.2.1 of the PWM provides additional information about ELGs.

The effluent guidelines are promulgated for various industrial categories in 40 CFR, Chapter I, Subchapter N - Effluent Guidelines and Standards - Parts 400-471 <<https://www.epa.gov/eg/industrial-effluent-guidelines>>. In promulgating effluent guidelines, EPA may divide an industrial point source category into groupings of subcategories to provide a method for addressing variations between products, raw materials, processes, and other factors that result in distinctly different characteristics. Regulation of an industrial category using subcategories allows each subcategory to have a uniform set of requirements that take into account technological achievability and economic impacts unique to that subcategory. The record should give a description of what guideline applies to that facility and the subcategory that further categorizes the discharge.

Select "Yes", "No", or "Uncertain" to indicate whether the facility was subject to an ELG.

a) If yes, what categories and subcategories apply?

If the facility is subject to an ELG, enter the ELG categories and subcategories, as described in the record.

i. new source / existing source?

A *new source* is any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," where construction commenced after promulgation of applicable New Source Performance Standards (NSPS) in the effluent guidelines, or after proposal of applicable New Source Performance Standards in effluent guidelines. This applies only if the NSPS are promulgated within 120 days of proposal (§122.2). An *existing source* is any building, structure, facility, or installation from which there is or may be a discharge of pollutants that is not a new source or a new discharger [§122.29(a)(3)].

A *new discharger* is any building, structure, facility, or installation from which there is or may be a discharge of pollutants that did not commence the discharge of pollutants at a particular site prior to August 13, 1979, which is not a new source, and which never received a finally effective NPDES permit (§122.2). A new discharger could be a new source (most likely) or an existing source (in rare cases).

An *existing source* means any source which is not a new source or a new discharger.

If the facility is subject to an ELG, check the box for if the facility new source or existing source.

ii. Did the record explain how the categorization and performance levels (BPT, BCT, BAT, NSPS) were determined?

The record should explain how the facility was categorized and subcategorized and how performance levels were determined for limit development.

Enter “N/A” if the facility was not subject to an ELG. If the facility was subject to an ELG, select “Yes”, “No”, or “Uncertain” to indicate whether the record explained applicability of ELG categorization of the facility.

iii. Did the record adequately document the calculations used to develop ELG-based effluent limits?

The record should clearly document the calculations based on the ELGs and the actual flow or production. Often, these calculations will be in an attachment to the fact sheet.

Enter “N/A” if the facility was not subject to an ELG. If the facility was subject to an ELG, select “Yes”, “No”, or “Uncertain” to indicate whether the record documented the calculations for TBELs based on ELGs.

iv. Were final limits as stringent as required by applicable effluent limitations guidelines?

The final limits in the permit should be as stringent as required based on applicable ELGs. The calculated TBELs for the non-POTW facility should be compared with water quality-based effluent limits (WQBELs) to determine the most stringent final limit that meets both technology- and water quality-based requirements.

Enter “N/A” if the facility was not subject to an ELG. If the facility was subject to an ELG, select “Yes”, “No”, or “Uncertain” to indicate whether any final permit limits were less stringent than required by applicable ELGs.

If no, list parameters:

If the final limits are less stringent than required by applicable ELGs, then list the parameters.

Specify the basis in the record:

If the final limits are less stringent than required by applicable ELGs, then specify the basis for the more lenient limits as documented in the record.

b) If the facility was not subject to an ELG (or if the facility included processes or waste streams that were not subject to ELG), did the permit include technology-based limitations based on best professional judgment (BPJ) for all conventional, nonconventional, and toxic pollutants in the discharge?

The regulations at §125.3(c)(2) allow for *technology-based limits* to be established on a case-by case basis using BPJ and at §125.3(d) establish the factors that must be considered when establishing limits using BPJ.

Enter “N/A” if the facility is subject to an ELG. If the facility was not subject to ELGs (or if the facility includes processes or waste streams that were not subject to ELGs), select “Yes”, “No”, or “Uncertain” to indicate whether the permit included technology-based limitations based on best professional judgment (BPJ) for all conventional, nonconventional, and toxic pollutants in the discharge as required by the regulations at §125.3(d).

If yes, specify which were based on BPJ.

If the permit included limits based on BPJ, then specify what parameters were based on BPJ.

i. For limits developed based on BPJ, did the record indicate that the limits were developed considering all of the criteria established at 40 CFR 125.3(d)?

The record should document that BPJ-based limits were developed considering: (1) For BPT requirements: the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application; the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; and non-water quality

environmental impact (including energy requirements). (2) For BCT requirements: the reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; and non-water quality environmental impact (including energy requirements). (3) For BAT requirements: the age of equipment and facilities involved; the process employed; the engineering aspects of the application of various types of control techniques; process changes; the cost of achieving such effluent reduction; and non-water quality environmental impact (including energy requirements). [§125.3(d)]

Enter “N/A” if the facility did not include BPJ-based limitations. If the permit included limits based on BPJ, select “Yes”, “No”, or “Uncertain” to indicate whether the record indicated that BPJ-based limits were developed considering all of the criteria established at §125.3(d).

ii. For limits developed based on BPJ, did the record adequately document the calculations used to develop BPJ technology-based effluent limits?

The fact sheet should document calculations used to develop BPJ TBELs. Often, these calculations are included in the effluent limitation development section of the permit or as an attachment to the fact sheet.

Enter “N/A” if the facility did not include BPJ-based limitations. If the permit included BPJ-based limits, select “Yes”, “No”, or “Uncertain” to indicate whether the record adequately documented the calculations used to develop BPJ-based TBELs.

List limits that were not based on BPJ:

If the permit includes limits not based on BPJ, then specify what parameters are not based on BPJ.

8. Were technology-based permit limits expressed in appropriate units of measure (i.e., concentration, mass, SU)?

Although the requirements in effluent guidelines generally are numeric limitations on the mass or concentration of a pollutant that can be discharged directly into waters of the United States, CWA section 502(11) defines *effluent limitation* broadly. Several types of possible expressions for the limitations found in effluent guidelines are mass or concentration-based numeric limits (e.g., lbs/day, mg/l), numeric limits established at minimum levels, other expressions for numeric limitations (e.g., pH, temperature, radiation), and nonnumeric effluent limits (i.e., BMPs). The permit writer should note that the limitations in effluent guidelines might need to be translated into an appropriate form to be included as effluent limitations in an NPDES permit. Section 5.2.1.3 of the PWM discusses the types of limitations in effluent guidelines.

The type of limitation (i.e., mass, concentration, or other units) calculated for a specific pollutant at a facility will depend on the type of pollutant and the way limitations are expressed in the applicable effluent guideline. The reviewer should consult the effluent guideline used in the permit’s TBEL development to determine the appropriate units of measure.

Select “Yes”, “No”, or “Uncertain” to indicate whether the technology-based permit limits were expressed in appropriate units of measure

9. Were all technology-based limits expressed in terms of both maximum daily and monthly average limits?

Generally, effluent guidelines include both maximum daily and monthly average limitations for most pollutants. Though the effluent guidelines use different terms for monthly effluent limitations (e.g., monthly average, maximum for monthly average, average of daily values for 30 consecutive days), the requirements are expressed in NPDES permits as average monthly limitations as defined in §122.2.

For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works. [§122.45(d)(1)]

For discharges which are not continuous, the permit writer must consider the following factors, as appropriate: (1) Frequency (e.g., a batch discharge shall not occur more than once every 3 weeks); (2) Total mass (e.g., not to exceed 100 kg of zinc and 200 kg of chromium per batch discharge); (3) Maximum rate of discharge of pollutants during the discharge (e.g., not to exceed 2 kilograms of zinc per minute); and (4) Prohibition or limitation of specified pollutants by mass, concentration, or other appropriate measure (for example, shall not contain at any time more than 0.1 mg/l zinc or more than 250 grams of zinc in any discharge). [§122.45(e)]

Select “Yes”, “No”, or “Uncertain” to indicate whether TBELs were expressed in terms of both maximum daily and monthly average limits for batch discharges derived from effluent guidelines or in appropriate averaging periods for non-continuous discharges.

10. For all limits that were based on production, did the record indicate that the calculations were based on a “reasonable measure of actual production” for the facility (not design)?

Production based limitations for facilities, except for POTWs, are established based upon a reasonable measure of actual production of the facility. For new sources or new dischargers, actual production shall be estimated using projected production. The time period of the measure of production shall correspond to the time period of the calculated permit limitations; for example, monthly production shall be used to calculate average monthly discharge limitations. (§122.45(b)(2)(i))

Enter “N/A” for all limits that were not based on production or flow. Select “Yes”, “No”, or “Uncertain” to indicate whether, for all limits based on production or flow, the record indicated that the calculations were based on a “reasonable measure of actual production” and not design production at the facility.

11. If the permit contained “tiered” limits that reflected projected increases in production or flow, did the permit require the facility to notify the permitting authority when alternate levels of production or flow were attained?

For expected significant increases or decreases in production during the permit term the permit may include a condition establishing alternate permit limitations, standards, or prohibitions based upon anticipated increased (not to exceed maximum production capability) or decreased production levels.

[§122.45(b)(2)(ii)(A)(1)] Tiered TBELs would apply to mass-based effluent limitations and would become effective when production or flow (or some other measure of production) exceeded a threshold value, such as during seasonal production variations. Generally, up to a 20 percent fluctuation in production is considered to be within the range of normal variability, while changes in production higher than 20 percent could warrant consideration of tiered limitations. Section 5.2.2.7 of the PWM discusses additional information about tiered limits.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit contained “tiered” limits that reflect projected increases in production or flow.

