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SEP 19 2016

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TO: AC Zyle SWMD

September 12, 2016

Mr. Tori Gordon
Associate Director of the Office of Land Resources
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: WASTEWATER CONTRIBUTION PERMIT #593

Dear Mr. Gordon:

Your application for issuance of your wastewater contribution permit has been reviewed and processed in accordance with Article V, Chapter 120 of the Springfield City Code.

The enclosed issued permit approves industrial facility wastewater discharged from Nabors Landfill located in Mountain Home, Arkansas to the City of Springfield wastewater collection system. All wastewater discharges from this facility along with actions and reports relating thereto shall be in accordance with the terms and conditions of the enclosed permit.

If you wish to appeal or challenge any conditions imposed in this permit, a petition shall be filed for modification or reissuance of this permit within 30 days in accordance with the requirements in section 120-202 of Chapter 120 of the Springfield City Code. Failure to petition for reconsideration of the permit within the allotted time is deemed a waiver by the permittee of the right to challenge the terms of this permit.

If you should have any questions or comments concerning this matter, please contact this office at (417) 864-1487.

Sincerely,

CITY OF SPRINGFIELD
ENVIRONMENTAL SERVICES

Heather Hoggard
Pretreatment Inspector

Clean Water Operations
755 N Franklin Ave. • Springfield, Missouri 65802-4121
(417) 864-1544 • www.springfieldmo.gov

CITY OF Springfield ENVIRONMENTAL SERVICES

Discharge Monitoring Report Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

All samples and measurements taken are to the best of my knowledge representative of the permitted wastewater discharge.

All sampling, measurements, and analyses were conducted in accordance with guidelines prescribed in 40 CFR 136 and the Wastewater Contribution Permit obtained from the City of Springfield, Missouri.

_____

Signature (**Legible**)

_____

Title

_____

Name of Facility

_____

Date

WASTEWATER CONTRIBUTION PERMIT
Permit No. # 593

In accordance with the provisions of Article VI of Chapter 120 of the Springfield City Code,

NABORS LANDFILL
1320 LANDFILL ROAD
MOUNTAIN HOME, AR 72653

is hereby authorized to discharge industrial pretreatment wastewater from the above identified facility and through the outfalls identified herein to the City of Springfield Southwest Wastewater Treatment Plant in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the Permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Springfield sewer use ordinance. This permit shall become effective on September 12, 2016 and shall expire at midnight on September 12, 2019.

If the Permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of Chapter 120-200, a minimum of 90 days prior to the expiration date.

PART 1 - EFFLUENT LIMITATIONS

A. During the effective period of this permit, the Permittee is authorized to discharge landfill leachate to the City of Springfield sewer system from the outfalls listed below.

Outfall	Description
001	LANDFILL LEACHATE

B. EFFLUENT LIMITATIONS

OUTFALL 001

During the effective dates of this permit, the discharge from this outfall shall not exceed the following effluent limitations.

Parameter	**Daily Maximum (mg/L)**
Flow	------
Arsenic, T	0.51
Cadmium, T	0.13
Chromium, T	2.91
Copper, T	2.44
Cyanide, T	0.33
Lead, T	0.53
Mercury, T	0.02
Nickel, T	5.79
Zinc, T	6.54
Oil & Grease (A/V)	100
Ammonia Nitrogen	Monitoring Requirement Only
Phosphorus, T	Monitoring Requirement Only
pH	12.5 (maximum) 5.0 (minimum)
Flashpoint	<140°F

C. All discharges shall comply with all other applicable laws, regulations, standards, and requirements contained in Article III of Chapter 120, 40 CFR 403, and any other applicable local, State and Federal pretreatment laws, regulations, standards, and requirements including any such laws, regulations, standards, or requirements that may become effective during the term of this permit.

PART 2 - MONITORING REQUIREMENTS

A. During the effective period of this permit, the Permittee shall monitor the following outfall for the following parameters, at the indicated frequency:

OUTFALL 001

Sample Parameter (units)	Measurement Location	Frequency*	Sample Type
Flow (gpd)		Continuous[2]	
Arsenic, T	See Note [1]	1/ Semiannual	Grab
Cadmium, T	See Note [1]	1/ Semiannual	Grab
Copper, T	See Note [1]	1/ Semiannual	Grab
Chromium, T	See Note [1]	1/ Semiannual	Grab
Cyanide T	See Note [1]	1/ Semiannual	Grab
Lead, T	See Note [1]	1/ Semiannual	Grab
Mercury, T	See Note [1]	1/ Semiannual	Grab
Nickel, T	See Note [1]	1/ Semiannual	Grab
Zinc, T	See Note [1]	1/ Semiannual	Grab
pH	See Note [1]	1/ Semiannual	Grab
Ammonia Nitrogen	See Note [1]	1/ Semiannual	Grab
Phosphorus, T	See Note [1]	1/ Semiannual	Grab
Flashpoint	See Note [1]	1/ Semiannual	Grab

Notes

* Sampling frequencies are based upon the information provided to the City of Springfield during the application process. The semiannual sampling period shall consist of one sample taken during the period of January thru June and another during July thru December.

1. Samples shall be collected at the leachate collection tank sampling access point or load out area capable of collecting representative leachate samples.

2. Daily flow shall be based upon the total gallons of wastewater transported to the City of Springfield Southwest Wastewater Treatment Plant, based upon full vehicle tank capacity in gallons. **The Permittee shall report a summary of daily flows to the City of Springfield with each semiannual report.**

3. Wastewater pH shall be analyzed on site or within 15 minutes using **40 CFR 136** approved testing methods.

B. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with **40 CFR Part 136** and amendments thereto unless specified otherwise in the monitoring conditions of this permit.

PART 3 - REPORTING REQUIREMENTS

A. Monitoring Reports

Each monitoring report shall indicate the concentration of all pollutants in the effluent for which sampling and analysis were performed during the sampling period and shall be summarized and reported in writing on a self monitoring report form or in a format providing the required information. The reports are due on the 28th day of the month following the completed reporting period.

B. If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA or as specified in this permit, the results of such monitoring shall be reported in the monthly report submitted to the City of Springfield.

C. Automatic Resampling

If the results of the Permittee wastewater analysis indicate that a violation of this permit has occurred, the Permittee **must**:

1. **Inform the City of Springfield of the violation within 24 hours**; **and**

2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the first violation, except the Permittee is not required to resample if:

   (a) The Control Authority performs sampling at the Permittee at a frequency of at least once per month or,

   (b) The Permittee performs sampling at a frequency of at least once per month.

   (c) The Control Authority performs sampling at the permitted between the time the Permittee performs its initial sampling and the time when the Permittee receives the results of this sampling.

D. Accelerated Sampling Schedule

When the Permittee becomes aware that noncompliance with their permit limitations has occurred, an accelerated sampling schedule shall be implemented until such time that no violations have occurred for a three month period from the last event of noncompliance.

Example:

1. Original permitted sampling frequency - Semiannually.

2. A violation occurs resulting in a new sampling frequency of once per month for a period of three months. This accelerated sampling rate only applies to the pollutant that was in violation. The accelerated sampling must begin within 30 days of date of Permittee knowledge of the permit violation.

   (a) If no violation occurs during the accelerated sampling period, the sampling frequency then returns to the original permitted frequency.

   (b) If another violation occurs during the accelerated sampling period, then the sampling frequency shall be increased to two times per month for the next three months from the month of the last violation. If violations continue to occur the sampling frequencies could be accelerated incrementally to daily sampling.

   (c) If no violations occur during the accelerated period the sampling frequency reverts back to the original permitted frequency.

In addition to the increased sampling frequency, the User shall remain liable for violations as expressed in Article VIII, "Enforcement" of Chapter 120 of the Springfield City Code.

Accidental Discharge Report

1. The Permittee shall **immediately** notify the City of Springfield upon the occurrence of an accidental spill or discharge of substances prohibited by Article III of Chapter 120, or any slug loads or spills that may enter the public sewer. Environmental Services should be notified by telephone at (417) 864-1923 to report an accidental permit violation, slug load, or spill. **If** emergency calls requesting dispatch of fire, police, or ambulance services are made, the **Southwest Wastewater Treatment Plant** shall be notified by telephone by calling (417) 891-1600 and dialing extension 42885 to speak with a treatment plant Shift Supervisor.

Permittee notification of accidental releases in accordance with this section does not relieve the Permittee of other reporting requirements that arise under local, State, or Federal laws.

Within five days following an accidental spill, permit violation, or slug discharge, the Permittee shall submit to the City of Springfield a detailed written report. The report shall specify:

(a) Description and cause of the upset, violation, slug load, or accidental discharge, the cause thereof, and the impact on the Permittee compliance status. The description should also include location of discharge, type, concentration and volume of waste.

(b) Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

(c) All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

F. All reports required by this permit shall be submitted to the City of Springfield at the following address:

CITY OF SPRINGFIELD
ENVIRONMENTAL SERVICES
755 N. FRANKLIN AVE.
SPRINGFIELD, MO 65802

PART 4 - SPECIAL CONDITIONS

SECTION 1 - ADDITIONAL/SPECIAL MONITORING REQUIREMENTS

No Special Conditions at this time.

PART 5 - STANDARD CONDITIONS

SECTION A GENERAL CONDITIONS AND DEFINITIONS

1. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

2. Duty to Comply

The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or correct any adverse impact to the publicly owned treatment works (POTW) or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliant discharge.

4. Permit Modification

This permit may be modified for good causes including, but not limited to, the following:

a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements.

b. Material or substantial alterations or additions to the discharger's operation processes, or discharge volume or character which were not considered in drafting the effective permit.

c. A change in any condition in either the Industrial User or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.

d. Information indicating that the permitted discharge poses a threat to the POTW collection and treatment systems, POTW personnel or the receiving waters.

e. Violation of any terms or conditions of the permit.

f. Misrepresentation or failure to disclose fully all required reporting.

g. Revision of, or a grant of, variance from such categorical standards pursuant to 40 CFR 403.13.

h. To correct typographical or other errors in the permit.

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator.

j. Upon request of the Permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

k. Incorporate any new or revised requirements contained in a National categorical pretreatment standard promulgated for landfills.

l. Incorporate any new or revised requirements resulting from the City of Springfield reevaluation of its local limits.

m. Incorporate any new or revised requirements developed by City of Springfield as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR 503) and the State of Missouri.

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.

5. Permit Revocation

Any Industrial User who violates the following conditions of Chapter 120 or applicable State or Federal Regulations is subject to having their Wastewater Contribution Permit revoked. The Director shall reinstate such permit upon proof of elimination of the violation. These conditions are as follows:

a. Failure of an Industrial User to factually report the wastewater constituents and characteristics of the discharge.

b. Failure of the Industrial User to report significant changes in operations or wastewater constituents and characteristics.

c. Refusal of reasonable access to the Industrial User's premises for the purpose of inspection or monitoring.

d. Violation of conditions of the permit.

e. Failure of the Industrial User to notify the POTW of an accidental or slug discharge.

f. Failure to pay fines.

g. Failure to pay sewer charges and/or connection fees.

h. Failure to meet compliance schedules.

6. Permit Appeals

The Permittee may petition to appeal the terms of this permit within thirty (30) days of the notice. This petition must be in writing. Failure to submit a petition for review shall be deemed to be a waiver of the appeal. In its petition, the Permittee must indicate the permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to be placed in the permit.

The effectiveness of this permit shall not be stayed pending reconsideration by the Director. If, after considering the petition and any arguments put forth by Environmental Services, the Director determines that reconsideration is proper, it shall remand the permit back to Clean Water Services for reissuance. Those permit provisions being reconsidered by the Superintendent shall be stayed pending reissuance.

The Director's decision not to reconsider a final permit shall be considered final administrative action for purposes of judicial review.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or local laws or regulations.

8. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner and/or operator with prior approval of the Director:

a. The Permittee must give at least ninety (90) days advance notice to the Director.

b. The notice must include a written certification by the new owner which:

(i) States that the new owner has no immediate intent to change the facility's operations and processes.

(ii) Identifies the specific date on which the transfer is to occur.

(iii) Acknowledges full responsibility for complying with the existing permit.

9. Continuation of Expired Permits

An expired Wastewater Contribution Permit will continue to be effective and enforceable until the Wastewater Contribution Permit is reissued if:

a. The Industrial User has submitted a complete Wastewater Contribution Permit application at least ninety (90) days prior to the expiration of the User's existing Wastewater Contribution permit.

b. The failure to reissue the Wastewater Contribution permit, prior to expiration of the previous Wastewater Contribution Permit, is not due to any act or failure to act on the part of the Industrial user.

10. Dilution

No User shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in applicable Pretreatment Standards, or any other specific pollutant limitation developed by the City and/or State of Missouri.

11. Definitions

a. Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be collected either as a time composite sample: composed of discrete sample aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a flow proportional composite sample: collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

b. Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow or time.

c. Cooling Water -

1) Uncontaminated: Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of the intake water.

2) Contaminated: Water used for cooling purposes only which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials and/or wastewater.

d. Instantaneous Maximum Allowable Discharge Limit - The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composite sample collected, independent of the industrial flow rate and the duration of the sampling event.

e. Monthly Average

1) The arithmetic mean of the values for effluent samples collected during the calendar month or specified 30 day period (as opposed to a rolling 30 day window).

2) Four (4) day average - the arithmetic mean of the values for effluent samples collected over a period of four (4) consecutive days (as opposed to a rolling four (4) day window).

f. 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, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

g. Bypass - Means the intentional diversion of wastes from any portion of a treatment facility.

12. Restricted Discharges

These general restrictions apply to all Users of the POTW whether or not the User is subject to National Categorical Pretreatment Standards or any other National, State, or Local Pretreatment Standards or Requirements.

a. No person shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which acting alone or in conjunction with other substances present in the POTW interferes with the operation or performance of the POTW or which causes or contributes to interference or pass through. A person shall not contribute substances to the POTW that may.

1) Create a fire or explosion hazard including, but not limited to gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquids, solids or gases with a closed cup flashpoint of less than 140° F (60° C) (the RCRA ignitability standard for liquid characteristic waste) using the test methods specified in 40 CFR 261.21. At no time shall two (2) successive readings over a one hour period on any explosion hazard meter, at the point of discharge into the POTW (or at any point in the POTW) be more than five percent (5%) nor shall any single reading be over ten percent (10%) of the Lower Explosive Limit (LEL).

2) Cause corrosive damage or hazard to structures, equipment or personnel of the POTW. In no case shall the discharges have a pH lower than 5.0 or higher than 12.5.

3) Cause obstruction to the flow in the POTW or other interference with the operation of the wastewater facilities due to accumulation of solid or viscous material such as but not limited to: grease, garbage with particles greater than one-half inch (½") in any dimensions, animal tissues, paunch manure, bones, hair, hides or flesh, entrails, blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, rags, plastics, tar, asphalt residues from refining or processing of fuel or lubricating oil, mud, or glass grinding, or polishing wastes.

4) Constitute a rate of discharge sufficient to cause interference with the operation and performance of the POTW.