4.3 Water Quality-Based Effluent Limits

This section of the checklist includes evaluation of the water quality-based effluent limits included in the permit for all dischargers and the permit writer’s documentation of the basis for the water quality-based effluent limitations. The regulations at §122.44(d) and Chapter 6 of the NPDES Permit Writers’ Manual provide information about water quality standards and state requirements and water quality-based effluent limitations.

4.3.1 Receiving Water Characterization

1. Is there an EPA-approved water quality standards variance applicable to this discharge?

A variance is any mechanism or provision under Sections 301 or 316 of the CWA or under 40 CFR Part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitations requirements or time deadlines of the CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors. Under CWA 131.13 a state must develop procedures to grant a variance. These procedures were approved as a part of the state’s water quality standards approval by EPA.

Enter “N/A” if the permit did not have a variance to any effluent limit. Select “Yes”, “No”, or “Uncertain” to indicate whether the record showed a variance was granted.

2. Did the record describe the designated uses of the receiving water(s) to which the facility discharges (e.g. contact recreation, aquatic life use)?

A state’s water quality standards include a classification system for waterbodies based on the expected uses of those waterbodies. The uses in this system are called *designated uses*. The regulations at §131.10(a) describe various uses of waters that are considered desirable and that must be considered when establishing water quality standards. Those uses include public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. Page 6-3 of the PWM provides additional information about designated uses.

3. Did the fact sheet contain a description of the 303(d) status of the receiving water(s)?

Often, the designated use is included in the receiving water discussion in the fact sheet. In some states, the receiving water might be characterized by a letter or tier that lists the respective designated uses in the water quality standard. In these cases, the reviewer should verify that the state water quality standard <<http://water.epa.gov/scitech/swguidance/standards/wqslibrary/index.cfm>> identifies the designated use.

a) If yes, was the receiving water(s) impaired for any uses?

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit or fact sheet identified the designated uses applicable to the receiving water to which the facility discharges, as described above.

b) If yes, complete the following table.

For each pollutant parameter identified as impairing the receiving water(s), complete the table for each of the following questions:

i. Had a TMDL been completed for the pollutant(s) causing the impairment(s)?

A total maximum daily load, or TMDL, is a calculation of the maximum amount of a pollutant that can be present in a segment and still allow attainment of water quality standards, and an allocation of that amount to the pollutant's sources. The TMDL calculation is $TMDL = WLA + LA + MOS$, where, WLA is the sum of wasteload allocations (point sources), LA is the sum of load allocations (nonpoint sources and background), and MOS is the margin of safety. If a TMDL was completed (i.e., allocations were calculated and approved by EPA) for a pollutant discharged to the receiving water by the facility, the TMDL should specify the wasteload allocation assigned to the discharge. Page 6-13 of the PWM and EPA's Impaired Waters and TMDLs website <<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/>> provide additional information.

ii. If the receiving water was impaired (i.e., on 303(d) list), did the facility discharge pollutants that cause or contribute to the impairment?

Under CWA section 303(d), states are required to develop lists of impaired waters. Impaired waters are those that do not meet the water quality standards set for them, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that those jurisdictions establish priority rankings for waters on their CWA section 303(d) list and develop TMDLs for those waters.

Question II.B.7. in this checklist asks, "Does the record indicate that the receiving water(s) is impaired for any uses?" If the receiving water is impaired ("Y" was answered in the checklist for question II.B.7.), compare the pollutants of concern selected for the permit development process discussed above to the pollutants listed as causing impairment to verify whether the facility contributes to the impairment. The record should discuss the facility's effect on the impairment, such as a WLA assigned to the discharge through a TMDL.

Enter "N/A" if "No" was answered for question II.B.7. If "Yes" was answered for question II.B.7, select "Yes", "No", or "Uncertain" to indicate whether the discharge would cause or contribute to that impairment.

iii. If yes, does the fact sheet indicate that the TMDL was implemented in the permit?

If the receiving water is not impaired, enter "N/A". If the receiving water is impaired, select "Yes" to identify if the record indicated that a TMDL had been drafted or completed. Select "No" if there is nothing in the record to indicate whether or not a TMDL exists for the receiving water body.

iv. If yes, did the permit include WQBELs that were consistent with the assumptions and requirements of the WLA portion of the TMDL(s)?

The term WLA refers to the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution [see §130.2(h)]. The WLA could be allocated through an EPA-approved TMDL, an EPA or state watershed loading analysis, or a facility-specific water quality modeling analysis.

The NPDES regulations at §122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL.

The National Summary of Impaired Waters and TMDL Information

<http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T> lists completed TMDLs. The point source contribution discussion often lists NPDES facilities that discharge to the impaired water. The WQBELs in the permit for the parameter based on TMDLs for causing or contributing to the impairment

should be consistent with the WLA in the TMDL. The fact sheet should discuss how the WQBELs were developed from the TMDL WLAs.

Enter “N/A” if there were no TMDLs for the receiving water or the waterbody was not impaired for any pollutants listed in the permit. If the facility discharges pollutants that cause or contribute to the impairment, select “Yes”, “No”, or “Uncertain” to indicate whether the permit included WQBELs that were consistent with the assumptions and requirements of the WLA portion of the TMDL.

4.3.2 Reasonable Potential Analysis

4. Did the record indicate that the permit writer considered all available data and information in identifying “pollutants of concern” for the limit development process?

There are several sources of information for and methods of identifying pollutants of concern for WQBEL development. Permit writers should consider data reported on the permit application and DMRs, assess pollutants for which there are existing effluent limitations, examine TBELs applicable to the discharge, review 303(d) lists, and evaluate industrial contributors for discharges from POTWs to identify “pollutants of concern.” For some pollutants of concern, the permit writer might not need to conduct any further analysis and could, after characterizing the effluent and receiving water, proceed directly to developing WQBELs. For other pollutants of concern, the permit writer uses the information from the effluent and receiving water characterization to assess the need for WQBELs. Section 6.1 of the PWM provides additional information about the five categories of pollutants of concern for WQBEL development including pollutants with applicable TBELs, pollutants with a WLA from a TMDL, pollutants identified as needing WQBELs in the previous permit, pollutants identified as present in the effluent through monitoring, pollutants otherwise expected to be present in the discharge. The fact sheet should contain a discussion of how “pollutants of concern” were identified and considered for effluent limitation development.

Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet described how pollutants of concern were selected.

5. Had the state made a finding that the discharge will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable numeric water quality standard for each pollutant of concern at each outfall?

After determining the applicable water quality standards and characterizing the effluent and receiving water, a permit writer determines whether WQBELs are needed. EPA regulations at §122.44(d)(1)(i) state, “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will *cause*, have the *reasonable potential to cause*, or *contribute* to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality.” [emphasis added] Because of this regulation, EPA and many authorized NPDES states refer to the process that a permit writer uses to determine whether a WQBEL is required in an NPDES permit as a *reasonable potential analysis*. Wording the requirements of the regulation another way, a reasonable potential analysis is used to determine whether a discharge, alone or in combination with other sources of pollutants to a waterbody and under a set of conditions arrived at by making a series of reasonable assumptions, could lead to an excursion above an applicable water quality standard. Section 6.3 of the PWM provides additional information about reasonable potential analyses.

The permit and fact sheet should document that a reasonable potential analysis considered each category of pollutant of concern and for each outfall discharging pollutants. Select “Yes”, “No”, or “Uncertain” to indicate whether the permit addressed this for each outfall.

6. Did the record include reasonable potential analysis documentation (e.g. summary tables, spreadsheets)?

The fact sheet, or an attachment to the fact sheet in the permit file, should provide documentation that the reasonable potential analysis was completed. In some cases, the reasonable potential analysis is conducted by a different person than the permit writer. The analysis might look like a spreadsheet, database printout, or other documentation table. Specific state procedures often vary and should be consulted to ensure that the permit is developed consistent with state requirements.

Select “Yes”, “No”, or “Uncertain” to indicate whether reasonable potential analysis documentation was provided (i.e., summary tables, spreadsheets) in the record.

a) If no, list all parameters of concern for which RP was not identified in the record

If the reasonable potential analysis is not provided or some pollutants were omitted from the analysis, list all the pollutants of concern that were omitted from the reasonable potential analysis.

4.3.3 Effluent Limitations Development and Calculations

7. Did the record include limit development calculations for each pollutant limited in the permit?

Any calculations or other necessary explanation of the derivation of specific effluent limitations and conditions shall be provided in the record. [§124.56(a)]

A fact sheet is a document that briefly sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. When the permit is in the draft stage, the fact sheet and supporting documentation serve to explain the rationale and assumptions used in deriving the limitations to the discharger, the public, and other interested parties.

Table 5. Required elements of a fact sheet

Required element	Regulatory citation (40 CFR)
General facility information	
Description of the facility or activity	§124.8
Sketches or a detailed description of the discharge location	§124.56
Type and quantity of waste/pollutants discharged	§124.8
Summary rationale of permit conditions	
Summary of the basis for the draft permit conditions	§124.8
References to the applicable statutory or regulatory provisions	
References to the administrative record	

Required element	Regulatory citation (40 CFR)
<p>Detailed rationale of permit conditions</p> <p>Explanation and calculation of effluent limitations and conditions</p> <p>Specific explanations of</p> <ul style="list-style-type: none"> • Toxic pollutant limitations • Limitations on internal wastestreams • Limitations on indicator pollutants • Case-by-case requirements • Decisions to regulate non-publicly owned treatment works (non-POTWs) under a separate permit <p>For EPA-issued permits, the requirements of any state certification</p> <p>For permits with a sewage sludge land application plan, a description of how all required elements of the land application plan are addressed in the permit</p> <p>Reasons why any requested variances do not appear justified, if applicable</p>	<p>§124.56</p> <p>§124.8</p>
<p>Administrative Requirements</p> <p>A description of the procedures for reaching a final decision on the draft permit, including</p> <ul style="list-style-type: none"> • Public comment period beginning and ending dates • Procedures for requesting a hearing • Other procedures for public participation <p>Name and telephone number of the person to contact for additional information</p>	<p>§124.8</p>

The fact sheet should provide detailed rationale of permit conditions including explanation and calculation of effluent limitations and conditions.

Select “Yes”, “No”, or “Uncertain” to indicate whether limit development calculations are provided for each pollutant limited in the permit.

a) If no, which pollutants did not have documentation of calculations?

If documentation of effluent limitation calculations is not provided for specific pollutants, enter the pollutants without calculations.

8. Where dilution or a mixing zone was provided, did the record describe how the dilution allowance was determined?

Many state water quality standards have general provisions allowing some consideration of mixing of effluent and receiving water when determining the need for and calculating WQBELs. Depending on the state’s water quality standards and implementation policy, such a mixing consideration could be expressed in the form of a dilution allowance or regulatory mixing zone. A dilution allowance typically is expressed as the flow of a river or stream, or a portion thereof. A regulatory mixing zone generally is expressed as a limited area or volume of water in any type of waterbody where initial dilution of a discharge takes place and within which the water quality standards allow certain water quality criteria to be exceeded. Section 6.2.5 of the PWM provides additional information about dilution allowances and mixing zones.

When a mixing zone or dilution allowance is provided in the permit, the fact sheet should indicate how that allowance was derived. The record should document the state’s mixing zone policy and how the mixing zone was calculated using the state’s policy. The permit should indicate if the discharge has rapid and complete mixing or incomplete mixing and then determination of mixing zone size.

In some cases, the fact sheet will indicate a dilution ratio (e.g., 4:1) or a percentage (e.g., 70 percent of the 1Q10 flow). In some cases, mixing zones are allowed by state standards but mixing might not be appropriate and should be considered on a case by case basis. The record should document the reasoning for selecting the allowable dilution including how the pollutant reacts with the receiving water and any upstream contributions and downstream conditions.

Select “Yes”, “No”, or “Uncertain” to indicate whether the record described how the dilution allowance was determined.

9. Where dilution or a mixing zone was provided, did the record indicate that background data for the receiving water was used in reasonable potential or limit development calculations?

When developing WQBELs, the steady state, mass balance equation requires background data to determine the upstream contribution of the pollutant. The fact sheet, or an attachment to the factsheet in the permit file, should provide documentation for calculations of limit development. Within that documentation, the record should indicate, often in the discussion of specific parameters or in a column on a spreadsheet or table, a background pollutant concentration and upstream flow conditions. Section 6.2.4.2 of the PWM provides additional information about receiving water characteristics.

Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet indicated that receiving water background data was used in limit development.

a) If yes, for what parameters?

Enter the parameters with background data if the fact sheet indicates background data was used in limit development.

b) If no, what was the default used in calculations?

In some cases, the permit writer might not have background data for all of the pollutants for which WQBELs were developed and would need to make assumptions. The state might have procedures for estimating background values (e.g., to use zero, or ½ MDL), although EPA encourages permitting authorities to collect and use actual ambient data, where possible.

Enter the default number used for limit development if the fact sheet does not specify background data used.

i. Did the record explain the basis of the default value?

Select “Yes”, “No”, or “Uncertain” to indicate whether the fact sheet indicated the basis of the default background data value.

10. Based on analyses conducted, did the permit contain numeric water quality-based effluent limits (WQBELs) or BMP WQBELs for all pollutants that will cause, have the reasonable potential to cause, or contribute to an excursion of applicable water quality standards?

A permit must contain effluent limits for a pollutant if the permitting authority has determined reasonable potential for that pollutant. [§122.44(d)(iii)] If a permit writer has determined that a pollutant or pollutant parameter is discharged at a level that will cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard, the permit writer must develop WQBELs for that pollutant parameter.

Section 6.4 of the PWM presents the approach recommended by EPA's *Technical Support Document for Water Quality-Based Toxics Control* (EPA 2004) <www.epa.gov/npdes/pubs/owm0264.pdf> for calculating WQBELs for toxic (priority) pollutants, including calculating parameter-specific WQBELs from aquatic life criteria, calculating parameter-specific WQBELs from human health criteria, and determining whole effluent toxicity (WET) requirements. Many permitting authorities apply those or similar procedures to calculate WQBELs for toxic pollutants and for a number of conventional or nonconventional pollutants with effluent concentrations that tend to follow a lognormal distribution. Permit writers consult permitting authority policies and procedures to determine the methodology specific to their authorized NPDES permitting program, including the approach for pollutants with effluent concentrations that do not follow a lognormal distribution.

If the permit provides documentation of a reasonable potential analysis, then the final limits should be developed for all parameters identified in the analysis. The reviewer should compare parameters documented in the reasonable potential analysis and the limit development section of the fact sheet.

Enter "N/A" if there was no reasonable potential analysis available in the record. Select "Yes", "No", or "Uncertain" to indicate whether the permit contained numeric effluent limits for all pollutants that have a reasonable potential to cause or contribute to an excursion of applicable WQ standards.

a) If no, identify all pollutants for which there was RP but no final limit.

If there were not WQBELs for all pollutants that were calculated to have reasonable potential, then identify which pollutants did not contain a final limit.

b) Was reasonable potential found for WET?

WET monitoring requirements that are representative of the discharge effluent (40 CFR Part 122.44(d)(1)(ii)) are included in NPDES permits to generate WET data used to determine whether reasonable potential for WET has been demonstrated. If reasonable potential has been demonstrated, then a WET limit must be included in the permit (40 CFR Part 122.44(d)(1)(iv) and (v)).

Select "N/A" if a discussion of RP for WET was not included in the permit. Select "Yes", "No", or "Uncertain" to indicate whether RP was found for WET.

ii. If yes, where reasonable potential was determined, were WQBELs included in the permit?

If a state has numeric criteria for WET, a permit writer could use the results of WET tests to project acute or chronic toxicity in the receiving water after accounting for the applicable dilution allowance or mixing zone made available in the water quality standards. The permit writer would compare the projected toxicity of the receiving water to the applicable water quality criterion for WET. If the projected toxicity exceeds the applicable numeric water quality criterion for WET, the discharge would cause, have the reasonable potential to cause, or contribute to an excursion above the applicable water quality standards, and the permit writer must develop a WQBEL for WET [see § 122.44(d)(1)(iv)]. In that way, numeric criteria for WET can be treated similarly to chemical-specific criteria. Section 6.5 of the PWM discusses calculating RP and WQBELs for WET.

Enter Select "NA" if the answer if RP was not found for WET. Select "Yes", "No", or "Uncertain" Enter "Y" or "N" to indicate whether WQBELs were found in the permit.

11. Were all final WQBELs in the permit consistent with the justification and documentation provided in the record?

In some cases, the final limits are not consistent with the limits in the draft permit and permit calculations. Discrepancies between draft and final permits could arise from changes due to public comment, transposing of numbers during the transcription process, and typographical errors.

The reviewer should look at the fact sheet, calculation attachments and the final permit to determine consistency between drafts.

Select “N/A” if the record did not include documentation in the record of limit development. Select “Yes”, “No”, or “Uncertain” to indicate whether all final WQBELs in the permit were consistent with the justification or documentation provided in the record.

12. For all final WQBELs, did the permit contain both long-term (e.g., average monthly) and short-term (e.g., maximum daily, instantaneous) effluent limits?

For continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works and average weekly and average monthly discharge limitations for POTWs. [§122.45(d)]

For discharges which are not continuous the permit writer shall consider the following factors, as appropriate: (1) Frequency (e.g., a batch discharge shall not occur more than once every 3 weeks); (2) Total mass (e.g., not to exceed 100 kg of zinc and 200 kg of chromium per batch discharge); (3) Maximum rate of discharge of pollutants during the discharge (e.g., not to exceed 2 kilograms of zinc per minute); and (4) Prohibition or limitation of specified pollutants by mass, concentration, or other appropriate measure (for example, shall not contain at any time more than 0.1 mg/l zinc or more than 250 grams of zinc in any discharge). [§122.45(e)]

All effluent limitations must be expressed, unless impracticable, as both average monthly limits (AMLs) and maximum daily limits (MDLs) for all discharges other than POTWs. [§122.45(d)]

The average monthly limit is the highest allowable value for the average of daily discharges over a calendar month. The maximum daily limit is the highest allowable daily discharge measured during a calendar day or 24-hour period representing a calendar day. The average weekly limit is the highest allowable value for the average of daily discharges over a calendar week. For pollutants with limitations expressed in units of mass, the daily discharge is the total mass discharged over the day. For limitations expressed in other units, the daily discharge is the average measurement of the pollutant over the period of a day.