5) Contain heat in amounts that will inhibit biological activity of the POTW Treatment Plant. In no case shall the temperature at the point

of connection to the POTW exceed 150° F (65.5° C) or cause the temperature at the treatment plant influent to exceed 104° F (40° C).

6) Contain any garbage that has not been properly shredded.

7) Contain petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through.

8) Contain any noxious or malodorous liquids, gases or solids which either singly or by interaction with other wastes are sufficient to create a public nuisance or hazard to life and property or that result in toxic gasses, vapors, and fumes in a quantity that may cause acute worker health and safety problems.

9) Contain radioactive waste or isotopes of such half life or concentration as may exceed limits defined by applicable State and Federal regulations.

10) Contain any odor, or color producing substances exceeding concentration limits which may be established by Environmental Services for the purpose of meeting the POTW NPDES permit.

11) Contain any substances which may cause the POTW effluent or any product of the POTW such as residues, sludge or scum to be unsuitable for reclamation and reuse or interfere with the reclamation process where the POTW is pursuing a reuse and reclamation program.

12) Contain toxic pollutants in sufficient quantity to injure or interfere with the wastewater treatment process, constitute a hazard to humans or other life forms, create a toxic effect in the receiving waters of the POTW, or exceed the limitation set forth in an applicable categorical pretreatment standard.

13) Contain compatible pollutants of such concentration, quantity or rate of discharge that the POTW treatment efficiency is impaired or unusual attention or expense is required to handle such materials in the POTW.

14) Contain fats, oils, or grease of animal or vegetable origin greater than one hundred (100) milligrams per liter.

15) Contain any trucked or hauled pollutants, except at points and times designated by the Director in accordance with sections 120-75 and 120-76.

16) Contain any medical wastes, except as specifically authorized by the Director.

17) Contain pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW.

18) Contain storm water, surface water, ground water, well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, cooling water, and unpolluted wastewater, unless specifically authorized by the Director.

19) Contain sludge, screenings, or other residues from the pretreatment of industrial wastes.

20) Contain wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail a toxicity test.

21) Contain detergents, surface-active agents, or other substances that may cause excessive foaming in the POTW.

13. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the Permittee from its obligations regarding compliance with any and all applicable local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

SECTION B OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. 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 of this permit. Proper operation and maintenance includes, but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls,

including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the Permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. 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.

3. Bypass of Treatment Facilities

a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, severe property damage, or no feasible alternatives exist.

b) Notification of bypass:

(1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the Director.

(2) Unanticipated bypass. The Permittee shall immediately notify the Director and submit a written notice to the POTW within 5 days. This report shall specify:

(i) A description of the bypass, and its cause, including its duration;

(ii) Whether the bypass has been collected, and

(iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

4. Process Residues and Hazardous Waste

Process residue/hazardous waste shall be handled and disposed of in accordance with Federal and State laws, rules and regulations.

SECTION C MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected, and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained by the Permittee to ensure that measurement accuracy is consistent with the accepted capability of that type of device.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures listed within 40 CFR 136, the results of this monitoring shall be included in the Permittee self-monitoring reports.

5. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and identification to:

a) Enter upon the Permittee premises without delay at any reasonable time where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

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

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

d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and

e) Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

6. Retention of Records

a) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip charge 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 five (5) years from the date of the sample, measurement, report or application.

This period may be extended by request of the Director at any time.

b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the Director shall be retained and preserved by the Permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include:

a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;

b) Who performed the sampling or measurements;

c) The date(s) analyses were performed;

d) Who performed the analyses;

e) The analytical techniques or methods used; and

f) The results of such analyses.

8. Transfer of Custody and Shipment

In order to ensure the validity of the self-monitoring sampling data, there must be accurate written records tracing the custody of each sample through all phases of the monitoring program. The primary objective of this chain of custody is to create an accurate written record that can be used to trace the possession and handling of the sample from the moment of collection through analysis.

When transferring possession of samples, the transferee must sign and record the data and time on the chain of custody record. In general, custody transfers are made on each individual sample, although samples may be transferred as a group, if desired. Every person who takes custody must fill in the appropriate section of the chain of custody record. The number of transfers should be kept to a minimum.

The sampler is responsible for properly packing and dispatching the samples to the appropriate laboratory for analysis and assuring that the samples have been handled and preserved as necessary. This responsibility also includes fully completing, dating, and signing the appropriate portion of the chain of custody record.

All packages transported to the laboratory must be accompanied by the chain of custody record and other applicable forms. A copy of these forms should be retained by the originating office.

Mailed packages should be sent with return receipt requested. If sent by common carrier, receipts are retained as part of the permanent chain of custody documentation.

Shipped samples should be properly packed to prevent breakage, and the package sealed or locked so that any evidence of tampering may be readily detected.

9. Sampling Quality Control

Control checks should be performed during the actual sample collection to determine the performance of the sample collection system. In general, the most common monitoring errors are usually caused by improper sampling, improper preservation, inadequate mixing during compositing and splitting, and excessive sample holding time. The following types of samples should be used to check the sample collection system:

a) Duplicate Samples - These are separate samples taken from the same source at the same time. These provide a check on sampling equipment and precision techniques.

b) Split Samples - This is a sample that has been divided into two containers for analysis by separate laboratories. These samples aid in identifying discrepancies in analytical techniques and procedures.

c) Spike Samples - This is a sample to which a known quantity of the same substances has been added. These provide a proficient check for accuracy of the analytical procedures.

d) Sample Preservation Blanks - This is a sample of reagent water to which a known quantity of preservative is added. This sample is then analyzed to determine the efficiency of the preservative. These provide a check on the contamination of chemical preservatives.

To obtain meaningful data for the self-monitoring program, a properly preserved representative sample must be delivered for analysis. The analysis must be performed in the prescribed fashion according to EPA approved procedures. The calculations should be completed and the results converted to final form so that the analytical data can be permanently recorded in meaningful, exact terms.

10. Falsifying Information

No person shall knowingly make any false statements, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to Chapter 120, nor falsify, tamper with, or knowingly render inaccurate any monitoring device or method required under Chapter 120.

SECTION D ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The Permittee shall give notice to the Director ninety (90) days prior to any facility expansion, production increase, or process modifications that result in new or substantially increased discharges or a change in the nature of the discharge.

2. Anticipated Noncompliance

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

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a specified time, as determined by the Director, 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. This Permittee shall also, upon request, furnish to the Director within five (5) working days copies of any records required to be kept by this permit.

4. Signatory Requirements

All applications, reports, or information submitted to the Director must contain the following certification statement and be signed as required in Sections (a), (b), (c) or (d) below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

All samples and measurements taken are to the best of my knowledge representative of the permitted wastewater discharge.

All sampling, measurements, and analyses were conducted in accordance with guidelines prescribed in 40 CFR 136 and the Wastewater Contribution permit obtained from the City of Springfield, Missouri."

a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or;

(ii) the manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship respectively.

c) The principal Executive Officer or Director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a Federal, State, or local governmental entity, or their agents.

d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:

(i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);

(ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operation of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(iii) the written authorization is submitted to the Director.

e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Director prior to or together with any reports to be signed by an authorized representative.

5. Operating Upsets

A Permittee that experiences an upset in operations that places the Permittee in a temporary state of noncompliance with the provisions of either this permit or with Article III of Chapter 120 shall inform the City of Springfield within 24 hours of becoming aware of the upset.

Environmental Services shall be notified by telephone at **(417) 864-1923** to report any upset, permit violation, accidental slug load, or spill. **If** emergency calls requesting dispatch of fire, police, or ambulance services are made, the **Southwest Wastewater Treatment Plant** shall be notified by telephone by calling (417) 891-1600 and dialing extension 42885 to speak with a treatment plant Shift Supervisor.

A written follow-up report of the upset shall be filed by the Permittee with the Director within five days. The report shall specify:

a) Description of the upset, the cause(s) thereof and the upset impact on the compliance status of the Permittee;

b) Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner. A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the Permittee for violations attributable to the upset event.

6. Annual Publication

A list of all Industrial Users that were in significant noncompliance with applicable pretreatment requirements during the twelve (12) previous months shall be annually published by the City of Springfield in the largest daily newspaper within its service area. Accordingly, the Permittee is apprized that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

7. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the Permittee from civil and/or criminal penalties for noncompliance under Section 120-296 of Chapter 120 or State or Federal laws or regulations.

8. Penalties for violations of Permit Conditions

Section 120-296 of Chapter 120 provides that any person who violates a permit condition is subject to a civil penalty of not more than $1,000 per day per violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of not more than $1,000 per day per violation, or by imprisonment for 180 days, or both. The Permittee may also be subject to sanctions under State and/or Federal law.

9. Recovery of Costs Incurred

In addition to civil and criminal liability, the Permittee violating any of the provisions of this permit or Article III of Chapter 120 or causing damage to or otherwise inhibiting the or disrupting the City of Springfield wastewater collection or disposal system shall be liable to the City of Springfield for any expense, loss, or damage caused by such violation or discharge. The City of Springfield shall bill the Permittee for the costs incurred by the City of Springfield for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 120-296 of Chapter 120.

bis(dichloroisopropyl) ether, bis-(chloroethoxy) methane and polychlorinated diphenyl ethers)
38. Halomethanes (other than those listed elsewhere; includes methylene chloride, methylchloride, methylbromide, bromoform, dichlorobromomethane
39. Heptachlor and metabolites
40. Hexachlorobutadiene
41. Hexachlorocyclohexane
42. Hexachlorocyclopentadiene
43. Isophorone
44. Lead and compounds
45. Mercury and compounds
46. Naphthalene
47. Nickel and compounds
48. Nitrobenzene
49. Nitrophenols (including 2,4-dinitrophenol, dinitrocresol)
50. Nitrosamines
51. Pentachlorophenol
52. Phenol
53. Phthalate esters
54. Polychlorinated biphenyls (PCBs)[1]
55. Polynuclear aromatic hydrocarbons (including benzanthracenes, benzopyrenes, benzofluoranthene, chrysenes, dibenzanthracenes, and indenopyrenes)
56. Selenium and compounds
57. Silver and compounds
58. 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)
59. Tetrachloroethylene
60. Thallium and compounds
61. Toluene
62. Toxaphene[1]
63. Trichloroethylene
64. Vinyl chloride
65. Zinc and compounds

[44 FR 44502, July 30, 1979, as amended at 46 FR 2266, Jan. 8, 1981; 46 FR 10724, Feb. 4, 1981]

§ 401.16 Conventional pollutants.

The following comprise the list of conventional pollutants designated pursuant to section 304(a)(4) of the Act:

1. Biochemical oxygen demand (BOD)
2. Total suspended solids (nonfilterable) (TSS)
3. pH
4. Fecal coliform
5. Oil and grease

[44 FR 44503, July 30, 1979; 44 FR 52685, Sept. 10, 1979]

§ 401.17 pH Effluent limitations under continuous monitoring.

(a) Where a permittee continuously measures the pH of wastewater pursuant to a requirement or option in a National Pollutant Discharge Elimination System (NPDES) permit issued pursuant to section 402 of the Act, the permittee shall maintain the pH of such wastewater within the range set forth in the applicable effluent limitations guidelines, except excursions from the range are permitted subject to the following limitations:

(1) The total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and

(2) No individual excursion from the range of pH values shall exceed 60 minutes.

(b) The Director, as defined in § 122.3 of this chapter, may adjust the requirements set forth in paragraph (a) of this section with respect to the length of individual excursions from the range of pH values, if a different period of time is appropriate based upon the treatment system, plant configuration or other technical factors.

(c) For purposes of this section, an *excursion* is an unintentional and temporary incident in which the pH value of discharge wastewater exceeds the range set forth in the applicable effluent limitations guidelines.

(Secs. 301, 304, 306 and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 et. seq., as amended by the Clean Water Act of 1977, Pub. L. 95-217))

[47 FR 24537, June 4, 1982]

PART 402 [RESERVED]

PART 403—GENERAL PRE-TREATMENT REGULATIONS FOR EXISTING AND NEW SOURCES OF POLLUTION

Sec.
403.1 Purpose and applicability.
403.2 Objectives of general pretreatment regulations.
403.3 Definitions.
403.4 State or local law.
403.5 National pretreatment standards: Prohibited discharges.
403.6 National pretreatment standards: Categorical standards.
403.7 Removal credits.
403.8 Pretreatment Program Requirements: Development and Implementation by POTW.
403.9 POTW pretreatment programs and/or authorization to revise pretreatment standards: Submission for approval.

AUTHORITY: 33 U.S.C. 1251 *et seq.*

SOURCE: 46 FR 9439, Jan. 28, 1981, unless otherwise noted.

§ 403.1 Purpose and applicability.

(a) This part implements sections 204(b)(1)(C), 208(b)(2)(C)(iii), 301(b)(1)(A)(ii), 301(b)(2)(A)(ii), 301(h)(5) and 301(i)(2), 304 (e) and (g), 307, 308, 309, 402(b), 405, and 501(a) of the Federal Water Pollution Control Act as amended by the Clean Water Act of 1977 (Pub. L. 95–217) or "The Act". It establishes responsibilities of Federal, State, and local government, industry and the public to implement National Pretreatment Standards to control pollutants which pass through or interfere with treatment processes in Publicly Owned Treatment Works (POTWs) or which may contaminate sewage sludge.

(b) This regulation applies:

(1) To pollutants from non-domestic sources covered by Pretreatment Standards which are indirectly discharged into or transported by truck or rail or otherwise introduced into POTWs as defined below in § 403.3;

(2) To POTWs which receive wastewater from sources subject to National Pretreatment Standards;

(3) To States which have or are applying for National Pollutant Discharge Elimination System (NPDES) programs approved in accordance with section 402 of the Act; and

(4) To any new or existing source subject to Pretreatment Standards. National Pretreatment Standards do not apply to sources which Discharge to a sewer which is not connected to a POTW Treatment Plant.

[46 FR 9439, Jan. 28, 1981, as amended at 48 FR 2776, Jan. 21, 1983; 60 FR 33932, June 29, 1995]

§ 403.2 Objectives of general pretreatment regulations.

By establishing the responsibilities of government and industry to implement National Pretreatment Standards this regulation fulfills three objectives:

(a) To prevent the introduction of pollutants into POTWs which will interfere with the operation of a POTW, including interference with its use or disposal of municipal sludge;

(b) To prevent the introduction of pollutants into POTWs which will pass through the treatment works or otherwise be incompatible with such works; and

(c) To improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

§ 403.3 Definitions.

For the purposes of this part:

(a) Except as discussed below, the general definitions, abbreviations, and methods of analysis set forth in 40 CFR part 401 shall apply to this regulation.

(b) The term *Act* means Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, *et seq.*

(c) The term *Approval Authority* means the Director in an NPDES State with an approved State pretreatment program and the appropriate Regional Administrator in a non-NPDES State or NPDES State without an approved State pretreatment program.

(d) The term *Approved POTW Pretreatment Program* or *Program* or *POTW Pretreatment Program* means a program administered by a POTW that meets the criteria established in this regulation (§§ 403.8 and 403.9) and which

has been approved by a Regional Administrator or State Director in accordance with § 403.11 of this regulation.

(e) The term *Best Management Practices* or *BMPs* means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in § 403.5(a)(1) and (b). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

(f) The term *Control Authority* refers to:

(1) The POTW if the POTW's Pretreatment Program Submission has been approved in accordance with the requirements of § 403.11; or

(2) The Approval Authority if the Submission has not been approved.

(g) The term *Director* means the chief administrative officer of a State or Interstate water pollution control agency with an NPDES permit program approved pursuant to section 402(b) of the Act and an approved State pretreatment program.

(h) The term *Water Management Division Director* means one of the Directors of the Water Management Divisions within the Regional offices of the Environmental Protection Agency or this person's delegated representative.

(i) The term *Indirect Discharge* or *Discharge* means the introduction of pollutants into a POTW from any non-domestic source regulated under section 307(b), (c) or (d) of the Act.

(j) The term *Industrial User* or *User* means a source of Indirect Discharge.

(k) The term *Interference* means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

(1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

(2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

(l) The term *National Pretreatment Standard, Pretreatment Standard,* or *Standard* means any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to § 403.5.

(m)(1) The term *New Source* means any building, structure, facility or installation from which there is or may be a Discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under section 307(c) of the Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, *provided that:*

(i) The building, structure, facility or installation is constructed at a site at which no other source is located; or

(ii) The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(iii) The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

(2) Construction on a site at which an existing source is located results in a modification rather than a New Source if the construction does not create a

new building, structure, facility or installation meeting the criteria of paragraphs (m)(1)(ii) or (m)(1)(iii) of this section, but otherwise alters, replaces, or adds to existing process or production equipment.

(3) Construction of a new source as defined under this paragraph has commenced if the owner or operator has:

(i) Begun, or caused to begin as part of a continuous onsite construction program:

(A) Any placement, assembly, or installation of facilities or equipment; or

(B) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

(ii) Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

(n) The terms *NPDES Permit* or *Permit* means a permit issued to a POTW pursuant to section 402 of the Act.

(o) The term *NPDES State* means a State (as defined in 40 CFR 122.2) or Interstate water pollution control agency with an NPDES permit program approved pursuant to section 402(b) of the Act.

(p) The term *Pass Through* means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

(q) The term *Publicly Owned Treatment Works* or *POTW* means a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

(r) The term *POTW Treatment Plant* means that portion of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.

(s) The term *Pretreatment* means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical or biological processes, process changes or by other means, except as prohibited by § 403.6(d). Appropriate pretreatment technology includes control equipment, such as equalization tanks or facilities, for protection against surges or slug loadings that might interfere with or otherwise be incompatible with the POTW. However, where wastewater from a regulated process is mixed in an equalization facility with unregulated wastewater or with wastewater from another regulated process, the effluent from the equalization facility must meet an adjusted pretreatment limit calculated in accordance with § 403.6(e).

(t) The term *Pretreatment requirements* means any substantive or procedural requirement related to Pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.

(u) The term *Regional Administrator* means the appropriate EPA Regional Administrator.

(v) *Significant Industrial User.* (1) Except as provided in paragraphs (v)(2) and (v)(3) of this section, the term Significant Industrial User means:

(i) All Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and

(ii) Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater

to the POTW (excluding sanitary, non-contact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW Treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

(2) The Control Authority may determine that an Industrial User subject to categorical Pretreatment Standards under § 403.6 and 40 CFR chapter I, subchapter N is a Non-Significant Categorical Industrial User rather than a Significant Industrial User on a finding that the Industrial User never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:

(i) The Industrial User, prior to the Control Authority's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;

(ii) The Industrial User annually submits the certification statement required in § 403.12(q) together with any additional information necessary to support the certification statement; and

(iii) The Industrial User never discharges any untreated concentrated wastewater.

(3) Upon a finding that an Industrial User meeting the criteria in paragraph (v)(1)(ii) of this section has no reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standards or requirement, the Control Authority may at any time, on its own initiative or in response to a petition received from an Industrial User or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such Industrial User is not a Significant Industrial User.

(w) The term *Submission* means:

(1) A request by a POTW for approval of a Pretreatment Program to the EPA or a Director;

(2) A request by a POTW to the EPA or a Director for authority to revise the discharge limits in categorical Pretreatment Standards to reflect POTW pollutant removals; or

(3) A request to the EPA by an NPDES State for approval of its State pretreatment program.

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 5132, Feb. 10, 1984; 49 FR 28059, July 10, 1984; 51 FR 20430, June 4, 1986; 51 FR 23760, July 1, 1986; 52 FR 1600, Jan. 14, 1987; 53 FR 40610, Oct. 17, 1988; 55 FR 30129, July 24, 1990; 70 FR 60191, Oct. 14, 2005]

§ 403.4 State or local law.

Nothing in this regulation is intended to affect any Pretreatment Requirements, including any standards or prohibitions, established by State or local law as long as the State or local requirements are not less stringent than any set forth in National Pretreatment Standards, or any other requirements or prohibitions established under the Act or this regulation. States with an NPDES permit program approved in accordance with section 402 (b) and (c) of the Act, or States requesting NPDES programs, are responsible for developing a State pretreatment program in accordance with § 403.10 of this regulation.

§ 403.5 National pretreatment standards: Prohibited discharges.

(a)(1) *General prohibitions.* A User may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference. These general prohibitions and the specific prohibitions in paragraph (b) of this section apply to each User introducing pollutants into a POTW whether or not the User is subject to other National Pretreatment Standards or any national, State, or local Pretreatment Requirements.

(2) *Affirmative Defenses.* A User shall have an affirmative defense in any action brought against it alleging a violation of the general prohibitions established in paragraph (a)(1) of this section and the specific prohibitions in paragraphs (b)(3), (b)(4), (b)(5), (b)(6), and (b)(7) of this section where the User can demonstrate that:

(i) It did not know or have reason to know that its Discharge, alone or in conjunction with a discharge or discharges from other sources, would cause Pass Through or Interference; and

(ii)(A) A local limit designed to prevent Pass Through and/or Interference, as the case may be, was developed in accordance with paragraph (c) of this section for each pollutant in the User's Discharge that caused Pass Through or Interference, and the User was in compliance with each such local limit directly prior to and during the Pass Through or Interference; or

(B) If a local limit designed to prevent Pass Through and/or Interference, as the case may be, has not been developed in accordance with paragraph (c) of this section for the pollutant(s) that caused the Pass Through or Interference, the User's Discharge directly prior to and during the Pass Through or Interference did not change substantially in nature or constituents from the User's prior discharge activity when the POTW was regularly in compliance with the POTW's NPDES permit requirements and, in the case of Interference, applicable requirements for sewage sludge use or disposal.

(b) *Specific prohibitions.* In addition, the following pollutants shall not be introduced into a POTW:

(1) Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

(2) Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;

(3) Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;

(4) Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.

(5) Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40 °C (104 °F) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits.

(6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

(8) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

(c) *When specific limits must be developed by POTW.* (1) Each POTW developing a POTW Pretreatment Program pursuant to § 403.8 shall develop and enforce specific limits to implement the prohibitions listed in paragraphs (a)(1) and (b) of this section. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

(2) All other POTW's shall, in cases where pollutants contributed by User(s) result in Interference or Pass-Through, and such violation is likely to recur, develop and enforce specific effluent limits for Industrial User(s), and all other users, as appropriate, which, together with appropriate changes in the POTW Treatment Plant's facilities or operation, are necessary to ensure renewed and continued compliance with the POTW's NPDES permit or sludge use or disposal practices.

(3) Specific effluent limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond.

(4) POTWs may develop Best Management Practices (BMPs) to implement paragraphs (c)(1) and (c)(2) of this section. Such BMPs shall be considered local limits and Pretreatment Standards for the purposes of this part and section 307(d) of the Act.

(d) *Local limits.* Where specific prohibitions or limits on pollutants or pollutant parameters are developed by a

POTW in accordance with paragraph (c) above, such limits shall be deemed Pretreatment Standards for the purposes of section 307(d) of the Act.

(e) EPA enforcement actions under section 309(f) of the Clean Water Act.

If, within 30 days after notice of an Interference or Pass Through violation has been sent by EPA to the POTW, and to persons or groups who have requested such notice, the POTW fails to commence appropriate enforcement action to correct the violation, EPA may take appropriate enforcement action under the authority provided in section 309(f) of the Clean Water Act.

[46 FR 9439, Jan. 28, 1981, as amended at 51 FR 20430, June 4, 1986; 52 FR 1600, Jan. 14, 1987; 55 FR 30129, July 24, 1990; 60 FR 33932, June 29, 1995; 70 FR 60192, Oct. 14, 2005]

§ 403.6 National pretreatment standards: Categorical standards.

National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories will be established as separate regulations under the appropriate subpart of 40 CFR chapter I, subchapter N. These standards, unless specifically noted otherwise, shall be in addition to all applicable pretreatment standards and requirements set forth in this part.

(a) *Category Determination Request*—(1) *Application Deadline.* Within 60 days after the effective date of a Pretreatment Standard for a subcategory under which an Industrial User may be included, the Industrial User or POTW may request that the Water Management Division Director or Director, as appropriate, provide written certification on whether the Industrial User falls within that particular subcategory. If an existing Industrial User adds or changes a process or operation which may be included in a subcategory, the existing Industrial User must request this certification prior to commencing discharge from the added or changed processes or operation. A New Source must request this certification prior to commencing discharge. Where a request for certification is submitted by a POTW, the POTW shall notify any affected Industrial User of such submission. The Industrial User may provide written comments on the POTW submission to the Water Management Division Director or Director, as appropriate, within 30 days of notification.

(2) *Contents of Application.* Each request shall contain a statement:

(i) Describing which subcategories might be applicable; and

(ii) Citing evidence and reasons why a particular subcategory is applicable and why others are not applicable. Any person signing the application statement submitted pursuant to this section shall make the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(3) *Deficient requests.* The Water Management Division Director or Director will only act on written requests for determinations that contain all of the information required. Persons who have made incomplete submissions will be notified by the Water Management Division Director or Director that their requests are deficient and, unless the time period is extended, will be given 30 days to correct the deficiency. If the deficiency is not corrected within 30 days or within an extended period allowed by the Water Management Division Director or the Director, the request for a determination shall be denied.

(4) *Final decision.* (i) When the Water Management Division Director or Director receives a submittal he or she will, after determining that it contains all of the information required by paragraph (2) of this section, consider the submission, any additional evidence that may have been requested, and any other available information relevant to the request. The Water Management Division Director or Director will then

make a written determination of the applicable subcategory and state the reasons for the determination.

(ii) Where the request is submitted to the Director, the Director shall forward the determination described in this paragraph to the Water Management Division Director who may make a final determination. The Water Management Division Director may waive receipt of these determinations. If the Water Management Division Director does not modify the Director's decision within 60 days after receipt thereof, or if the Water Management Division Director waives receipt of the determination, the Director's decision is final.

(iii) Where the request is submitted by the Industrial User or POTW to the Water Management Division Director or where the Water Management Division Director elects to modify the Director's decision, the Water Management Division Director's decision will be final.

(iv) The Water Management Division Director or Director, as appropriate, shall send a copy of the determination to the affected Industrial User and the POTW. Where the final determination is made by the Water Management Division Director, he or she shall send a copy of the determination to the Director.

(5) *Requests for hearing and/or legal decision.* Within 30 days following the date of receipt of notice of the final determination as provided for by paragraph (a)(4)(iv) of this section, the Requester may submit a petition to reconsider or contest the decision to the Regional Administrator who shall act on such petition expeditiously and state the reasons for his or her determination in writing.

(b) *Deadline for compliance with categorical standards.* Compliance by existing sources with categorical Pretreatment Standards shall be within 3 years of the date the Standard is effective unless a shorter compliance time is specified in the appropriate subpart of 40 CFR chapter I, subchapter N. Direct dischargers with NPDES Permits modified or reissued to provide a variance pursuant to section 301(i)(2) of the Act shall be required to meet compliance dates set in any applicable categorical Pretreatment Standard. Existing sources which become Industrial Users subsequent to promulgation of an applicable categorical Pretreatment Standard shall be considered existing Industrial Users except where such sources meet the definition of a New Source as defined in §403.3(m). New Sources shall install and have in operating condition, and shall "start-up" all pollution control equipment required to meet applicable Pretreatment Standards before beginning to Discharge. Within the shortest feasible time (not to exceed 90 days), New Sources must meet all applicable Pretreatment Standards.

(c)(1) *Concentration and mass limits.* Pollutant discharge limits in categorical Pretreatment Standards will be expressed either as concentration or mass limits. Wherever possible, where concentration limits are specified in standards, equivalent mass limits will be provided so that local, State or Federal authorities responsible for enforcement may use either concentration or mass limits. Limits in categorical Pretreatment Standards shall apply to the effluent of the process regulated by the Standard, or as otherwise specified by the standard.

(2) When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, the Control Authority may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual Industrial Users.

(3) A Control Authority calculating equivalent mass-per-day limitations under paragraph (c)(2) of this section shall calculate such limitations by multiplying the limits in the Standard by the Industrial User's average rate of production. This average rate of production shall be based not upon the designed production capacity but rather upon a reasonable measure of the Industrial User's actual long-term daily production, such as the average daily production during a representative year. For new sources, actual production shall be estimated using projected production.

(4) A Control Authority calculating equivalent concentration limitations

under paragraph (c)(2) of this section shall calculate such limitations by dividing the mass limitations derived under paragraph (c)(3) of this section by the average daily flow rate of the Industrial User's regulated process wastewater. This average daily flow rate shall be based upon a reasonable measure of the Industrial User's actual long-term average flow rate, such as the average daily flow rate during the representative year.

(5) When the limits in a categorical Pretreatment Standard are expressed only in terms of pollutant concentrations, an Industrial User may request that the Control Authority convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of the Control Authority. The Control Authority may establish equivalent mass limits only if the Industrial User meets all the following conditions in paragraph (c)(5)(i)(A) through (c)(5)(i)(E) of this section.

(i) To be eligible for equivalent mass limits, the Industrial User must:

(A) Employ, or demonstrate that it will employ, water conservation methods and technologies that substantially reduce water use during the term of its control mechanism;

(B) Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical Pretreatment Standard, and not have used dilution as a substitute for treatment;

(C) Provide sufficient information to establish the facility's actual average daily flow rate for all wastestreams, based on data from a continuous effluent flow monitoring device, as well as the facility's long-term average production rate. Both the actual average daily flow rate and long-term average production rate must be representative of current operating conditions;

(D) Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the Discharge; and

(E) Have consistently complied with all applicable categorical Pretreatment Standards during the period prior to the Industrial User's request for equivalent mass limits.

(ii) An Industrial User subject to equivalent mass limits must:

(A) Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits;

(B) Continue to record the facility's flow rates through the use of a continuous effluent flow monitoring device;

(C) Continue to record the facility's production rates and notify the Control Authority whenever production rates are expected to vary by more than 20 percent from its baseline production rates determined in paragraph (c)(5)(i)(C) of this section. Upon notification of a revised production rate, the Control Authority must reassess the equivalent mass limit and revise the limit as necessary to reflect changed conditions at the facility; and

(D) Continue to employ the same or comparable water conservation methods and technologies as those implemented pursuant to paragraph (c)(5)(i)(A) of this section so long as it discharges under an equivalent mass limit.