In the TSD, EPA recommends establishing an MDL, rather than an AWL, for discharges of toxic pollutants from POTWs. Section 6.4.1.4 of the PWM provides additional information about calculating average monthly limitations and maximum daily limitations for WQBELs.

Select “N/A” if final WQBELs were not included in the permit. Select “Yes”, “No”, or “Uncertain” to indicate whether both long-term (e.g., average monthly) and short-term (e.g., maximum daily, instantaneous) limits were established for all final WQBELs.

a) If no, specify.

If there were not both long-term and short-term WQBELs for all pollutants that were calculated to have reasonable potential, then identify which pollutants did not contain both types of limits.

13. Are units of measure specified for all numeric WQBELs (i.e., concentration, mass, SU)?

Where no TMDL is available, a water quality model generally is used to calculate a wasteload allocation (WLA) for the specific point source discharger. The WLA is the loading or concentration of pollutant that the specific point source may discharge while still allowing the water quality criterion to be attained downstream of that discharge.

The requirements of a WLA generally must be interpreted in some way to be expressed as an effluent limitation. The goal of the permit writer is to derive effluent limitations that are enforceable, adequately account for effluent variability, consider available receiving water dilution, protect against acute and chronic impacts, account for compliance monitoring sampling frequency, and assure attainment of the WLA and water quality standards. In developing WQBELs, the permit writer develops limitations that require a facility to perform in such a way that the concentration of the pollutant of concern in the effluent discharged is nearly always below the WLA.

To accomplish that goal, EPA has developed a statistical permit limitation derivation procedure to translate WLAs into effluent limitations for pollutants with effluent concentration measurements that tend to follow a lognormal distribution. EPA believes that this procedure, discussed in Chapter 5 of the *Technical Support Document* (EPA 1991), results in defensible, enforceable, and protective WQBELs for such pollutants. In addition, a number of states have adopted procedures based on, but not identical to, EPA's guidance that also provide defensible, enforceable, and protective WQBELs. Permit writers should always use the procedures adopted by their permitting authority. In addition, permit writers should recognize that alternative procedures would be used to calculate effluent limitations for pollutants with effluent concentrations that cannot generally be described using a lognormal distribution.

The type of limitation (i.e., mass, concentration, or other units) calculated for a specific pollutant at a facility will depend on the type of pollutant and the way limitations are expressed in the applicable water quality standard. The reviewer should consult the state water quality standards used in the permit's WQBEL development to determine the appropriate units of measure.

Select "N/A" if final WQBELs were not included in the permit. Select "Yes", "No", or "Uncertain" to indicate whether all WQBELS were expressed in appropriate units of measure.

14. For pollutants for which the state WQS have narrative water quality criteria, did the record indicate the state considered its applicable narrative water quality criteria in developing water quality-based permit conditions?

The regulation at §131.11(b) allows states to adopt both numeric and narrative water quality criteria. All states have adopted narrative water quality criteria to supplement numeric criteria. Narrative criteria are statements that describe the desired water quality goal for a waterbody. Narrative criteria, for example, might require that discharges be "free from toxics in toxic amounts" or be "free of objectionable color, odor, taste, and turbidity." Narrative criteria can be the basis for limiting specific pollutants for which the state does not have numeric criteria [§122.44(d)(1)(vi)] or they can be used as the basis for limiting toxicity using WET requirements where the toxicity has not yet been traced to a specific pollutant or pollutants [§122.44(d)(1)(v)]. For toxic pollutants, EPA's Water Quality Standards Regulation at §131.11(a)(2) requires states to develop implementation procedures for toxics narrative criteria that address how the state intends to regulate point source discharges of toxic pollutants to water quality limited segments.

WET requirements in NPDES permits protect aquatic life from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach is useful for complex effluents where it might be infeasible to identify and

regulate all toxic pollutants in the effluent or where parameter-specific effluent limitations are set, but the combined effects of multiple pollutants are suspected to be problematic. The WET approach allows a permit writer to implement numeric criteria for toxicity included in a state's water quality standards or to be protective of a narrative "no toxics in toxic amounts" criterion. Like the parameter-specific approach, the WET approach allows permitting authorities to control toxicity in effluents before toxic impacts occur or may be used to help return water quality to a level that will meet designated uses.

In many cases, the water quality standards discussion or effluent limitations section of the fact sheet will document narrative criteria applicable to the receiving water. Reviewers can also check EPA's State, Tribal, and Territorial Standards Website (EPA 2011b) to determine narrative criteria for the permit's receiving water to verify applicable narrative criteria.

Select "Yes", "No", or "Uncertain" to indicate whether the record indicated the state considered its applicable narrative water quality criteria in developing water quality-based permit conditions.

15. Did the permit contain or require a compliance schedule?

The NPDES regulations at §122.47 allow permit writers to establish schedules of compliance to give permittees additional time to achieve compliance with the CWA and applicable regulations. Schedules developed under this provision must require compliance by the permittee *as soon as possible*, but may not extend the date for final compliance beyond compliance dates established by the CWA. Thus, compliance schedules in permits are not appropriate for every type of permit requirement. Specifically, a permit writer may not establish a compliance schedule in a permit for TBELs because the statutory deadlines for meeting technology standards (i.e., secondary treatment standards and effluent guidelines) have passed. Section 9.1.3 of the PWM provides additional information about compliance schedules.

In May 2007, the Director of EPA's Office of Wastewater Management issued a memorandum to EPA Region 9 that clarified the requirements of §122.47 as they relate to WQBELs (Hanlon 2007) *Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits* <www.epa.gov/npdes/pubs/memo_complianceschedules_may07.pdf>. Permit writers should consider the principles outlined in this memo when assessing whether a compliance schedule for achieving a WQBEL is consistent with the CWA and its implementing regulations and when documenting the basis for a compliance schedule in a permit. Considerations outlined in the memo include the following:

- Demonstrate that the permittee cannot immediately comply with the new effluent limitation on the effective date of the permit.
- Include in the permit an enforceable *final* effluent limitation and a date by when this will be achieved.
- Justify and document the *appropriateness* of the compliance schedule; factors relevant to a determination that a compliance schedule is appropriate include how much time the discharger had to meet the WQBEL under prior permit(s), whether there is any need for modifications to treatment facilities, operations, or other measures and, if so, how long it would take to implement such modifications.
- Justify and demonstrate that compliance with the final WQBEL is required *as soon as possible*; factors relevant to a determination that a compliance is required as soon as possible include the steps needed to modify or install treatment facilities, operations, or other measures and the time those steps would take.

- Include an enforceable sequence of events leading to compliance with interim milestones for schedules longer than one year.
- Recognize that a schedule solely to provide time to develop a total maximum daily load (TMDL) or to conduct a use attainability analysis (UAA) is not appropriate.

Select “Yes”, “No”, or “Uncertain” to indicate whether “the permit provided the discharger with a compliance schedule.

a) *If yes, did the permit include the final compliance date?*

NPDES compliance schedules must require compliance by the permittee *as soon as possible*, but may not extend the date for final compliance beyond compliance dates established by the CWA. The permit should indicate that the compliance date is before the expiration date for the permit and is as soon as possible (i.e., factors relevant to a determination that compliance is required as soon as possible include the steps needed to modify or install treatment facilities, operations, or other measures and the time those steps would take).

If there is a compliance schedule, then enter the final compliance date.

b) *If yes, was the schedule otherwise consistent with 40 CFR 122.47 (explanation of need for compliance schedule, interim milestones, compliance as soon as possible)?*

Considerations listed above from the memorandum from Jim Hanlon, *Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits* (Hanlon 2007)

<http://water.epa.gov/lawsregs/guidance/wetlands/upload/signed-hanlon-memo.pdf> should be discussed in the permit and fact sheet, including an enforceable sequence of events leading to compliance with interim milestones for schedules longer than one year.

Enter “N/A” if there was no compliance schedule. Select “Yes”, “No”, or “Uncertain” to indicate whether the record showed that an enforceable sequence of events leading to compliance with interim milestones for schedules longer than one year was included.

5. Monitoring and Reporting Requirements

This section of the checklist summarizes the discharger’s monitoring and reporting requirements and the basis for development of those requirements.

The NPDES regulations require facilities discharging pollutants to waters of the United States to periodically evaluate compliance with the effluent limitations established in their permits and provide the results to the permitting authority. A permit writer should consider several factors when determining the specific requirements to be included in the NPDES permit. Inappropriate or incomplete monitoring requirements can lead to inaccurate compliance determinations. Factors that could affect sampling location, sampling method, and sampling frequency include the following:

- Applicability of effluent limitations guidelines and standards (effluent guidelines).
- Waste stream and process variability.
- Access to sample locations.
- Pollutants discharged.
- Effluent limitations.
- Discharge frequencies (e.g., continuous versus intermittent).

- Effect of flow or pollutant load or both on the receiving water.
- Characteristics of the pollutants discharged.
- Permittee’s compliance history.

The regulations at §§122.44(i) and 122.48, as well as the standard conditions at §122.41(j), provide monitoring and reporting requirements. Chapter 8 of the PWM provides additional information about monitoring and reporting. Specific state procedures often vary and should be consulted to ensure that the permit is developed consist with state requirements.

1. Did the permit require at least annual reporting for all limited parameters?

The regulations at §122.44(i)(2) require reporting at a frequency no less than once per year. Generally, monitoring and reporting requirements are either incorporated into the effluent limitations table for each parameter or in a separate monitoring table for each parameter in the permit.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit required annual reporting for all pollutants limited in the permit.