(iii) A Control Authority which chooses to establish equivalent mass limits:

(A) Must calculate the equivalent mass limit by multiplying the actual average daily flow rate of the regulated process(es) of the Industrial User by the concentration-based daily maximum and monthly average Standard for the applicable categorical Pretreatment Standard and the appropriate unit conversion factor;

(B) Upon notification of a revised production rate, must reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility; and

(C) May retain the same equivalent mass limit in subsequent control mechanism terms if the Industrial User's actual average daily flow rate was reduced solely as a result of the implementation of water conservation methods and technologies, and the actual average daily flow rates used in the original calculation of the equivalent mass limit were not based on the use of dilution as a substitute for treatment pursuant to paragraph (d) of this section. The Industrial User must also be

in compliance with § 403.17 (regarding the prohibition of bypass).

(iv) The Control Authority may not express limits in terms of mass for pollutants such as pH, temperature, radiation, or other pollutants which cannot appropriately be expressed as mass.

(6) The Control Authority may convert the mass limits of the categorical Pretreatment Standards at 40 CFR parts 414, 419, and 455 to concentration limits for purposes of calculating limitations applicable to individual Industrial Users under the following conditions. When converting such limits to concentration limits, the Control Authority must use the concentrations listed in the applicable subparts of 40 CFR parts 414, 419, and 455 and document that dilution is not being substituted for treatment as prohibited by paragraph (d) of this section.

(7) Equivalent limitations calculated in accordance with paragraphs (c)(3), (c)(4), (c)(5) and (c)(6) of this section are deemed Pretreatment Standards for the purposes of section 307(d) of the Act and this part. The Control Authority must document how the equivalent limits were derived and make this information publicly available. Once incorporated into its control mechanism, the Industrial User must comply with the equivalent limitations in lieu of the promulgated categorical standards from which the equivalent limitations were derived.

(8) Many categorical Pretreatment Standards specify one limit for calculating maximum daily discharge limitations and a second limit for calculating maximum monthly average, or 4-day average, limitations. Where such Standards are being applied, the same production or flow figure shall be used in calculating both the average and the maximum equivalent limitation.

(9) Any Industrial User operating under a control mechanism incorporating equivalent mass or concentration limits calculated from a production based standard shall notify the Control Authority within two (2) business days after the User has a reasonable basis to know that the production level will significantly change within the next calendar month. Any User not notifying the Control Authority of such anticipated change will be required to meet the mass or concentration limits in its control mechanism that were based on the original estimate of the long term average production rate.

(d) *Dilution prohibited as substitute for treatment.* Except where expressly authorized to do so by an applicable Pretreatment Standard or Requirement, no Industrial User shall ever increase the use of process water, or in any other way attempt to dilute a Discharge as a partial or complete substitute for adequate treatment to achieve compliance with a Pretreatment Standard or Requirement. The Control Authority may impose mass limitations on Industrial Users which are using dilution to meet applicable Pretreatment Standards or Requirements, or in other cases where the imposition of mass limitations is appropriate.

(e) *Combined wastestream formula.* Where process effluent is mixed prior to treatment with wastewaters other than those generated by the regulated process, fixed alternative discharge limits may be derived by the Control Authority or by the Industrial User with the written concurrence of the Control Authority. These alternative limits shall be applied to the mixed effluent. When deriving alternative categorical limits, the Control Authority or Industrial User shall calculate both an alternative daily maximum value using the daily maximum value(s) specified in the appropriate categorical Pretreatment Standard(s) and an alternative consecutive sampling day average value using the monthly average value(s) specified in the appropriate categorical Pretreatment Standard(s). The Industrial User shall comply with the alternative daily maximum and monthly average limits fixed by the Control Authority until the Control Authority modifies the limits or approves an Industrial User modification request. Modification is authorized whenever there is a material or significant change in the values used in the calculation to fix alternative limits for the regulated pollutant. An Industrial User must immediately report any such material or significant change to

the Control Authority. Where appropriate new alternative categorical limits shall be calculated within 30 days.

(1) *Alternative limit calculation.* For purposes of these formulas, the "average daily flow" means a reasonable measure of the average daily flow for a 30-day period. For new sources, flows shall be estimated using projected values. The alternative limit for a specified pollutant will be derived by the use of either of the following formulas:

(i) *Alternative concentration limit.*

$$C_T = \left(\frac{\sum_{i=1}^{N} C_i F_i}{\sum_{i=1}^{N} F_i} \right) \left(\frac{F_T - F_D}{F_T} \right)$$

where

C_T=the alternative concentration limit for the combined wastestream.

C_i=the categorical Pretreatment Standard concentration limit for a pollutant in the regulated stream i.

F_i=the average daily flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.

F_D=the average daily flow (at least a 30-day average) from: (a) Boiler blowdown streams, non-contact cooling streams, stormwater streams, and demineralizer backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an Industrial User's regulated process wastestream(s) will result in a substantial reduction of that pollutant, the Control Authority, upon application of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the Control Authority, the Industrial User must provide engineering, production, sampling and analysis and such other information so that the Control Authority can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a Categorical Pretreatment Standard; or (c) from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the *NRDC v. Costle* Consent Decree (12 ERC 1833) for one or more of the following reasons (see appendix D of this part):

(1) The pollutants of concern are not detectable in the effluent from the Industrial User (paragraph (8)(a)(iii));

(2) The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii));

(3) The pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph (8)(a)(iii)); or

(4) The wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(i)).

F_T=The average daily flow (at least a 30-day average) through the combined treatment facility (includes F_i, F_D and unregulated streams).

N=The total number of regulated streams.

(ii) *Alternative mass limit.*

$$M_T = \left(\sum_{i=1}^{N} M_i \right) \left(\frac{F_T - F_D}{\sum_{i=1}^{N} F_i} \right)$$

where

M_T=the alternative mass limit for a pollutant in the combined wastestream.

M_i=the categorical Pretreatment Standard mass limit for a pollutant in the regulated stream i (the categorical pretreatment mass limit multiplied by the appropriate measure of production).

F_i=the average flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.

F_D=the average daily flow (at least a 30-day average) from: (a) Boiler blowdown streams, non-contact cooling streams, stormwater streams, and demineralizer backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an Industrial User's regulated process wastestream(s) will result in a substantial reduction of that pollutant, the Control Authority, upon application of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated. In its application to the Control Authority, the Industrial User must provide engineering, production, sampling and analysis and such other information so that the Control Authority can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a categorical Pretreatment Standard; or (c) from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the *NRDC v. Costle* Consent Decree (12 ERC 1833) for one or more of the

following reasons (see appendix D of this part):

(1) The pollutants of concern are not detectable in the effluent from the Industrial User (paragraph (8)(a)(iii));

(2) The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii));

(3) The pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph (8)(a)(iii)); or

(4) The wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(i)).

F_T=The average flow (at least a 30-day average) through the combined treatment facility (includes F_I, F_D and unregulated streams).

N=The total number of regulated streams.

(2) *Alternate limits below detection limit.* An alternative pretreatment limit may not be used if the alternative limit is below the analytical detection limit for any of the regulated pollutants.

(3) *Self-monitoring.* Self-monitoring required to insure compliance with the alternative categorical limit shall be conducted in accordance with the requirements of § 403.12(g).

(4) *Choice of monitoring location.* Where a treated regulated process wastestream is combined prior to treatment with wastewaters other than those generated by the regulated process, the Industrial User may monitor either the segregated process wastestream or the combined wastestream for the purpose of determining compliance with applicable Pretreatment Standards. If the Industrial User chooses to monitor the segregated process wastestream, it shall apply the applicable categorical Pretreatment Standard. If the User chooses to monitor the combined wastestream, it shall apply an alternative discharge limit calculated using the combined wastestream formula as provided in this section. The Industrial User may change monitoring points only after receiving approval from the Control Authority. The Control Authority shall ensure that any change in an Industrial User's monitoring point(s) will not allow the User to substitute dilution for adequate treatment to achieve compliance with applicable Standards.

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 21037, May 17, 1984; 49 FR 31224, Aug. 3, 1984; 51 FR 20430, June 4, 1986; 51 FR 23760, July 1, 1986; 53 FR 40610, Oct. 17, 1988; 55 FR 30129, July 24, 1990; 58 FR 18017, Apr. 7, 1993; 70 FR 60192, Oct. 14, 2005]

§ 403.7 Removal credits.

(a) *Introduction*—(1) *Definitions.* For the purpose of this section:

(i) *Removal* means a reduction in the amount of a pollutant in the POTW's effluent or alteration of the nature of a pollutant during treatment at the POTW. The reduction or alteration can be obtained by physical, chemical or biological means and may be the result of specifically designed POTW capabilities or may be incidental to the operation of the treatment system. Removal as used in this subpart shall not mean dilution of a pollutant in the POTW.

(ii) *Sludge requirements* shall mean the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act; the Solid Waste Disposal Act (SWDA) (including title II more commonly referred to as the Resource Conservation Recovery Act (RCRA) and State regulations contained in any State sludge management plan prepared pursuant to subtitle D of SWDA); the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research and Sanctuaries Act.

(2) *General.* Any POTW receiving wastes from an Industrial User to which a categorical Pretreatment Standard(s) applies may, at its discretion and subject to the conditions of this section, grant removal credits to reflect removal by the POTW of pollutants specified in the categorical Pretreatment Standard(s). The POTW may grant a removal credit equal to or, at its discretion, less than its consistent removal rate. Upon being granted a removal credit, each affected Industrial User shall calculate its revised discharge limits in accordance with

paragraph (a)(4) of this section. Removal credits may only be given for indicator or surrogate pollutants regulated in a categorical Pretreatment Standard if the categorical Pretreatment Standard so specifies.

(3) *Conditions for authorization to give removal credits.* A POTW is authorized to give removal credits only if the following conditions are met:

(i) *Application.* The POTW applies for, and receives, authorization from the Approval Authority to give a removal credit in accordance with the requirements and procedures specified in paragraph (e) of this section.

(ii) *Consistent removal determination.* The POTW demonstrates and continues to achieve consistent removal of the pollutant in accordance with paragraph (b) of this section.

(iii) *POTW local pretreatment program.* The POTW has an approved pretreatment program in accordance with and to the extent required by part 403; provided, however, a POTW which does not have an approved pretreatment program may, pending approval of such a program, conditionally give credits as provided in paragraph (d) of this section.

(iv) *Sludge requirements.* The granting of removal credits will not cause the POTW to violate the local, State and Federal Sludge Requirements which apply to the sludge management method chosen by the POTW. Alternatively, the POTW can demonstrate to the Approval Authority that even though it is not presently in compliance with applicable Sludge Requirements, it will be in compliance when the Industrial User(s) to whom the removal credit would apply is required to meet its categorical Pretreatment Standard(s) as modified by the removal credit. If granting removal credits forces a POTW to incur greater sludge management costs than would be incurred in the absence of granting removal credits, the additional sludge management costs will not be eligible for EPA grant assistance. Removal credits may be made available for the following pollutants.

(A) For any pollutant listed in appendix G section I of this part for the use or disposal practice employed by the POTW, when the requirements in 40 CFR part 503 for that practice are met.

(B) For any pollutant listed in appendix G section II of this part for the use or disposal practice employed by the POTW when the concentration for a pollutant listed in appendix G section II of this part in the sewage sludge that is used or disposed does not exceed the concentration for the pollutant in appendix G section II of this part.

(C) For any pollutant in sewage sludge when the POTW disposes all of its sewage sludge in a municipal solid waste landfill unit that meets the criteria in 40 CFR part 258.

(v) *NPDES permit limitations.* The granting of removal credits will not cause a violation of the POTW's permit limitations or conditions. Alternatively, the POTW can demonstrate to the Approval Authority that even though it is not presently in compliance with applicable limitations and conditions in its NPDES permit, it will be in compliance when the Industrial User(s) to whom the removal credit would apply is required to meet its categorical Pretreatment Standard(s), as modified by the removal credit provision.

(4) *Calculation of revised discharge limits.* Revised discharge limits for a specific pollutant shall be derived by use of the following formula:

$$y = \frac{x}{1-r}$$

where:

x=pollutant discharge limit specified in the applicable categorical Pretreatment Standard

r=removal credit for that pollutant as established under paragraph (b) of this section (percentage removal expressed as a proportion, *i.e.*, a number between 0 and 1)

y=revised discharge limit for the specified pollutant (expressed in same units as x)

(b) *Establishment of removal credits; demonstration of Consistent Removal*—(1) *Definition of Consistent Removal.* "Consistent Removal" shall mean the average of the lowest 50 percent of the removal measured according to paragraph (b)(2) of this section. All sample data obtained for the measured pollutant during the time period prescribed in paragraph (b)(2) of this section must

be reported and used in computing Consistent Removal. If a substance is measurable in the influent but not in the effluent, the effluent level may be assumed to be the limit of measurement, and those data may be used by the POTW at its discretion and subject to approval by the Approval Authority. If the substance is not measurable in the influent, the date may not be used. Where the number of samples with concentrations equal to or above the limit of measurement is between 8 and 12, the average of the lowest 6 removals shall be used. If there are less than 8 samples with concentrations equal to or above the limit of measurement, the Approval Authority may approve alternate means for demonstrating Consistent Removal. The term "measurement" refers to the ability of the analytical method or protocol to quantify as well as identify the presence of the substance in question.

(2) *Consistent Removal data.* Influent and effluent operational data demonstrating Consistent Removal or other information, as provided for in paragraph (b)(1) of this section, which demonstrates Consistent Removal of the pollutants for which discharge limit revisions are proposed. This data shall meet the following requirements:

(i) *Representative data; seasonal.* The data shall be representative of yearly and seasonal conditions to which the POTW is subjected for each pollutant for which a discharge limit revision is proposed.

(ii) *Representative data; quality and quantity.* The data shall be representative of the quality and quantity of normal effluent and influent flow if such data can be obtained. If such data are unobtainable, alternate data or information may be presented for approval to demonstrate Consistent Removal as provided for in paragraph (b)(1) of this section.

(iii) *Sampling procedures: Composite.* (A) The influent and effluent operational data shall be obtained through 24-hour flow-proportional composite samples. Sampling may be done manually or automatically, and discretely or continuously. For discrete sampling, at least 12 aliquots shall be composited. Discrete sampling may be flow-proportioned either by varying the time interval between each aliquot or the volume of each aliquot. All composites must be flow-proportional to each stream flow at time of collection of influent aliquot or to the total influent flow since the previous influent aliquot. Volatile pollutant aliquots must be combined in the laboratory immediately before analysis.

(B)(*1*) Twelve samples shall be taken at approximately equal intervals throughout one full year. Sampling must be evenly distributed over the days of the week so as to include noworkdays as well as workdays. If the Approval Authority determines that this schedule will not be most representative of the actual operation of the POTW Treatment Plant, an alternative sampling schedule will be approved.