2. Were monitoring location(s) identified?

The permit writer should specify the appropriate monitoring location in an NPDES permit to ensure compliance with the permit limitations and provide the necessary data to determine the effects of an effluent on the receiving water. The NPDES regulations do not prescribe exact monitoring locations; rather, the permit writer is responsible for determining the most appropriate monitoring location(s) and indicating the location(s) in the permit. Ultimately, the permittee is responsible for providing a safe and accessible sampling point that is representative of the discharge [§122.41(j)(1)]. Examples of monitoring locations include influent, effluent, source water, internal, and ambient. Effluent monitoring must be included for each outfall to determine compliance with effluent limitations. The permit should specify a monitoring location to obtain representative samples at each point of discharge.

Select “Yes”, “No”, or “Uncertain” to indicate whether monitoring location(s) were identified.

If monitoring location(s) are identified in the record, then specify the monitoring location for each outfall from the permit. It might be easier to identify which outfalls are not identified adequately.

3. Were monitoring frequency(s) identified?

The permit writer should establish monitoring frequencies sufficient to characterize the effluent quality and to detect events of noncompliance, considering the need for data and, as appropriate, the potential cost to the permittee. Monitoring frequency should be determined on a case-by-case basis, and decisions for setting monitoring frequency should be described in the fact sheet. Some states have their own monitoring guidelines that can help a permit writer determine an appropriate monitoring frequency. Frequency considerations are the design capacity of the treatment facility, type of treatment, location of discharge, frequency of discharge (batch, continuous), compliance history, nature of pollutants, number of monthly samples used in developing permit limit, tiered limits, correlated parameters, and cost of monitoring relative to the permittee’s capabilities. Common monitoring frequencies are continuous, daily, five times a week, three times a week, weekly, monthly, quarterly, semi-annually, semi-annually (specified seasons), and annually. The permit should specify the sampling frequency for each parameter to determine compliance with effluent limits. Section 8.1.3 of the PWM provides additional information about monitoring frequencies.

Select “Yes”, “No”, or “Uncertain” to indicate whether monitoring frequency(s) were identified.

If monitoring frequency(s) are identified in the record, then specify the frequencies of pollutant monitoring from the permit. It might be easier to identify which frequencies are not established adequately.

4. Were any monitoring requirements insufficient to assess compliance with an effluent limitation?

Permits must contain required monitoring including the type, intervals, and frequency sufficient to yield data that are representative of the monitored activity [§122.48(b)]. The permit writer must specify the monitoring type (sample collection method) for all parameters required to be monitored in the permit on the basis of the characteristics of each specific discharge. Certain sample collection and storage requirements are identified as part of the analytical methods specified in Part 136. The two most frequently used sampling methods are grab and composite. Section 8.1.4 of the PWM and Chapter 5 (Sampling) of the *NPDES Compliance Inspection Manual* (EPA 2004)

<www.epa.gov/compliance/resources/publications/monitoring/cwa/inspections/npdesinspect/npdesmanual.html> provide additional information about sample types. Frequency and location considerations are discussed in question V.2. above.

The monitoring requirements should be consistent in both the permit and the fact sheet. If prior permit monitoring is discussed, monitoring should be the same unless an increase or reduction in monitoring is discussed in the fact sheet. The fact sheet should discuss the basis for monitoring and that the monitoring is sufficient to yield data that are representative of the monitored activity.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit established any monitoring requirements that were insufficient to yield data that were representative of the monitored activity and assess compliance with effluent limitations.

5. Did the permit require testing for Whole Effluent Toxicity?

Whole Effluent Toxicity (WET) tests measure the degree of response of exposed aquatic test organisms to an effluent mixed in some proportion with control water (e.g., laboratory water or a non-toxic receiving water sample). To protect water quality, EPA recommends that WET tests be used in NPDES permits together with requirements based on chemical-specific water quality criteria. Organisms used in WET tests (e.g., *Ceriodaphnia dubia* (freshwater flea) and *Pimephales promelas* (fathead minnow)) are indicators or surrogates for the aquatic community to be protected, and a measure of the real biological impact from exposure to the toxic pollutants. Sections 6.4 and 8.2.4 of the PWM and EPA’s NPDES Whole Effluent Toxicity Website <www.epa.gov/npdes/wet> provide additional information about WET testing.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit included WET testing.

a) Type of testing:

If the permit includes WET testing, then indicate which type of WET testing is required, acute, chronic or both.

b) If yes, did the permit include specific testing requirements?

Select “Yes”, “No”, or “Uncertain” to indicate if the permit includes specific WET testing requirements.

6. Did the permit require use of sufficiently sensitive 40 CFR Part 136 methods capable of quantifying pollutants at concentrations equal to or less than the limits?

When available, permittees must use test procedures specified in Part 136 [§§122.41(j)(4) and 122.44(i)(1)(iv)]. The permit must specify the analytical methods to be used for monitoring. The analytical

methods contained in Part 136 are established for conventional, toxic (priority), and some nonconventional pollutants. Without analytical methods for a parameter, the permit should specify the analytical method to be used. There are also procedures to apply for approval of alternative test methods in accordance with §136.4.

While Part 136 identifies the analytical methods approved for use in the NPDES program, additional methods information is available through the National Environmental Methods Index (NEMI) <www.nemi.gov/>, a Web-based, searchable database. Section 8.3 of the PWM and EPA's Office of Science and Technology's Clean Water Act Analytical Methods Website <www.epa.gov/waterscience/methods/> provides additional information about analytical methods.

At the time of the writing of this manual, EPA had proposed regulations at §§ 122.21(e), 122.44(i), and Part 136, to require the use of sufficiently sensitive methods for analyses conducted for NPDES permit applications and for compliance monitoring (75 FR 35712, June 23, 2010). To ensure that appropriate analytical methods are required and performed, see the most current version of these federal regulations and applicable state analytical method regulations and policy on EPA's Proposed Sufficiently Sensitive Methods Rulemaking <<http://cfpub.epa.gov/npdes/ssmethods.cfm>>.

Select "Yes", "No", or "Uncertain" to indicate whether the permit specified use of Part 136 methods or alternative methods for all parameters limited in the permit.

7. Did the permit specify the method, frequency, and timing of submission of DMRs and other required reports to the permitting authority?

The NPDES regulations require the permittee to maintain records and periodically report on monitoring activities. The regulations at §122.41(l)(4)(i) require that monitoring results must be reported on a DMR. Data reported include both data required by the permit and any additional data the permittee has collected consistent with permit requirements. All facilities must submit reports (on discharges and sludge use or disposal) at least annually, as required by §122.44(i)(2). However, the NPDES regulation states that monitoring frequency and reporting should be dependent on the nature and effect of the discharge or sludge use or disposal. Thus, the permit writer can require reporting more frequent than annually.

Select "Yes", "No", or "Uncertain" to indicate whether the permit specified requirements regarding the method, frequency, and timing of submission of DMRs and other required reports to the permitting authority.

a) Did the permit require the permittee to submit DMRs electronically starting no later than December 21, 2016?

EPA's final NPDES Electronic Reporting Rule became effective December 21, 2015. The rule requires NPDES permittees to electronically submit DMRs to the permitting authority. Permittees were required to begin electronically submitting DMRs by December 21, 2016 (one year after the effective date of the final rule).

Select "Yes", "No", or "Uncertain" to indicate whether the permit required the permittee to submit DMRs electronically starting no later than December 21, 2016.

8. POTWs:

a) Did the permit require monitoring for CSO/SSOs or blending?

Permitting authorities might want to require monitoring for overflows.

Select “N/A” if the facility was not a POTW. Select “Yes”, “No”, or “Uncertain” to indicate whether the facility included monitoring requirements for CSO/SSOs or blending.

If yes, specify

If the permit required monitoring for CSO/SSOs or blending, specify the requirements documented in the record.

9. Non POTWs: For monitoring of ELG-based limits, if the monitoring frequency was less frequent than annual, did the record indicate that the facility applied for and was granted a monitoring waiver?

Monitoring waivers for certain guideline-listed pollutants can be provided for dischargers to forgo sampling if the discharger has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. This waiver is good only for the term of the permit and is not available during the term of the first permit issued to a discharger. Any request for this waiver must be submitted when applying for a reissued permit or modification of a reissued permit. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger.

[§122.44(a)(2)(i)-(iii)]

Select “N/A” if the facility was a POTW. Select “Yes”, “No”, or “Uncertain” to indicate whether the facility applied for and was granted a monitoring waiver.

a) If yes, did the permit specifically incorporate this waiver?

Any grant of the monitoring waiver must be included in the permit as an express permit condition and the reasons supporting the grant must be documented in the permit's fact sheet or statement of basis.

[§122.44(a)(2)(iv)]

Select “N/A” if the facility was a POTW or if the permit required annual monitoring. Select “Yes”, “No”, or “Uncertain” to indicate whether the waiver was included as a permit condition and documented in the fact sheet.

6. Standard Conditions

This section of the checklist summarizes the inclusion of the standard conditions required by §§122.41 and 122.42. Chapter 10 of the NPDES Permit Writers’ Manual discusses standard conditions. If the reviewers are confident that identical standard conditions are included in each of the permits subject to review, a full review of these permit conditions can be conducted once and the findings can be deemed applicable to all of the permits reviewed.