(*2*) In addition, upon the Approval Authority's concurrence, a POTW may utilize an historical data base amassed prior to the effective data of this section provide that such data otherwise meet the requirements of this paragraph. In order for the historical data base to be approved it must present a statistically valid description of daily, weekly and seasonal sewage treatment plant loadings and performance for at least one year.

(C) Effluent sample collection need not be delayed to compensate for hydraulic detention unless the POTW elects to include detention time compensation or unless the Approval Authority requires detention time compensation. The Approval Authority may require that each effluent sample be taken approximately one detention time later than the corresponding influent sample when failure to do so would result in an unrepresentative portrayal of actual POTW operation. The detention period is to be based on a 24-hour average daily flow value. The average daily flow used will be based upon the average of the daily flows during the same month of the previous year.

(iv) *Sampling procedures: Grab.* Where composite sampling is not an appropriate sampling technique, a grab sample(s) shall be taken to obtain influent and effluent operational data. Collection of influent grab samples should precede collection of effluent samples

by approximately one detention period. The detention period is to be based on a 24-hour average daily flow value. The average daily flow used will be based upon the average of the daily flows during the same month of the previous year. Grab samples will be required, for example, where the parameters being evaluated are those, such as cyanide and phenol, which may not be held for any extended period because of biological, chemical or physical interactions which take place after sample collection and affect the results. A grab sample is an individual sample collected over a period of time not exceeding 15 minutes.

(v) *Analytical methods.* The sampling referred to in paragraphs (b)(2) (i) through (iv) of this section and an analysis of these samples shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto. Where 40 CFR part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator.

(vi) *Calculation of removal.* All data acquired under the provisions of this section must be submitted to the Approval Authority. Removal for a specific pollutant shall be determined either, for each sample, by measuring the difference between the concentrations of the pollutant in the influent and effluent of the POTW and expressing the difference as a percent of the influent concentration, or, where such data cannot be obtained, Removal may be demonstrated using other data or procedures subject to concurrence by the Approval Authority as provided for in paragraph (b)(1) of this section.

(c) *Provisional credits.* For pollutants which are not being discharged currently (*i.e.*, new or modified facilities, or production changes) the POTW may apply for authorization to give removal credits prior to the initial discharge of the pollutant. Consistent removal shall be based provisionally on data from treatability studies or demonstrated removal at other treatment facilities where the quality and quantity of influent are similar. Within 18 months after the commencement of discharge of pollutants in question, consistent removal must be demonstrated pursuant to the requirements of paragraph (b) of this section. If, within 18 months after the commencement of the discharge of the pollutant in question, the POTW cannot demonstrate consistent removal pursuant to the requirements of paragraph (b) of this section, the authority to grant provisional removal credits shall be terminated by the Approval Authority and all Industrial Users to whom the revised discharge limits had been applied shall achieve compliance with the applicable categorical Pretreatment Standard(s) within a reasonable time, not to exceed the period of time prescribed in the applicable categorical Pretreatment Standard(s), as may be specified by the Approval Authority.

(d) *Exception to POTW Pretreatment Program Requirement.* A POTW required to develop a local pretreatment program by § 403.8 may conditionally give removal credits pending approval of such a program in accordance with the following terms and conditions:

(1) All Industrial Users who are currently subject to a categorical Pretreatment Standard and who wish conditionally to receive a removal credit must submit to the POTW the information required in § 403.12(b)(1) through (7) (except new or modified industrial users must only submit the information required by § 403.12(b)(1) through (6)), pertaining to the categorical Pretreatment Standard as modified by the removal credit. The Industrial Users shall indicate what additional technology, if any, will be needed to comply with the categorical Pretreatment Standard(s) as modified by the removal credit;

(2) The POTW must have submitted to the Approval Authority an application for pretreatment program approval meeting the requirements of §§ 403.8 and 403.9 in a timely manner, not to exceed the time limitation set

forth in a compliance schedule for development of a pretreatment program included in the POTW's NPDES permit, but in no case later than July 1, 1983, where no permit deadline exists;

(3) The POTW must:

(i) Compile and submit data demonstrating its consistent removal in accordance with paragraph (b) of this section;

(ii) Comply with the conditions specified in paragraph (a)(3) of this section; and

(iii) Submit a complete application for removal credit authority in accordance with paragraph (e) of this section;

(4) If a POTW receives authority to grant conditional removal credits and the Approval Authority subsequently makes a final determination, after appropriate notice, that the POTW failed to comply with the conditions in paragraphs (d)(2) and (3) of this section, the authority to grant conditional removal credits shall be terminated by the Approval Authority and all Industrial Users to whom the revised discharge limits had been applied shall achieve compliance with the applicable categorical Pretreatment Standard(s) within a reasonable time, not to exceed the period of time prescribed in the applicable categorical Pretreatment Standard(s), as may be specified by the Approval Authority.

(5) If a POTW grants conditional removal credits and the POTW or the Approval Authority subsequently makes a final determination, after appropriate notice, that the Industrial User(s) failed to comply with the conditions in paragraph (d)(1) of this section, the conditional credit shall be terminated by the POTW or the Approval Authority for the non-complying Industrial User(s) and the Industrial User(s) to whom the revised discharge limits had been applied shall achieve compliance with the applicable categorical Pretreatment Standard(s) within a reasonable time, not to exceed the period of time prescribed in the applicable categorical Pretreatment Standard(s), as may be specified by the Approval Authority. The conditional credit shall not be terminated where a violation of the provisions of this paragraph results from causes entirely outside of the control of the Industrial User(s) or the Industrial User(s) had demonstrated substantial compliance.

(6) The Approval Authority may elect not to review an application for conditional removal credit authority upon receipt of such application, in which case the conditionally revised discharge limits will remain in effect until reviewed by the Approval Authority. This review may occur at any time in accordance with the procedures of § 403.11, but in no event later than the time of any pretreatment program approval or any NPDES permit reissuance thereunder.

(e) *POTW application for authorization to give removal credits and Approval Authority review*—(1) *Who must apply.* Any POTW that wants to give a removal credit must apply for authorization from the Approval Authority.

(2) *To whom application is made.* An application for authorization to give removal credits (or modify existing ones) shall be submitted by the POTW to the Approval Authority.

(3) *When to apply.* A POTW may apply for authorization to give or modify removal credits at any time.

(4) *Contents of the application.* An application for authorization to give removal credits must be supported by the following information:

(i) *List of pollutants.* A list of pollutants for which removal credits are proposed.

(ii) *Consistent Removal data.* The data required pursuant to paragraph (b) of this section.

(iii) *Calculation of revised discharge limits.* Proposed revised discharge limits for each affected subcategory of Industrial Users calculated in accordance with paragraph (a)(4) of this section.

(iv) *Local Pretreatment Program Certification.* A certification that the POTW has an approved local pretreatment program or qualifies for the exception to this requirement found at paragraph (d) of this section.

(v) *Sludge management certification.* A specific description of the POTW's current methods of using or disposing of its sludge and a certification that the granting of removal credits will not cause a violation of the sludge requirements identified in paragraph (a)(3)(iv) of this section.

(vi) *NPDES permit limit certification.* A certification that the granting of removal credits will not cause a violation of the POTW's NPDES permit limits and conditions as required in paragraph (a)(3)(v) of this section.

(5) *Approval Authority review.* The Approval Authority shall review the POTW's application for authorization to give or modify removal credits in accordance with the procedures of § 403.11 and shall, in no event, have more that 180 days from public notice of an application to complete review.

(6) *EPA review of State removal credit approvals.* Where the NPDES State has an approved pretreatment program, the Regional Administrator may agree in the Memorandum of Agreement under 40 CFR 123.24(d) to waive the right to review and object to submissions for authority to grant removal credits. Such an agreement shall not restrict the Regional Administrator's right to comment upon or object to permits issued to POTW's except to the extent 40 CFR 123.24(d) allows such restriction.

(7) Nothing in these regulations precludes an Industrial User or other interested party from assisting the POTW in preparing and presenting the information necessary to apply for authorization.

(f) *Continuation and withdrawal of authorization*—(1) *Effect of authorization.* (i) Once a POTW has received authorization to grant removal credits for a particular pollutant regulated in a categorical Pretreatment Standard it may automatically extend that removal credit to the same pollutant when it is regulated in other categorical standards, unless granting the removal credit will cause the POTW to violate the sludge requirements identified in paragraph (a)(3)(iv) of this section or its NPDES permit limits and conditions as required by paragraph (a)(3)(v) of this section. If a POTW elects at a later time to extend removal credits to a certain categorical Pretreatment Standard, industrial subcategory or one or more Industrial Users that initially were not granted removal credits, it must notify the Approval Authority.

(2) *Inclusion in POTW permit.* Once authority is granted, the removal credits shall be included in the POTW's NPDES Permit as soon as possible and shall become an enforceable requirement of the POTW's NPDES permit. The removal credits will remain in effect for the term of the POTW's NPDES permit, provided the POTW maintains compliance with the conditions specified in paragraph (f)(4) of this section.

(3) *Compliance monitoring.* Following authorization to give removal credits, a POTW shall continue to monitor and report on (at such intervals as may be specified by the Approval Authority, but in no case less than once per year) the POTW's removal capabilities. A minimum of one representative sample per month during the reporting period is required, and all sampling data must be included in the POTW's compliance report.

(4) *Modification or withdrawal of removal credits*—(i) *Notice of POTW.* The Approval Authority shall notify the POTW if, on the basis of pollutant removal capability reports received pursuant to paragraph (f)(3) of this section or other relevant information available to it, the Approval Authority determines:

(A) That one or more of the discharge limit revisions made by the POTW, of the POTW itself, no longer meets the requirements of this section, or

(B) That such discharge limit revisions are causing a violation of any conditions or limits contained in the POTW's NPDES Permit.

(ii) *Corrective action.* If appropriate corrective action is not taken within a reasonable time, not to exceed 60 days unless the POTW or the affected Industrial Users demonstrate that a longer time period is reasonably necessary to undertake the appropriate corrective action, the Approval Authority shall either withdraw such discharge limits or require modifications in the revised discharge limits.

(iii) *Public notice of withdrawal or modification.* The Approval Authority shall not withdraw or modify revised discharge limits unless it shall first have notified the POTW and all Industrial Users to whom revised discharge limits have been applied, and made public, in writing, the reasons for such

withdrawal or modification, and an opportunity is provided for a hearing. Following such notice and withdrawal or modification, all Industrial Users to whom revised discharge limits had been applied, shall be subject to the modified discharge limits or the discharge limits prescribed in the applicable categorical Pretreatment Standards, as appropriate, and shall achieve compliance with such limits within a reasonable time (not to exceed the period of time prescribed in the applicable categorical Pretreatment Standard(s) as may be specified by the Approval Authority.

(g) *Removal credits in State-run pretreatment programs under § 403.10(e).* Where an NPDES State with an approved pretreatment program elects to implement a local pretreatment program in lieu or requiring the POTW to develop such a program (as provided in § 403.10(e)), the POTW will not be required to develop a pretreatment program as a precondition to obtaining authorization to give removal credits. The POTW will, however, be required to comply with the other conditions of paragraph (a)(3) of this section.

(h) *Compensation for overflow.* "Overflow" means the intentional or unintentional diversion of flow from the POTW before the POTW Treatment Plant. POTWs which at least once annually Overflow untreated wastewater to receiving waters may claim Consistent Removal of a pollutant only by complying with either paragraphs (h)(1) or (h)(2) of this section. However, paragraph (h) of this section shall not apply where Industrial User(s) can demonstrate that Overflow does not occur between the Industrial User(s) and the POTW Treatment Plant;

(1) The Industrial User provides containment or otherwise ceases or reduces Discharges from the regulated processes which contain the pollutant for which an allowance is requested during all circumstances in which an Overflow event can reasonably be expected to occur at the POTW or at a sewer to which the Industrial User is connected. Discharges must cease or be reduced, or pretreatment must be increased, to the extent necessary to compensate for the removal not being provided by the POTW. Allowances under this provision will only be granted where the POTW submits to the Approval Authority evidence that:

(i) All Industrial Users to which the POTW proposes to apply this provision have demonstrated the ability to contain or otherwise cease or reduce, during circumstances in which an Overflow event can reasonably be expected to occur, Discharges from the regulated processes which contain pollutants for which an allowance is requested;

(ii) The POTW has identified circumstances in which an Overflow event can reasonably be expected to occur, and has a notification or other viable plan to insure that Industrial Users will learn of an impending Overflow in sufficient time to contain, cease or reduce Discharging to prevent untreated Overflows from occurring. The POTW must also demonstrate that it will monitor and verify the data required in paragraph (h)(1)(iii) of this section, to insure that Industrial Users are containing, ceasing or reducing operations during POTW System Overflow; and

(iii) All Industrial Users to which the POTW proposes to apply this provision have demonstrated the ability and commitment to collect and make available, upon request by the POTW, State Director or EPA Regional Administrator, daily flow reports or other data sufficient to demonstrate that all Discharges from regulated processes containing the pollutant for which the allowance is requested were contained, reduced or otherwise ceased, as appropriate, during all circumstances in which an Overflow event was reasonably expected to occur; or

(2)(i) The Consistent Removal claimed is reduced pursuant to the following equation:

$$r_c = r_m \frac{8760 - Z}{8760}$$

Where:

r_m = POTW's Consistent Removal rate for that pollutant as established under paragraphs (a)(1) and (b)(2) of this section

r_c = removal corrected by the Overflow factor

Z = hours per year that Overflows occurred between the Industrial User(s) and the POTW Treatment Plant, the hours either to be shown in the POTW's current NPDES permit application or the hours,

as demonstrated by verifiable techniques, that a particular Industrial User's Discharge Overflows between the Industrial User and the POTW Treatment Plant; and

(ii) The POTW is complying with all NPDES permit requirements and any additional requirements in any order or decree, issued pursuant to the Clean Water Act affecting combined sewer overflows. These requirements include, but are not limited to, any combined sewer overflow requirements that conform to the Combined Sewer Overflow Control Policy.

[49 FR 31221, Aug. 3, 1984, as amended at 51 FR 20430, June 4, 1986; 53 FR 42435, Nov. 5, 1987; 58 FR 9386, Feb. 19, 1993; 58 FR 18017, Apr. 7, 1993; 70 FR 60193, Oct. 14, 2005]

§ 403.8 Pretreatment Program Requirements: Development and Implementation by POTW.

(a) *POTWs required to develop a pretreatment program.* Any POTW (or combination of POTWs operated by the same authority) with a total design flow greater than 5 million gallons per day (mgd) and receiving from Industrial Users pollutants which Pass Through or Interfere with the operation of the POTW or are otherwise subject to Pretreatment Standards will be required to establish a POTW Pretreatment Program unless the NPDES State exercises its option to assume local responsibilities as provided for in § 403.10(e). The Regional Administrator or Director may require that a POTW with a design flow of 5 mgd or less develop a POTW Pretreatment Program if he or she finds that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, or other circumstances warrant in order to prevent Interference with the POTW or Pass Through.

(b) *Deadline for Program Approval.* A POTW which meets the criteria of paragraph (a) of this section must receive approval of a POTW Pretreatment Program no later than 3 years after the reissuance or modification of its existing NPDES permit but in no case later than July 1, 1983. POTWs whose NPDES permits are modified under section 301(h) of the Act shall have a Pretreatment Program within three (3) years as provided for in 40 CFR part 125, subpart G. POTWs identified after July 1, 1983 as being required to develop a POTW Pretreatment Program under paragraph (a) of this section shall develop and submit such a program for approval as soon as possible, but in no case later than one year after written notification from the Approval Authority of such identification. The POTW Pretreatment Program shall meet the criteria set forth in paragraph (f) of this section and shall be administered by the POTW to ensure compliance by Industrial Users with applicable Pretreatment Standards and Requirements.

(c) *Incorporation of approved programs in permits.* A POTW may develop an appropriate POTW Pretreatment Program any time before the time limit set forth in paragraph (b) of this section. The POTW's NPDES Permit will be reissued or modified by the NPDES State or EPA to incorporate the approved Program as enforceable conditions of the Permit. The modification of a POTW's NPDES Permit for the purposes of incorporating a POTW Pretreatment Program approved in accordance with the procedure in § 403.11 shall be deemed a minor Permit modification subject to the procedures in 40 CFR 122.63.

(d) *Incorporation of compliance schedules in permits.* [Reserved]

(e) *Cause for reissuance or modification of Permits.* Under the authority of section 402(b)(1)(C) of the Act, the Approval Authority may modify, or alternatively, revoke and reissue a POTW's Permit in order to:

(1) Put the POTW on a compliance schedule for the development of a POTW Pretreatment Program where the addition of pollutants into a POTW by an Industrial User or combination of Industrial Users presents a substantial hazard to the functioning of the treatment works, quality of the receiving waters, human health, or the environment;

(2) Coordinate the issuance of a section 201 construction grant with the incorporation into a permit of a compliance schedule for POTW Pretreatment Program;

(3) Incorporate a modification of the permit approved under section 301(h) or 301(i) of the Act;

(4) Incorporate an approved POTW Pretreatment Program in the POTW permit; or

(5) Incorporate a compliance schedule for the development of a POTW pretreatment program in the POTW permit.

(6) Incorporate the removal credits (established under § 403.7) in the POTW permit.

(f) *POTW pretreatment requirements.* A POTW pretreatment program must be based on the following legal authority and include the following procedures. These authorities and procedures shall at all times be fully and effectively exercised and implemented.

(1) *Legal authority.* The POTW shall operate pursuant to legal authority enforceable in Federal, State or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law. At a minimum, this legal authority shall enable the POTW to:

(i) Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by Industrial Users where such contributions do not meet applicable Pretreatment Standards and Requirements or where such contributions would cause the POTW to violate its NPDES permit;

(ii) Require compliance with applicable Pretreatment Standards and Requirements by Industrial Users;

(iii) Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under § 403.3(v), this control shall be achieved through individual permits or equivalent individual control mechanisms issued to each such User except as follows.

(A)(*1*) At the discretion of the POTW, this control may include use of general control mechanisms if the following conditions are met. All of the facilities to be covered must:

(*i*) Involve the same or substantially similar types of operations;

(*ii*) Discharge the same types of wastes;

(*iii*) Require the same effluent limitations;

(*iv*) Require the same or similar monitoring; and

(*v*) In the opinion of the POTW, are more appropriately controlled under a general control mechanism than under individual control mechanisms.

(*2*) To be covered by the general control mechanism, the Significant Industrial User must file a written request for coverage that identifies its contact information, production processes, the types of wastes generated, the location for monitoring all wastes covered by the general control mechanism, any requests in accordance with § 403.12(e)(2) for a monitoring waiver for a pollutant neither present nor expected to be present in the Discharge, and any other information the POTW deems appropriate. A monitoring waiver for a pollutant neither present nor expected to be present in the Discharge is not effective in the general control mechanism until after the POTW has provided written notice to the Significant Industrial User that such a waiver request has been granted in accordance with § 403.12(e)(2). The POTW must retain a copy of the general control mechanism, documentation to support the POTW's determination that a specific Significant Industrial User meets the criteria in paragraphs (f)(1)(iii)(A)(*1*) through (*5*) of this section, and a copy of the User's written request for coverage for 3 years after the expiration of the general control mechanism. A POTW may not control a Significant Industrial User through a general control mechanism where the facility is subject to production-based categorical Pretreatment Standards or categorical Pretreatment Standards expressed as mass of pollutant discharged per day or for Industrial Users whose limits are based on the Combined Wastestream Formula or Net/Gross calculations (§§ 403.6(e) and 403.15).

(B) Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

(*1*) Statement of duration (in no case more than five years);

(*2*) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;

(*3*) Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards in part 403 of this chapter, categorical Pretreatment Standards, local limits, and State and local law;

(*4*) Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored (including the process for seeking a waiver for a pollutant neither present nor expected to be present in the Discharge in accordance with § 403.12(e)(2), or a specific waived pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in part 403 of this chapter, categorical Pretreatment Standards, local limits, and State and local law;

(*5*) Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines;

(*6*) Requirements to control Slug Discharges, if determined by the POTW to be necessary.

(iv) Require (A) the development of a compliance schedule by each Industrial User for the installation of technology required to meet applicable Pretreatment Standards and Requirements and (B) the submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements, including but not limited to the reports required in § 403.12.

(v) Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under § 403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;

(vi)(A) Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of $1,000 a day for each violation by Industrial Users of Pretreatment Standards and Requirements.

(B) Pretreatment requirements which will be enforced through the remedies set forth in paragraph (f)(1)(vi)(A) of this section, will include but not be limited to, the duty to allow or carry out inspections, entry, or monitoring activities; any rules, regulations, or orders issued by the POTW; any requirements set forth in control mechanisms issued by the POTW; or any reporting requirements imposed by the POTW or these regulations in this part. The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of persons. The POTW shall also have authority and procedures (which shall include notice to the affected industrial users and an opportunity to respond) to halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW. The Approval Authority shall have authority to seek judicial relief and may also use administrative penalty authority when the POTW has sought a

monetary penalty which the Approval Authority believes to be insufficient.

(vii) Comply with the confidentiality requirements set forth in § 403.14.

(2) *Procedures.* The POTW shall develop and implement procedures to ensure compliance with the requirements of a Pretreatment Program. At a minimum, these procedures shall enable the POTW to:

(i) Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request;

(ii) Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request;

(iii) Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 CFR 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as such and of all requirements applicable to it as a result of such status.

(iv) Receive and analyze self-monitoring reports and other notices submitted by Industrial Users in accordance with the self-monitoring requirements in § 403.12;

(v) Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year, except as otherwise specified below:

(A) Where the POTW has authorized the Industrial User subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard in accordance with § 403.12(e)(3), the POTW must sample for the waived pollutant(s) at least once during the term of the Categorical Industrial User's control mechanism. In the event that the POTW subsequently determines that a waived pollutant is present or is expected to be present in the Industrial User's wastewater based on changes that occur in the User's operations, the POTW must immediately begin at least annual effluent monitoring of the User's Discharge and inspection.

(B) Where the POTW has determined that an Industrial User meets the criteria for classification as a Non-Significant Categorical Industrial User, the POTW must evaluate, at least once per year, whether an Industrial User continues to meet the criteria in § 403.3(v)(2).

(C) In the case of Industrial Users subject to reduced reporting requirements under § 403.12(e)(3), the POTW must randomly sample and analyze the effluent from Industrial Users and conduct inspections at least once every two years. If the Industrial User no longer meets the conditions for reduced reporting in § 403.12(e)(3), the POTW must immediately begin sampling and inspecting the Industrial User at least once a year.

(vi) Evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. For Industrial Users identified as significant prior to November 14, 2005, this evaluation must have been conducted at least once by October 14, 2006; additional Significant Industrial Users must be evaluated within 1 year of being designated a Significant Industrial User. For purposes of this subsection, a Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. The results of such activities shall be available to the Approval Authority upon request. Significant Industrial Users are required to notify the POTW immediately of

any changes at its facility affecting potential for a Slug Discharge. If the POTW decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:

(A) Description of discharge practices, including non-routine batch Discharges;

(B) Description of stored chemicals;

(C) Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition under § 403.5(b) with procedures for follow-up written notification within five days;

(D) If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response;

(vii) Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under § 403.12, or indicated by analysis, inspection, and surveillance activities described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions; and

(viii) Comply with the public participation requirements of 40 CFR part 25 in the enforcement of National Pretreatment Standards. These procedures shall include provision for at least annual public notification in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW of Industrial Users which, at any time during the previous 12 months, were in significant noncompliance with applicable Pretreatment requirements. For the purposes of this provision, a Significant Industrial User (or any Industrial User which violates paragraphs (f)(2)(viii)(C), (D), or (H) of this section) is in significant noncompliance if its violation meets one or more of the following criteria:

(A) Chronic violations of wastewater Discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);

(B) Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);

(C) Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative Standard) that the POTW determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);

(D) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of this section to halt or prevent such a discharge;

(E) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;

(F) Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

(G) Failure to accurately report noncompliance;

(H) Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program.

(3) *Funding.* The POTW shall have sufficient resources and qualified personnel to carry out the authorities and procedures described in paragraphs (f)(1) and (2) of this section. In some limited circumstances, funding and personnel may be delayed where (i) the POTW has adequate legal authority and procedures to carry out the Pretreatment Program requirements described in this section, and (ii) a limited aspect of the Program does not need to be implemented immediately (see § 403.9(b)).

(4) *Local limits.* The POTW shall develop local limits as required in § 403.5(c)(1), or demonstrate that they are not necessary.

(5) The POTW shall develop and implement an enforcement response plan. This plan shall contain detailed procedures indicating how a POTW will investigate and respond to instances of industrial user noncompliance. The plan shall, at a minimum:

(i) Describe how the POTW will investigate instances of noncompliance;

(ii) Describe the types of escalating enforcement responses the POTW will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place;

(iii) Identify (by title) the official(s) responsible for each type of response;

(iv) Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards, as detailed in 40 CFR 403.8 (f)(1) and (f)(2).

(6) The POTW shall prepare and maintain a list of its Industrial Users meeting the criteria in § 403.3(v)(1). The list shall identify the criteria in § 403.3(v)(1) applicable to each Industrial User and, where applicable, shall also indicate whether the POTW has made a determination pursuant to § 403.3(v)(2) that such Industrial User should not be considered a Significant Industrial User. The initial list shall be submitted to the Approval Authority pursuant to § 403.9 or as a non-substantial modification pursuant to § 403.18(d). Modifications to the list shall be submitted to the Approval Authority pursuant to § 403.12(i)(1).

(g) A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR Part 3—(Electronic reporting).

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 31224, Aug. 3, 1984; 51 FR 20429, 20430, June 4, 1986; 51 FR 23759, July 1, 1986; 53 FR 40612, Oct. 17, 1988; 55 FR 30129, July 24, 1990; 58 FR 18017, Apr. 7, 1993; 60 FR 33932, June 29, 1995; 62 FR 38414, July 17, 1997; 70 FR 59889, Oct. 13, 2005; 70 FR 60193, Oct. 14, 2005]

§ 403.9 POTW pretreatment programs and/or authorization to revise pretreatment standards: Submission for approval.

(a) *Who approves Program.* A POTW requesting approval of a POTW Pretreatment Program shall develop a program description which includes the information set forth in paragraphs (b)(1) through (4) of this section. This description shall be submitted to the Approval Authority which will make a determination on the request for program approval in accordance with the procedures described in § 403.11.

(b) *Contents of POTW program submission.* The program description must contain the following information:

(1) A statement from the City Solicitor or a city official acting in a comparable capacity (or the attorney for those POTWs which have independent legal counsel) that the POTW has authority adequate to carry out the programs described in § 403.8. This statement shall:

(i) Identify the provision of the legal authority under § 403.8(f)(1) which provides the basis for each procedure under § 403.8(f)(2);

(ii) Identify the manner in which the POTW will implement the program requirements set forth in § 403.8, including the means by which Pretreatment Standards will be applied to individual Industrial Users (e.g., by order, permit, ordinance, etc.); and,

(iii) Identify how the POTW intends to ensure compliance with Pretreatment Standards and Requirements, and to enforce them in the event of noncompliance by Industrial Users;

(2) A copy of any statutes, ordinances, regulations, agreements, or other authorities relied upon by the POTW for its administration of the Program. This Submission shall include a statement reflecting the endorsement or approval of the local boards or bodies responsible for supervising and/or funding the POTW Pretreatment Program if approved;

(3) A brief description (including organization charts) of the POTW organization which will administer the Pretreatment Program. If more than one agency is responsible for administration of the Program the responsible agencies should be identified, their respective responsibilities delineated, and their procedures for coordination set forth; and

(4) A description of the funding levels and full- and part-time manpower available to implement the Program;

(c) *Conditional POTW program approval.* The POTW may request conditional approval of the Pretreatment Program pending the acquisition of funding and personnel for certain elements of the Program. The request for conditional approval must meet the requirements set forth in paragraph (b) of this section except that the requirements of paragraph (b) of this section, may be relaxed if the Submission demonstrates that:

(1) A limited aspect of the Program does not need to be implemented immediately;

(2) The POTW had adequate legal authority and procedures to carry out those aspects of the Program which will not be implemented immediately; and

(3) Funding and personnel for the Program aspects to be implemented at a later date will be available when needed. The POTW will describe in the Submission the mechanism by which this funding will be acquired. Upon receipt of a request for conditional approval, the Approval Authority will establish a fixed date for the acquisition of the needed funding and personnel. If funding is not acquired by this date, the conditional approval of the POTW Pretreatment Program and any removal allowances granted to the POTW, may be modified or withdrawn.

(d) *Content of removal allowance submission.* The request for authority to revise categorical Pretreatment Standards must contain the information required in § 403.7(d).

(e) *Approval authority action.* Any POTW requesting POTW Pretreatment Program approval shall submit to the Approval Authority three copies of the Submission described in paragraph (b), and if appropriate, (d) of this section. Within 60 days after receiving the Submission, the Approval Authority shall make a preliminary determination of whether the Submission meets the requirements of paragraph (b) and, if appropriate, (d) of this section. If the Approval Authority makes the preliminary determination that the Submission meets these requirements, the Approval Authority shall:

(1) Notify the POTW that the Submission has been received and is under review; and

(2) Commence the public notice and evaluation activities set forth in § 403.11.

(f) *Notification where submission is defective.* If, after review of the Submission as provided for in paragraph (e) of this section, the Approval Authority determines that the Submission does not comply with the requirements of paragraph (b) or (c) of this section, and, if appropriate, paragraph (d), of this section, the Approval Authority shall provide notice in writing to the applying POTW and each person who has requested individual notice. This notification shall identify any defects in the Submission and advise the POTW and each person who has requested individual notice of the means by which the POTW can comply with the applicable requirements of paragraphs (b), (c) of this section, and, if appropriate, paragraph (d) of this section.