1. Did the permit contain all 40 CFR §122.41 standard conditions?

The regulations at §122.41 specify the standard conditions applicable to all dischargers. The list of standard conditions from §122.41 is included in Appendix A of this companion and with checkboxes below so reviewers can check off the standard conditions as they are identified in the permit and then answer the summary question highlighting any missing conditions.

List of Standard Conditions

- | | |
|--|--|
| <input type="checkbox"/> Duty to comply | <input type="checkbox"/> Reporting requirements |
| <input type="checkbox"/> Duty to reapply | <input type="checkbox"/> Planned change |
| <input type="checkbox"/> Need to halt or reduce activity not a defense | <input type="checkbox"/> Anticipated noncompliance |
| <input type="checkbox"/> Duty to mitigate | <input type="checkbox"/> Transfers |
| <input type="checkbox"/> Proper O & M | <input type="checkbox"/> Monitoring reports |
| <input type="checkbox"/> Permit actions | <input type="checkbox"/> Compliance schedules |
| <input type="checkbox"/> Property rights | <input type="checkbox"/> 24 hour reporting |
| <input type="checkbox"/> Duty to provide information | <input type="checkbox"/> Other non-compliance |
| <input type="checkbox"/> Inspections and entry | <input type="checkbox"/> Other information |
| <input type="checkbox"/> Monitoring and records | <input type="checkbox"/> Bypass |
| <input type="checkbox"/> Signatory requirement | <input type="checkbox"/> Upset |

2. Was the language of all §122.41 standard conditions at least as stringent as the federal regulations?

Standard conditions may be incorporated into a permit either expressly (verbatim from the regulations) or by reference to the regulations. EPA prefers that the standard conditions are attached expressly because permittees might not have easy access to the regulations. Many states have developed an attachment for NPDES permits that includes the federal standard conditions. In some permits, standard conditions are included as a separate section in the permit or might be woven throughout the permit.

The reviewer should compare the language in §122.41 <<http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1>> to the standard conditions and verify that the language in the permit is the same as in the regulations. All the conditions must be listed with verbiage from §122.41. For multiple reviews for the same state that uses a separate attachment, a coordinated review of the separate attachment would be more efficient than multiple reviews.

Select “Yes”, “No”, or “Uncertain” to indicate whether the standard conditions were as stringent as the federal regulations.

a) If no, specify

If language for any of the §122.41 standard conditions has been changed to be less stringent, then specify the standard condition that was edited and the language from the permit.

3. Did the permit or fact sheet indicate that certain bypasses would be “approved” (i.e., No enforcement will be taken when system specific conditions, such as wet weather flows exceeding specified levels, are met)?

Bypass means the intentional diversion of waste streams from any portion of a treatment facility. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. [§122.41(m)(1)]

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (m)(3) and (m)(4) of this section. [§122.41(m)(2)]

If the permittee knows in advance of the need for a bypass (anticipated bypass), it shall submit prior notice, if possible at least ten days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph by the 24 hour reporting standard condition (l)(6) of this section (24-hour notice). [§122.41(m)(3)]

Prohibition of bypass. (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless: (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and (C) The permittee submitted notices as required under paragraph (m)(3) of this section. (ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section. [§122.41(m)(4)]

One example of a less stringent permit provision would be if the permit provides, “Bypass is prohibited unless [listed criteria are met]” rather than, “Bypass is prohibited, and the Director may take enforcement action against a permittee unless [listed criteria are met].” Another example would be, if the criteria for limiting enforcement are less stringent than that used in the bypass regulation (no feasible alternatives, etc.)

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit showed approval (i.e., no enforcement will be taken) when system specific conditions (i.e., wet weather flows exceed specified levels) were met.

a) If yes, did the record for the permit provide an adequate demonstration that there were “no feasible alternatives” to the bypass under the conditions when bypass is approved?

If the permit or fact sheet indicate that certain bypasses will be “approved” (i.e., No enforcement will be taken when system specific conditions, such as wet weather flows exceed specified levels are met). Bypass provisions in the permit or in the fact sheet should discuss that the bypasses are allowed when there are “no feasible alternatives” and define the conditions when a bypass is approved.

Select “N/A” if the permit did not indicate approval of bypasses. Select “Yes”, “No”, or “Uncertain” to indicate whether the record discussed an adequate demonstration that there were “no feasible alternatives” to the bypass under the conditions when bypass was approved.

4. POTWs: Did the permit contain the additional standard condition at §122.42(b)(1)–(3) for POTWs regarding notification of new introduction of pollutants and new industrial users?

All POTWs must provide adequate notice to the Director of the following: (1) any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and (2) any substantial change in the volume or character of pollutants being introduced into the POTW by a source at the time of issuance of the permit. For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. [§122.42(b)]

The permit should provide this standard condition expressly or by reference. States might have a separate attachment to the permit with standard conditions for POTWs or include this standard condition in a separate section with the other standard conditions from §122.41.

Select “Yes”, “No”, or “Uncertain” to indicate whether the additional standard conditions at §122.42(b) were included in the permit. Select “N/A” for non-POTWs.

5. Non-POTWs: Did the permit contain the additional standard condition at §122.42(a)(1)-(2) for non-municipals regarding notification levels?

In addition to the reporting requirements under Sec. 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit. In this case, the Director must be notified of such a discharge if that discharge will exceed the highest of the following "notification levels": (i) one hundred micrograms per liter (100 [micro]g/l); (ii) two hundred micrograms per liter (200 [micro]g/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 [micro]g/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony; (iii) five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7); or (iv) the level established by the Director in accordance with Sec. 122.44(f).

The Director shall also be notified of any activity that has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels": (i) five hundred micrograms per liter (500 [micro]g/l); (ii) one milligram per liter (1 mg/l) for antimony; (iii) ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7). (iv) the level established by the Director in accordance with Sec. 122.44(f). [§122.42(a)]

The permit should provide this standard condition expressly or by reference. States might have a separate attachment to the permit with standard conditions for non-POTWs or include this standard condition in a separate section with the other standard conditions from §122.41.

Select "Yes", "No", or "Uncertain" to indicate whether the additional standard conditions at §122.42(a) were included expressly or by reference. Enter "N/A" for non-POTWs.

7. Administrative Record

This section of the checklist includes the technical requirements and the public notice. This information is generally found in the draft permit, the fact sheet, and supporting attachments and is often assessed during the site visit.

7.1 Technical Requirements

This section of the checklist includes evaluation of the permitting authority's documentation procedures. EPA regulations at §124.2 define a draft permit as a document that indicates the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. After the permit is issued, the fact sheet and supporting documentation (administrative record) are the primary support for defending the permit in the administrative appeals process. Documenting the permit requires the permit writer to be organized and logical throughout the permit development process.

Some of the content of the fact sheet and administrative record is specified by federal and state regulation, and the remainder is dictated by good project management. Chapter 11 of the PWM provides additional information about NPDES permit administration.

1. Was the permit revised between the draft and final permits?

After significant public interest or a public hearing, a permit might be revised to reflect resolution of issues. In some cases, transcription errors or omissions could result in different limits or requirements in the draft and final versions of the permit.

The reviewer should compare the draft and final permit and the fact sheet to determine if the permit was revised between the draft and final permit.

Select “N/A” if the draft permit was not available. Select “Yes”, “No”, or “Uncertain” to indicate whether the permit was revised between the draft and final permit.

a) If yes, was documentation of the changes and rationale included in the file?

As required by §§124.9 and 124.18, an administrative record must contain specific elements. The administrative record allows personnel from the permitting authority to reconstruct the justification for a given permit and defend the permit during any legal proceedings regarding the permit. Therefore, the administrative record should contain all information supporting development of the permit—including documentation of the changes made between the draft and final permit, and the rationale for the changes.

Select “Yes”, “No”, or “Uncertain” to indicate whether the administrative record contained documentation of the changes made between the draft and final permit, and the rationale for the changes.

2. Subsequent to issuance, had the permit been modified?

In most cases, a permit will not need to be modified (or revoked and reissued) during the term of the permit if the facility can fully comply with permit conditions. However, under certain circumstances, it might be necessary to modify the permit before its expiration date. A permit modification could be triggered in several ways. For example, a representative of the regulatory agency might inspect the facility and identify a need for the modification (i.e., the improper classification of an industry), or information submitted by the permittee might suggest the need for a change. Of course, any interested person may make a request for a permit modification.

Except where the permittee requests or agrees, permit modifications are limited to specific causes identified in §§122.62(a) and 122.62(b) and are further discussed in section 11.4.2 of the PWM.

Modifications are often identified on the cover page of the permit, by a cover letter in the record, or discussed in the fact sheet.

Select “Yes”, “No”, or “Uncertain” to indicate whether the permit was modified after the permit was issued.

a) If yes, was the modification processed in accordance with §§122.62 & 122.63?

The regulations at §122.62 establish causes for modification or revocation and reissuance of a permit. Except where the permittee requests or agrees, permit modifications are limited to specific *causes* identified in §§122.62(a) and 122.62(b), including alterations, new information, new regulations, compliance schedules, variance requests, toxics, reopener, net limits, pretreatment, failure to notify, non-limited pollutants, notification levels, compliance schedules for innovative or alternative facilities, small municipal separate storm sewer system (MS4) minimum control measures, technical mistakes, failed BPJ compliance, land application plans, cause exists for termination, and notification of proposed transfer.