(g) *Consistency with water quality management plans.* (1) In order to be approved the POTW Pretreatment Program shall be consistent with any approved water quality management plan developed in accordance with 40 CFR parts 130, 131, as revised, where such 208 plan includes Management Agency designations and addresses pretreatment in a manner consistent with 40 CFR part 403. In order to assure such consistency the Approval Authority shall

solicit the review and comment of the appropriate 208 Planning Agency during the public comment period provided for in § 403.11(b)(1)(ii) prior to approval or disapproval of the Program.

(2) Where no 208 plan has been approved or where a plan has been approved but lacks Management Agency designations and/or does not address pretreatment in a manner consistent with this regulation, the Approval Authority shall nevertheless solicit the review and comment of the appropriate 208 planning agency.

[53 FR 9439, Jan. 28, 1981, as amended at 53 FR 40612, Oct. 17, 1988; 58 FR 18017, Apr. 7, 1993]

§ 403.10 Development and submission of NPDES State pretreatment programs.

(a) *Approval of State Programs.* No State NPDES program shall be approved under section 402 of the Act after the effective date of these regulations unless it is determined to meet the requirements of paragraph (f) of this section. Notwithstanding any other provision of this regulation, a State will be required to act upon those authorities which it currently possesses before the approval of a State Pretreatment Program.

(b) [Reserved]

(c) *Failure to request approval.* Failure of an NPDES State with a permit program approved under section 402 of the Act prior to December 27, 1977, to seek approval of a State Pretreatment Program and failure of an approved State to administer its State Pretreatment Program in accordance with the requirements of this section constitutes grounds for withdrawal of NPDES program approval under section 402(c)(3) of the Act.

(d) [Reserved]

(e) *State Program in lieu of POTW Program.* Notwithstanding the provision of § 403.8(a), a State with an approved Pretreatment Program may assume responsibility for implementing the POTW Pretreatment Program requirements set forth in § 403.8(f) in lieu of requiring the POTW to develop a Pretreatment Program. However, this does not preclude POTW's from independently developing Pretreatment Programs.

(f) *State Pretreatment Program requirements.* In order to be approved, a request for State Pretreatment Program Approval must demonstrate that the State Pretreatment Program has the following elements:

(1) *Legal authority.* The Attorney General's Statement submitted in accordance with paragraph (g)(1)(i) of this section shall certify that the Director has authority under State law to operate and enforce the State Pretreatment Program to the extent required by this part and by 40 CFR 123.27. At a minimum, the Director shall have the authority to:

(i) Incorporate POTW Pretreatment Program conditions into permits issued to POTW's; require compliance by POTW's with these incorporated permit conditions; and require compliance by Industrial Users with Pretreatment Standards;

(ii) Ensure continuing compliance by POTW's with pretreatment conditions incorporated into the POTW Permit through review of monitoring reports submitted to the Director by the POTW in accordance with § 403.12 and ensure continuing compliance by Industrial Users with Pretreatment Standards through the review of self-monitoring reports submitted to the POTW or to the Director by the Industrial Users in accordance with § 403.12;

(iii) Carry out inspection, surveillance and monitoring procedures which will determine, independent of information supplied by the POTW, compliance or noncompliance by the POTW with pretreatment conditions incorporated into the POTW Permit; and carry out inspection, surveillance and monitoring procedures which will determine, independent of information supplied by the Industrial User, whether the Industrial User is in compliance with Pretreatment Standards;

(iv) Seek civil and criminal penalties, and injunctive relief, for noncompliance by the POTW with pretreatment conditions incorporated into the POTW Permit and for noncompliance with Pretreatment Standards by Industrial Users as set forth in § 403.8(f)(1)(vi). The Director shall have authority to seek judicial relief for noncompliance by Industrial Users even when the POTW has acted to seek such relief (e.g., if

the POTW has sought a penalty which the Director finds to be insufficient);

(v) Approve and deny requests for approval of POTW Pretreatment Programs submitted by a POTW to the Director;

(vi) Deny and recommend approval of (but not approve) requests for Fundamentally Different Factors variances submitted by Industrial Users in accordance with the criteria and procedures set forth in § 403.13; and

(vii) Approve and deny requests for authority to modify categorical Pretreatment Standards to reflect removals achieved by the POTW in accordance with the criteria and procedures set forth in §§ 403.7, 403.9 and 403.11.

(2) *Procedures.* The Director shall have developed procedures to carry out the requirements of sections 307 (b) and (c), and 402(b)(1), 402(b)(2), 402(b)(8), and 402(b)(9) of the Act. At a minimum, these procedures shall enable the Director to:

(i) Identify POTW's required to develop Pretreatment Programs in accordance with § 403.8(a) and notify these POTW's of the need to develop a POTW Pretreatment Program. In the absence of a POTW Pretreatment Program, the State shall have procedures to carry out the activities set forth in § 403.8(f)(2);

(ii) Provide technical and legal assistance to POTW's in developing Pretreatment Programs;

(iii) Develop compliance schedules for inclusion in POTW Permits which set forth the shortest reasonable time schedule for the completion of tasks needed to implement a POTW Pretreatment Program. The final compliance date in these schedules shall be no later than July 1, 1983;

(iv) Sample and analyze:

(A) Influent and effluent of the POTW to identify, independent of information supplied by the POTW, compliance or noncompliance with pollutant removal levels set forth in the POTW permit (see § 403.7); and

(B) The contents of sludge from the POTW and methods of sludge disposal and use to identify, independent of information supplied by the POTW, compliance or noncompliance with requirements applicable to the selected method of sludge management;

(v) Investigate evidence of violations of pretreatment conditions set forth in the POTW Permit by taking samples and acquiring other information as needed. This data acquisition shall be performed with sufficient care as to produce evidence admissible in an enforcement proceeding or in court;

(vi) Review and approve requests for approval of POTW Pretreatment Programs and authority to modify categorical Pretreatment Standards submitted by a POTW to the Director; and

(vii) Consider requests for Fundamentally Different Factors variances submitted by Industrial Users in accordance with the criteria and procedures set forth in § 403.13.

(3) *Funding.* The Director shall assure that funding and qualified personnel are available to carry out the authorities and procedures described in paragraphs (f)(1) and (2) of this section.

(g) *Content of State Pretreatment Program submission.* The request for State Pretreatment Program approval will consist of:

(1)(i) A statement from the State Attorney General (or the Attorney for those State agencies which have independent legal counsel) that the laws of the State provide adequate authority to implement the requirements of this part. The authorities cited by the Attorney General in this statement shall be in the form of lawfully adopted State statutes or regulations which shall be effective by the time of approval of the State Pretreatment Program; and

(ii) Copies of all State statutes and regulations cited in the above statement;

(iii) States with approved Pretreatment Programs shall establish Pretreatment regulations by November 16, 1989, unless the State would be required to enact or amend statutory provision, in which case, such regulations must be established by November 16, 1990.

(2) A description of the funding levels and full- and part-time personnel available to implement the program; and

(3) Any modifications or additions to the Memorandum of Agreement (required by 40 CFR 123.24) which may be

necessary for EPA and the State to implement the requirements of this part.

(h) *EPA Action.* Any approved NPDES State requesting State Pretreatment Program approval shall submit to the Regional Administrator three copies of the Submission described in paragraph (g) of this section. Upon a preliminary determination that the Submission meets the requirements of paragraph (g) the Regional Administrator shall:

(1) Notify the Director that the Submission has been received and is under review; and

(2) Commence the program revision process set out in 40 CFR 123.62. For purposes of that section all requests for approval of State Pretreatment Programs shall be deemed substantial program modifications. A comment period of at least 30 days and the opportunity for a hearing shall be afforded the public on all such proposed program revisions.

(i) *Notification where submission is defective.* If, after review of the Submission as provided for in paragraph (h) of this section, EPA determines that the Submission does not comply with the requirements of paragraph (f) or (g) of this section EPA shall so notify the applying NPDES State in writing. This notification shall identify any defects in the Submission and advise the NPDES State of the means by which it can comply with the requirements of this part.

[46 FR 9439, Jan. 28, 1981, as amended at 51 FR 20429, June 4, 1986; 53 FR 40612, Oct. 17, 1988; 55 FR 30131, July 24, 1990; 58 FR 18017, Apr. 7, 1993; 60 FR 33932, June 29, 1995]

§ 403.11 Approval procedures for POTW pretreatment programs and POTW granting of removal credits.

The following procedures shall be adopted in approving or denying requests for approval of POTW Pretreatment Programs and applications for removal credit authorization:

(a) *Deadline for review of submission.* The Approval Authority shall have 90 days from the date of public notice of any Submission complying with the requirements of §403.9(b) and, where removal credit authorization is sought with §§403.7(e) and 403.9(d), to review the Submission. The Approval Authority shall review the Submission to determine compliance with the requirements of §403.8 (b) and (f), and, where removal credit authorization is sought, with §403.7. The Approval Authority may have up to an additional 90 days to complete the evaluation of the Submission if the public comment period provided for in paragraph (b)(1)(ii) of this section is extended beyond 30 days or if a public hearing is held as provided for in paragraph (b)(2) of this section. In no event, however, shall the time for evaluation of the Submission exceed a total of 180 days from the date of public notice of a Submission meeting the requirements of §403.9(b) and, in the case of a removal credit application, §§403.7(e) and 403.9(b).

(b) *Public notice and opportunity for hearing.* Upon receipt of a Submission the Approval Authority shall commence its review. Within 20 work days after making a determination that a Submission meets the requirements of §403.9(b) and, where removal allowance approval is sought, §§403.7(d) and 403.9(d), the Approval Authority shall:

(1) Issue a public notice of request for approval of the Submission;

(i) This public notice shall be circulated in a manner designed to inform interested and potentially interested persons of the Submission. Procedures for the circulation of public notice shall include:

(A) Mailing notices of the request for approval of the Submission to designated 208 planning agencies, Federal and State fish, shellfish and wildfish resource agencies (unless such agencies have asked not to be sent the notices); and to any other person or group who has requested individual notice, including those on appropriate mailing lists; and

(B) Publication of a notice of request for approval of the Submission in a newspaper(s) of general circulation within the jurisdiction(s) served by the POTW that meaningful public notice.

(ii) The public notice shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit their written views on the Submission.

(iii) All written comments submitted during the 30 day comment period shall be retained by the Approval Authority

and considered in the decision on whether or not to approve the Submission. The period for comment may be extended at the discretion of the Approval Authority; and

(2) Provide an opportunity for the applicant, any affected State, any interested State or Federal agency, person or group of persons to request a public hearing with respect to the Submission.

(i) This request for public hearing shall be filed within the 30 day (or extended) comment period described in paragraph (b)(1)(ii) of this section and shall indicate the interest of the person filing such request and the reasons why a hearing is warranted.

(ii) The Approval Authority shall hold a hearing if the POTW so requests. In addition, a hearing will be held if there is a significant public interest in issues relating to whether or not the Submission should be approved. Instances of doubt should be resolved in favor of holding the hearing.

(iii) Public notice of a hearing to consider a Submission and sufficient to inform interested parties of the nature of the hearing and the right to participate shall be published in the same newspaper as the notice of the original request for approval of the Submission under paragraph (b)(1)(i)(B) of this section. In addition, notice of the hearing shall be sent to those persons requesting individual notice.

(c) *Approval authority decision.* At the end of the 30 day (or extended) comment period and within the 90 day (or extended) period provided for in paragraph (a) of this section, the Approval Authority shall approve or deny the Submission based upon the evaluation in paragraph (a) of this section and taking into consideration comments submitted during the comment period and the record of the public hearing, if held. Where the Approval Authority makes a determination to deny the request, the Approval Authority shall so notify the POTW and each person who has requested individual notice. This notification shall include suggested modifications and the Approval Authority may allow the requestor additional time to bring the Submission into compliance with applicable requirements.

(d) *EPA objection to Director's decision.* No POTW pretreatment program or authorization to grant removal allowances shall be approved by the Director if following the 30 day (or extended) evaluation period provided for in paragraph (b)(1)(ii) of this section and any hearing held pursuant to paragraph (b)(2) of this section the Regional Administrator sets forth in writing objections to the approval of such Submission and the reasons for such objections. A copy of the Regional Administrator's objections shall be provided to the applicant, and each person who has requested individual notice. The Regional Administrator shall provide an opportunity for written comments and may convene a public hearing on his or her objections. Unless retracted, the Regional Administrator's objections shall constitute a final ruling to deny approval of a POTW pretreatment program or authorization to grant removal allowances 90 days after the date the objections are issued.

(e) *Notice of decision.* The Approval Authority shall notify those persons who submitted comments and participated in the public hearing, if held, of the approval or disapproval of the Submission. In addition, the Approval Authority shall cause to be published a notice of approval or disapproval in the same newspapers as the original notice of request for approval of the Submission was published. The Approval Authority shall identify in any notice of POTW Pretreatment Program approval any authorization to modify categorical Pretreatment Standards which the POTW may make, in accordance with § 403.7, for removal of pollutants subject to Pretreatment Standards.

(f) *Public access to submission.* The Approval Authority shall ensure that the Submission and any comments upon such Submission are available to the public for inspection and copying.

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 31224, Aug. 3, 1984; 51 FR 20429, June 4, 1986; 53 FR 40613, Oct. 17, 1988; 62 FR 38414, July 17, 1997]

§ 403.12 Reporting requirements for POTW's and industrial users.

(a) [Reserved]

(b) *Reporting requirements for industrial users upon effective date of categorical pretreatment standard—baseline report.* Within 180 days after the effective date of a categorical Pretreatment Standard, or 180 days after the final administrative decision made upon a category determination submission under § 403.6(a)(4), whichever is later, existing Industrial Users subject to such categorical Pretreatment Standards and currently discharging to or scheduled to discharge to a POTW shall be required to submit to the Control Authority a report which contains the information listed in paragraphs (b)(1)–(7) of this section. At least 90 days prior to commencement of discharge, New Sources, and sources that become Industrial Users subsequent to the promulgation of an applicable categorical Standard, shall be required to submit to the Control Authority a report which contains the information listed in paragraphs (b)(1)–(5) of this section. New sources shall also be required to include in this report information on the method of pretreatment the source intends to use to meet applicable pretreatment standards. New Sources shall give estimates of the information requested in paragraphs (b) (4) and (5) of this section:

(1) *Identifying information.* The User shall submit the name and address of the facility including the name of the operator and owners;

(2) *Permits.* The User shall submit a list of any environmental control permits held by or for the facility;

(3) *Description of operations.* The User shall submit a brief description of the nature, average rate of production, and Standard Industrial Classification of the operation(s) carried out by such Industrial User. This description should include a schematic process diagram which indicates points of Discharge to the POTW from the regulated processes.

(4) *Flow measurement.* The User shall submit information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from each of the following:

(i) Regulated process streams; and

(ii) Other streams as necessary to allow use of the combined wastestream formula of § 403.6(e). (See paragraph (b)(5)(iv) of this section.)

The Control Authority may allow for verifiable estimates of these flows where justified by cost or feasibility considerations.