The specific permit changes that can be processed as non-major modifications are to correct typographical errors, incorporate more frequent monitoring or reporting, revise an interim compliance date in the schedule of compliance (provided the new date is not more than 120 days after the date specified in the permit and does not interfere with attainment of the final compliance date requirement), allow for a change of ownership (provided no other change is necessary), change the construction schedule for a new source discharger, delete a point source outfall when that outfall is terminated and does not result in discharge of

pollutants from other outfalls except in accordance with permit limits, and Incorporate an approved local pretreatment program. [§122.63]

Select “N/A” if the permit was not modified. Select “Yes”, “No”, or “Uncertain” to indicate whether the modification was processed as a major or non-major modification in accordance with §§122.62 & 122.63.

3. Note in comments whether the permit file was missing any supporting documentation used to develop permit limits and conditions (list missing documents)?

The state visit will include looking at the hard copy permit files. As discussed in Question VII.A.1. above, the file copy of the permit should include, not only the final permit and fact sheet, but also the application and supporting attachments (i.e., topographical map, wastewater flow diagram), the previous permit, TBEL calculations, reasonable potential analysis, WQBEL development, copy of the public notice (might also be included as scanned attachment to electronic fact sheet), cover letters and other correspondence, notes from telephone calls, and any other information relevant to the permit.

The fact sheet should reference supporting documentation that was used to develop limits and conditions, which should be provided in the full permit file retained by the permitting authority.

If the permit file was missing any supporting documentation used to develop permit limits and conditions, list the missing documents in the comments section.

7.2 Public Notice

This section of the checklist includes evaluation of the public notice documentation. The regulations at §124.10 provides the requirements for public notice of permit actions and public comment period and section 11.3.1 of the NPDES Permit Writers’ Manual provides additional information about NPDES public notices.

1. Did the record include documentation of public notice in accordance with §124.10?

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft NPDES permit or other significant actions with respect to an NPDES permit or permit application. The exact scope, required contents, and methods for effecting public notices are found in §124.10.

The actions for which public notice is required include:

- Tentative denial of an NPDES permit application (not necessarily applicable to state programs);
- Preparation of a draft NPDES permit, including a proposal to terminate a permit;
- Scheduling of a public hearing;
- An appeal has been granted by the Environmental Appeals Board;
- Major permit modifications (after permit issuance); and
- New source determinations (EPA only).

A public notice must contain name and address of the office processing the permit action; the name and address of the permittee or applicant and, if different, of the facility or activity regulated by the permit; a brief description of the business conducted at the facility or activity described in the permit; the name, address, and telephone number of a contact from whom interested persons can obtain additional information; a brief description of the comment procedures required, the time and place of any hearing to be

held including procedures to request a hearing; for EPA-issued permits, the location and availability of the administrative record and the times at which the record will be open for public inspection and a statement that all data submitted by the applicant is available as part of the administrative record; a description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice(s) and the location of each sludge treatment works treating domestic sewage and use or disposal sites known at the time of permit application; requirements applicable to a thermal variance under CWA section 316(a); requirements applicable to cooling water intake structures under CWA section 316(b); and any additional information considered necessary. [§124.10(d)(1)]

The reviewer should verify that the record documents the public notice and that it contains the elements from §124.10.

Select “Yes”, “No”, or “Uncertain” to indicate whether documentation of the public notice was included in the permit record.

2. Did the public notice include content requirements at 124.10(d)?

Federal regulations specify 9 items of information that must be included in NPDES permit public notices. In general this includes: the name and address of the processing office, the name and address of the permittee or applicant, a description of the business conducted at the facility, contact information to obtain additional information, a description of the comment and hearing procedures, the location of the administrative record (for EPA-issued permits), the location of discharges points and the name of the receiving water, requirements applicable to cooling water intake structures, and additional information deemed necessary or proper. Public hearing notice requirements are also specified.

Select “Yes”, “No”, or “Uncertain” to indicate whether the public notice included the required information elements.

a) If a 316(a) variance was requested, did the public notice include contents required at 124.57?

Public notice of an NPDES draft permit for a discharge where a CWA section 316(a) request has been filed under §122.21(1) shall include:

- A statement that the thermal component of the discharge is subject to effluent limitations under CWA section 301 or 306 and a brief description, including a quantitative statement, of the thermal effluent limitations proposed under section 301 or 306;
- A statement that a section 316(a) request has been filed and that alternative less stringent effluent limitations may be imposed on the thermal component of the discharge under section 316(a) and a brief description, including a quantitative statement, of the alternative effluent limitations, if any, included in the request; and
- If the applicant has filed an early screening request under §125.72 for a section 316(a) variance, a statement that the applicant has submitted such a plan.

Select “Yes”, “No”, or “Uncertain” to indicate whether the public notice included the required content if a 316(a) variance was requested.

3. Did the record include all comments received, if any?

Public notice of a draft permit might elicit comments from concerned individuals or agencies. Frequently, such comments are simply requests for additional information. However, some comments are of a substantive nature and suggest modifications to the draft permit or indicate that the draft permit is inappropriate for various reasons. In such cases, commenters must submit all reasonable arguments and factual material in support of their positions and comments by the close of the public comment period, and the permitting authority must consider those comments in making final decisions. If the approach is technically correct and clearly stated in the fact sheet, it will be difficult for commenters to find fault with the permit. Commenters can always suggest alternatives, however. In addition, an interested party may also request a public hearing.

Section 11.3.2 provides additional information about public comments. The fact sheet or a separate attachment should discuss any comments received.

Select "N/A" if no comments were received or the record did not discuss comments. Select "Yes", "No", or "Uncertain" to indicate whether the record included comments.

4. Did the record include a written response to all significant comments?

To the extent possible, it is desirable to respond to all public comments as quickly as possible. In some cases, it might be possible to diffuse a potentially controversial situation by providing further explanation of permit terms and conditions. Additionally, permit writers should also consider notifying commenters that their comments have been received and are being considered.

The permitting agency must respond to all significant comments at the time a final permit decision is reached (in the case of EPA-issued permits) or at the same time a final permit is actually issued (in the case of state-issued permits). The response must specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and briefly describe and respond to all significant comments on the draft permit or the permit application (for section 404 permits only) raised during the public comment period, or during any hearing. For EPA-issued permits, any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in §124.18. If new points are raised or new material supplied during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record. The response to comments shall be available to the public. (§124.17)

Section 11.3.2 provides additional information about public comments. The fact sheet or a separate attachment should provide responses to all comments received.

Select "N/A" if no comments were received or the record did not discuss comments. Select "Yes", "No", or "Uncertain" to indicate whether a written response was included for all significant comments.

5. If a public hearing was requested, was one held?

Any interested party may request a public hearing. The request should be in writing and should state the nature of the issues proposed to be raised during the hearing. However, a request for a hearing does not automatically necessitate that a hearing be held. A public hearing should be held when there is a significant amount of interest expressed during the public comment period or when it is necessary to clarify the issues involved in the permit decision.

Thus, the decision of whether to hold a public hearing is actually a judgment call. Such decisions are usually made by someone other than the permit writer. However, the permit writer will be responsible for ensuring that all the factual information in support of the draft permit is well documented.

Public notice of a public hearing must be given at least 30 days before the public meeting. Public notice of the hearing may be given at the same time as public notice of the draft permit, and the two notices may be combined. The public notice of the hearing should contain the following information:

- Brief description of the nature and purpose of the hearing, including the applicable rules and procedures.
- Reference to the dates of any other public notices relating to the permit.
- Date, time, and place of the hearing.

Scheduling a hearing automatically extends the comment period until at least the close of the hearing [§124.12(c)] and the public comment period may be extended by request during the hearing. Anyone may submit written or oral comments concerning the draft permit at the hearing. A presiding officer is responsible for scheduling the hearing and maintaining orderly conduct, including setting reasonable time limitations for oral statements. Note that a transcript or recording of the hearing must be available to interested persons.

Select “Yes”, “No”, or “Uncertain” to indicate whether a public hearing was held.

6. If a public hearing was held, was the recording or transcript part of the administrative record?

Whenever a public hearing will be held and EPA is the permitting authority, the Regional Administrator shall designate a Presiding Officer for the hearing who shall be responsible for its scheduling and orderly conduct. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under Sec. 124.10 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing. A tape recording or written transcript of the hearing shall be made available to the public. [§124.12(b)-(d)]

Select “N/A” if there was no public hearing. Select “Yes”, “No”, or “Uncertain” to indicate whether the recording or transcript was part of the administrative record.

Summary of Findings

The reviewer should summarize findings from the permit quality review in concise bulleted form to be used for development of the PQR Report. Findings should be compiled from PQR checklist results and should include permit strengths, permit weaknesses, and clarification for the state visit.

1. Permit Strengths

This section will include one or two bullets about the exceptional strengths of the permit. Bullets can pertain to the basic permit and facility information, effluent limitation development, standard conditions, and administrative record. Language can be duplicated from comments in the checklist. Bullets should indicate location of specific language within the permit so that the PQR Report writer can refer to the permit for more information.

Examples of bullets include:

- Cover sheet of the permit and introduction of the fact sheet (on page x of x) clearly provided a concise description of the facility and receiving water.
- Effluent limitation development in section x of the fact sheet (on page x of x and Appendix x) was complete, with clear TBEL development, an RPA for WQBELs, and documentation of the comparison of WQBELs to TBELs.
- Record presented clear documentation for public notice (on page x of x of the permit) and documented all public comments (in Appendix x).
- Permit used a standardized attachment with all standard conditions (on page x of x of the permit).

2. Permit Weaknesses

This section will include two or more bullets describing the specific weaknesses of the permit. Bullets can pertain to the basic permit and facility information, effluent limitation development, standard conditions, and administrative record, Bullets should indicate location of specific language within the permit so that the PQR Report writer can refer to the permit for more information.

Examples of bullets include:

- Location of discharge within the receiving water was not specified in the record (see cover page on page x of x in the permit and receiving water description in the fact sheet on page x of x).
- The fact sheet referenced a water quality analysis in section x (on page x of x in the fact sheet); however reasonable potential analysis and WQBEL calculations and results were not provided.
- Units were not included for some of the effluent limitations in the permit. Specifically, pollutant x (in Table xx); pollutant y (in Table xx); and pollutant z (in Table yy).
- The permit provided a mixing zone (on page x of x in the fact sheet), but there was no discussion of the basis for the mixing zone or how it complied with state mixing zone regulations and policies.
- There were no monitoring or reporting requirements in the permit sufficient to assess compliance with narrative WQBELs and special conditions.
- Sections of the Duty to Comply standard condition were missing (on page x of x of the permit)
- Page x of x was missing from the fact sheet.

3. Clarification for the State Visit

This section will include bullets with any questions that might be answered during the state visit and can pertain to the basic permit and facility information, effluent limitation development, standard conditions, and administrative record, Bullets should indicate location of specific language within the permit so that the PQR Report writer can refer to the permit for more information.

Examples of bullets include:

- The fact sheet referenced a water quality analysis in section x (on page x of x in the fact sheet); however reasonable potential analysis and WQBEL calculations and results were not provided.
- The permit referenced a public notice but did not include it in the record.

References

Hanlon, James. A. 2007. (Hanlon 2007) *Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits*. U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, DC. Memorandum, May 10, 2007. <http://www.epa.gov/npdes/pubs/memo_complianceschedules_may07.pdf>.

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U.S. Environmental Protection Agency. 2011. (EPA 2011a) *Water Impaired Waters and Total Maximum Daily Loads*. <<http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/>>. July 20, 2011. Accessed July 20, 2011.

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U.S. Environmental Protection Agency. 2004. (EPA 2004) *NPDES Compliance Inspection Manual*. EPA-305-X-03-001. U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance, Washington, DC. <www.epa.gov/compliance/resources/publications/monitoring/cwa/inspections/npdesinspect/npdesinspect.pdf>.

U.S. Environmental Protection Agency. 1991. (EPA 1991) *Technical Support Document for Water Quality-Based Toxics Control (TSD)*. EPA-505/2-90-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC. <www.epa.gov/npdes/pubs/owm0264.pdf>.

U.S. Senate Committee on Environment and Public Works. 2011. *Federal Water Pollution Control Act [As Amended Through P.L. 107–303, November 27, 2002]*. <<http://epw.senate.gov/water.pdf>> November 27, 2002. Accessed September 20, 2011

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responsible for compliance with your permit obligations if the other entity fails to implement the control measure (or component thereof). Therefore, EPA encourages you to enter into a legally binding agreement with that entity if you want to minimize any uncertainty about compliance with your permit.

(b) In some cases, the NPDES permitting authority may recognize, either in your individual NPDES permit or in an NPDES general permit, that another governmental entity is responsible under an NPDES permit for implementing one or more of the minimum control measures for your small MS4 or that the permitting authority itself is responsible. Where the permitting authority does so, you are not required to include such minimum control measure(s) in your storm water management program. (For example, if a State or Tribe is subject to an NPDES permit that requires it to administer a program to control construction site runoff at the State or Tribal level and that program satisfies all of the requirements of § 122.34(b)(4), you could avoid responsibility for the construction measure, but would be responsible for the remaining minimum control measures.) Your permit may be reopened and modified to include the requirement to implement a minimum control measure if the entity fails to implement it.

[64 FR 68846, Dec. 8, 1999]

§ 122.36 As an operator of a regulated small MS4, what happens if I don't comply with the application or permit requirements in §§ 122.33 through 122.35?

NPDES permits are federally enforceable. Violators may be subject to the enforcement actions and penalties described in Clean Water Act sections 309 (b), (c), and (g) and 505, or under applicable State, Tribal, or local law. Compliance with a permit issued pursuant to section 402 of the Clean Water Act is deemed compliance, for purposes of sections 309 and 505, with sections 301, 302, 306, 307, and 403, except any standard imposed under section 307 for toxic pollutants injurious to human health. If you are covered as a co-permittee under an individual permit or

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under a general permit by means of a joint Notice of Intent you remain subject to the enforcement actions and penalties for the failure to comply with the terms of the permit in your jurisdiction except as set forth in § 122.35(b).

[64 FR 68847, Dec. 8, 1999]

§ 122.37 Will the small MS4 storm water program regulations at §§ 122.32 through 122.36 and § 123.35 of this chapter change in the future?

EPA will evaluate the small MS4 regulations at §§ 122.32 through 122.36 and § 123.35 of this chapter after December 10, 2012 and make any necessary revisions. (EPA intends to conduct an enhanced research effort and compile a comprehensive evaluation of the NPDES MS4 storm water program. EPA will re-evaluate the regulations based on data from the NPDES MS4 storm water program, from research on receiving water impacts from storm water, and the effectiveness of best management practices (BMPs), as well as other relevant information sources.)

[64 FR 68847, Dec. 8, 1999]

Subpart C—Permit Conditions

§ 122.41 Conditions applicable to all permits (applicable to State programs, see § 123.25).

The following conditions apply to all NPDES permits. Additional conditions applicable to NPDES permits are in § 122.42. All conditions applicable to NPDES permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

(a) *Duty to comply.* The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

(i) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants

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and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

(2) The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Clean Water Act provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be sub-

ject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

(3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

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

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

(d) *Duty to mitigate.* The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) *Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions

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of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

(f) *Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(g) *Property rights.* This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) *Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

(i) *Inspection and entry.* The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise author-

ized by the Clean Water Act, any substances or parameters at any location.

(j) *Monitoring and records.* (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless another method is required under 40 CFR subchapters N or O.

(5) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

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(k) *Signatory requirement.* (1) All applications, reports, or information submitted to the Director shall be signed and certified. (See § 122.22)

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(l) *Reporting requirements—(1) Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in § 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under § 122.42(a)(1).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may

be necessary under the Clean Water Act. (See § 122.61; in some cases, modification or revocation and reissuance is mandatory.)

(4) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.

(ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.

(iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

(5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) *Twenty-four hour reporting.* (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See § 122.41(g).)

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See § 122.44(g).)

(iii) The Director may waive the written report on a case-by-case basis for reports under paragraph (l)(6)(ii) of this section if the oral report has been received within 24 hours.

(7) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (l) (4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.

(8) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

(m) *Bypass—(1) Definitions.* (i) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

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

(2) *Bypass not exceeding limitations.* The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (m)(3) and (m)(4) of this section.

(3) *Notice—(i) Anticipated bypass.* If the permittee knows in advance of the

need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(ii) *Unanticipated bypass.* The permittee shall submit notice of an unanticipated bypass as required in paragraph (l)(6) of this section (24-hour notice).

(4) *Prohibition of bypass.* (i) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The permittee submitted notices as required under paragraph (m)(3) of this section.

(ii) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (m)(4)(i) of this section.

(n) *Upset—(1) Definition.* *Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(2) *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (n)(3) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and

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before an action for noncompliance, is final administrative action subject to judicial review.

(3) *Conditions necessary for a demonstration of upset.* A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(i) An upset occurred and that the permittee can identify the cause(s) of the upset;

(ii) The permitted facility was at the time being properly operated; and

(iii) The permittee submitted notice of the upset as required in paragraph (l)(6)(ii)(B) of this section (24 hour notice).

(iv) The permittee complied with any remedial measures required under paragraph (d) of this section.

(4) *Burden of proof.* In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(Clean Water Act (33 U.S.C. 1251 *et seq.*), Safe Drinking Water Act (42 U.S.C. 300f *et seq.*), Clean Air Act (42 U.S.C. 7401 *et seq.*), Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*))

[48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39620, Sept. 1, 1983; 49 FR 38049, Sept. 26, 1984; 50 FR 4514, Jan. 31, 1985; 50 FR 6940, Feb. 19, 1985; 54 FR 255, Jan. 4, 1989; 54 FR 18783, May 2, 1989; 65 FR 30908, May 15, 2000; 72 FR 11211, Mar. 12, 2007]

§ 122.42 Additional conditions applicable to specified categories of NPDES permits (applicable to State NPDES programs, see § 123.25).

The following conditions, in addition to those set forth in § 122.41, apply to all NPDES permits within the categories specified below:

(a) *Existing manufacturing, commercial, mining, and silvicultural dischargers.* In addition to the reporting requirements under § 122.41(l), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that dis-

charge will exceed the highest of the following "notification levels":

(i) One hundred micrograms per liter (100 µg/l);

(ii) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7); or

(iv) The level established by the Director in accordance with § 122.44(f).

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(i) Five hundred micrograms per liter (500 µg/l);

(ii) One milligram per liter (1 mg/l) for antimony;

(iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with § 122.21(g)(7).

(iv) The level established by the Director in accordance with § 122.44(f).

(b) *Publicly owned treatment works.* All POTWs must provide adequate notice to the Director of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(3) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(c) *Municipal separate storm sewer systems.* The operator of a large or medium municipal separate storm sewer