(5) *Measurement of pollutants.* (i) The user shall identify the Pretreatment Standards applicable to each regulated process;

(ii) In addition, the User shall submit the results of sampling and analysis identifying the nature and concentration (or mass, where required by the Standard or Control Authority) of regulated pollutants in the Discharge from each regulated process. Both daily maximum and average concentration (or mass, where required) shall be reported. The sample shall be representative of daily operations. In cases where the Standard requires compliance with a Best Management Practice or pollution prevention alternative, the User shall submit documentation as required by the Control Authority or the applicable Standards to determine compliance with the Standard;

(iii) The User shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.

(iv) Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the User should measure the flows and concentrations necessary to allow use of the combined wastestream formula of § 403.6(e) in order to evaluate compliance with the Pretreatment Standards. Where an alternate concentration or mass limit has been calculated in accordance with § 403.6(e) this adjusted limit along with supporting data shall be submitted to the Control Authority;

(v) Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR part 136 and amendments thereto. Where 40 CFR part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the part 136

sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator;

(vi) The Control Authority may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures;

(vii) The baseline report shall indicate the time, date and place, of sampling, and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant Discharges to the POTW;

(6) *Certification.* A statement, reviewed by an authorized representative of the Industrial User (as defined in paragraph (l) of this section) and certified to by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O and M) and/or additional Pretreatment is required for the Industrial User to meet the Pretreatment Standards and Requirements; and

(7) *Compliance schedule.* If additional pretreatment and/or O and M will be required to meet the Pretreatment Standards; the shortest schedule by which the Industrial User will provide such additional pretreatment and/or O and M. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard.

(i) Where the Industrial User's categorical Pretreatment Standard has been modified by a removal allowance (§ 403.7), the combined wastestream formula (§ 403.6(e)), and/or a Fundamentally Different Factors variance (§ 403.13) at the time the User submits the report required by paragraph (b) of this section, the information required by paragraphs (b)(6) and (7) of this section shall pertain to the modified limits.

(ii) If the categorical Pretreatment Standard is modified by a removal allowance (§ 403.7), the combined wastestream formula (§ 403.6(e)), and/or a Fundamentally Different Factors variance (§ 403.13) after the User submits the report required by paragraph (b) of this section, any necessary amendments to the information requested by paragraphs (b)(6) and (7) of this section shall be submitted by the User to the Control Authority within 60 days after the modified limit is approved.

(c) *Compliance schedule for meeting categorical Pretreatment Standards.* The following conditions shall apply to the schedule required by paragraph (b)(7) of this section:

(1) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the Industrial User to meet the applicable categorical Pretreatment Standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).

(2) No increment referred to in paragraph (c)(1) of this section shall exceed 9 months.

(3) Not later than 14 days following each date in the schedule and the final date for compliance, the Industrial User shall submit a progress report to the Control Authority including, at a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the Industrial User to return the construction to the schedule established. In no event shall more than 9 months elapse between such progress reports to the Control Authority.

(d) *Report on compliance with categorical pretreatment standard deadline.* Within 90 days following the date for final compliance with applicable categorical Pretreatment Standards or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any Industrial User subject to Pretreatment

Standards and Requirements shall submit to the Control Authority a report containing the information described in paragraphs (b) (4)–(6) of this section. For Industrial Users subject to equivalent mass or concentration limits established by the Control Authority in accordance with the procedures in §403.6(c), this report shall contain a reasonable measure of the User's long term production rate. For all other Industrial Users subject to categorical Pretreatment Standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the User's actual production during the appropriate sampling period.

(e) *Periodic reports on continued compliance.* (1) Any Industrial User subject to a categorical Pretreatment Standard (except a Non-Significant Categorical User as defined in §403.3(v)(2)), after the compliance date of such Pretreatment Standard, or, in the case of a New Source, after commencement of the discharge into the POTW, shall submit to the Control Authority during the months of June and December, unless required more frequently in the Pretreatment Standard or by the Control Authority or the Approval Authority, a report indicating the nature and concentration of pollutants in the effluent which are limited by such categorical Pretreatment Standards. In addition, this report shall include a record of measured or estimated average and maximum daily flows for the reporting period for the Discharge reported in paragraph (b)(4) of this section except that the Control Authority may require more detailed reporting of flows. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (or pollution prevention alternative), the User shall submit documentation required by the Control Authority or the Pretreatment Standard necessary to determine the compliance status of the User. At the discretion of the Control Authority and in consideration of such factors as local high or low flow rates, holidays, budget cycles, etc., the Control Authority may modify the months during which the above reports are to be submitted.

(2) The Control Authority may authorize the Industrial User subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if the Industrial User has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be 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 Industrial User. This authorization is subject to the following conditions:

(i) The Control Authority may authorize a waiver where a pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical Standard and otherwise includes no process wastewater.

(ii) The monitoring waiver is valid only for the duration of the effective period of the Permit or other equivalent individual control mechanism, but in no case longer than 5 years. The User must submit a new request for the waiver before the waiver can be granted for each subsequent control mechanism.

(iii) In making a demonstration that a pollutant is not present, the Industrial User must provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes.

The request for a monitoring waiver must be signed in accordance with paragraph (l) of this section and include the certification statement in §403.6(a)(2)(ii). Non-detectable sample results may only be used as a demonstration that a pollutant is not present if the EPA approved method from 40 CFR part 136 with the lowest minimum detection level for that pollutant was used in the analysis.

(iv) Any grant of the monitoring waiver by the Control Authority must be included as a condition in the User's

control mechanism. The reasons supporting the waiver and any information submitted by the User in its request for the waiver must be maintained by the Control Authority for 3 years after expiration of the waiver.

(v) Upon approval of the monitoring waiver and revision of the User's control mechanism by the Control Authority, the Industrial User must certify on each report with the statement below, that there has been no increase in the pollutant in its wastestream due to activities of the Industrial User:

Based on my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for 40 CFR _____ [specify applicable National Pretreatment Standard part(s)], I certify that, to the best of my knowledge and belief, there has been no increase in the level of _____ [list pollutant(s)] in the wastewaters due to the activities at the facility since filing of the last periodic report under 40 CFR 403.12(e)(1).

(vi) In the event that a waived pollutant is found to be present or is expected to be present based on changes that occur in the User's operations, the User must immediately: Comply with the monitoring requirements of paragraph (e)(1) of this section or other more frequent monitoring requirements imposed by the Control Authority; and notify the Control Authority.

(vii) This provision does not supersede certification processes and requirements established in categorical Pretreatment Standards, except as otherwise specified in the categorical Pretreatment Standard.

(3) The Control Authority may reduce the requirement in paragraph (e)(1) of this section to a requirement to report no less frequently than once a year, unless required more frequently in the Pretreatment Standard or by the Approval Authority, where the Industrial User meets all of the following conditions:

(i) The Industrial User's total categorical wastewater flow does not exceed any of the following:

(A) 0.01 percent of the design dry weather hydraulic capacity of the POTW, or 5,000 gallons per day, whichever is smaller, as measured by a continuous effluent flow monitoring device unless the Industrial User discharges in batches;

(B) 0.01 percent of the design dry weather organic treatment capacity of the POTW; and

(C) 0.01 percent of the maximum allowable headworks loading for any pollutant regulated by the applicable categorical Pretreatment Standard for which approved local limits were developed by a POTW in accordance with § 403.5(c) and paragraph (d) of this section;

(ii) The Industrial User has not been in significant noncompliance, as defined in § 403.8(f)(2)(viii), for any time in the past two years;

(iii) The Industrial User does not have daily flow rates, production levels, or pollutant levels that vary so significantly that decreasing the reporting requirement for this Industrial User would result in data that are not representative of conditions occurring during the reporting period pursuant to paragraph (g)(3) of this section;

(iv) The Industrial User must notify the Control Authority immediately of any changes at its facility causing it to no longer meet conditions of paragraphs (e)(3)(i) or (ii) of this section. Upon notification, the Industrial User must immediately begin complying with the minimum reporting in paragraph (e)(1) of this section; and

(v) The Control Authority must retain documentation to support the Control Authority's determination that a specific Industrial User qualifies for reduced reporting requirements under paragraph (e)(3) of this section for a period of 3 years after the expiration of the term of the control mechanism.

(4) For Industrial Users subject to equivalent mass or concentration limits established by the Control Authority in accordance with the procedures in § 403.6(c), the report required by paragraph (e)(1) shall contain a reasonable measure of the User's long term production rate. For all other Industrial Users subject to categorical Pretreatment Standards expressed only in terms of allowable pollutant discharge per unit of production (or other measure of operation), the report required by paragraph (e)(1) shall include

the User's actual average production rate for the reporting period.

(f) *Notice of potential problems, including slug loading.* All categorical and non-categorical Industrial Users shall notify the POTW immediately of all discharges that could cause problems to the POTW, including any slug loadings, as defined by §403.5(b), by the Industrial User.

(g) *Monitoring and analysis to demonstrate continued compliance.* (1) Except in the case of Non-Significant Categorical Users, the reports required in paragraphs (b), (d), (e), and (h) of this section shall contain the results of sampling and analysis of the Discharge, including the flow and the nature and concentration, or production and mass where requested by the Control Authority, of pollutants contained therein which are limited by the applicable Pretreatment Standards. This sampling and analysis may be performed by the Control Authority in lieu of the Industrial User. Where the POTW performs the required sampling and analysis in lieu of the Industrial User, the User will not be required to submit the compliance certification required under paragraphs (b)(6) and (d) of this section. In addition, where the POTW itself collects all the information required for the report, including flow data, the Industrial User will not be required to submit the report.

(2) If sampling performed by an Industrial User indicates a violation, the User shall notify the Control Authority within 24 hours of becoming aware of the violation. The User shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Control Authority within 30 days after becoming aware of the violation. Where the Control Authority has performed the sampling and analysis in lieu of the Industrial User, the Control Authority must perform the repeat sampling and analysis unless it notifies the User of the violation and requires the User to perform the repeat analysis. Resampling is not required if:

(i) The Control Authority performs sampling at the Industrial User at a frequency of at least once per month; or

(ii) The Control Authority performs sampling at the User between the time when the initial sampling was conducted and the time when the User or the Control Authority receives the results of this sampling.

(3) The reports required in paragraphs (b), (d), (e) and (h) of this section must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period. The Control Authority shall require that frequency of monitoring necessary to assess and assure compliance by Industrial Users with applicable Pretreatment Standards and Requirements. Grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the Control Authority. Where time-proportional composite sampling or grab sampling is authorized by the Control Authority, the samples must be representative of the Discharge and the decision to allow the alternative sampling must be documented in the Industrial User file for that facility or facilities. Using protocols (including appropriate preservation) specified in 40 CFR part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: For cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil & grease the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by the Control Authority, as appropriate.

(4) For sampling required in support of baseline monitoring and 90-day compliance reports required in paragraphs (b) and (d) of this section, a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic

compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, the Control Authority may authorize a lower minimum. For the reports required by paragraphs (e) and (h) of this section, the Control Authority shall require the number of grab samples necessary to assess and assure compliance by Industrial Users with Applicable Pretreatment Standards and Requirements.

(5) All analyses shall be performed in accordance with procedures established by the Administrator pursuant to section 304(h) of the Act and contained in 40 CFR part 136 and amendments thereto or with any other test procedures approved by the Administrator. (*See*, §§136.4 and 136.5.) Sampling shall be performed in accordance with the techniques approved by the Administrator. Where 40 CFR part 136 does not include sampling or analytical techniques for the pollutants in question, or where the Administrator determines that the part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed using validated analytical methods or any other sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator.

(6) If an Industrial User subject to the reporting requirement in paragraph (e) or (h) of this section monitors any regulated pollutant at the appropriate sampling location more frequently than required by the Control Authority, using the procedures prescribed in paragraph (g)(5) of this section, the results of this monitoring shall be included in the report.

(h) *Reporting requirements for Industrial Users not subject to categorical Pretreatment Standards.* The Control Authority must require appropriate reporting from those Industrial Users with Discharges that are not subject to categorical Pretreatment Standards. Significant Non-categorical Industrial Users must submit to the Control Authority at least once every six months (on dates specified by the Control Authority) a description of the nature, concentration, and flow of the pollutants required to be reported by the Control Authority. In cases where a local limit requires compliance with a Best Management Practice or pollution prevention alternative, the User must submit documentation required by the Control Authority to determine the compliance status of the User. These reports must be based on sampling and analysis performed in the period covered by the report, and in accordance with the techniques described in part 136 and amendments thereto. This sampling and analysis may be performed by the Control Authority in lieu of the significant non-categorical Industrial User.

(i) *Annual POTW reports.* POTWs with approved Pretreatment Programs shall provide the Approval Authority with a report that briefly describes the POTW's program activities, including activities of all participating agencies, if more than one jurisdiction is involved in the local program. The report required by this section shall be submitted no later than one year after approval of the POTW's Pretreatment Program, and at least annually thereafter, and shall include, at a minimum, the following:

(1) An updated list of the POTW's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The POTW shall also list the Industrial Users that are subject only to local Requirements. The list must also identify Industrial Users subject to categorical Pretreatment Standards that are subject to reduced reporting requirements under paragraph (e)(3), and identify which Industrial Users are Non-Significant Categorical Industrial Users.

(2) A summary of the status of Industrial User compliance over the reporting period;

(3) A summary of compliance and enforcement activities (including inspections) conducted by the POTW during the reporting period;

(4) A summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority; and

(5) Any other relevant information requested by the Approval Authority.

(j) *Notification of changed Discharge.* All Industrial Users shall promptly notify the Control Authority (and the POTW if the POTW is not the Control Authority) in advance of any substantial change in the volume or character of pollutants in their Discharge, including the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under paragraph (p) of this section.

(k) *Compliance schedule for POTW's.* The following conditions and reporting requirements shall apply to the compliance schedule for development of an approvable POTW Pretreatment Program required by § 403.8.

(1) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the development and implementation of a POTW Pretreatment Program (e.g., acquiring required authorities, developing funding mechanisms, acquiring equipment);

(2) No increment referred to in paragraph (k)(1) of this section shall exceed nine months;

(3) Not later than 14 days following each date in the schedule and the final date for compliance, the POTW shall submit a progress report to the Approval Authority including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps taken by the POTW to return to the schedule established. In no event shall more than nine months elapse between such progress reports to the Approval Authority.

(l) *Signatory requirements for Industrial User reports.* The reports required by paragraphs (b), (d), and (e) of this section shall include the certification statement as set forth in § 403.6(a)(2)(ii), and shall be signed as follows:

(1) By a responsible corporate officer, if the Industrial User submitting the reports required by paragraphs (b), (d), and (e) of this section is a corporation. For the purpose of this paragraph, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

(ii) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) By a general partner or proprietor if the Industrial User submitting the reports required by paragraphs (b), (d), and (e) of this section is a partnership, or sole proprietorship respectively.

(3) By a duly authorized representative of the individual designated in paragraph (l)(1) or (l)(2) of this section if:

(i) The authorization is made in writing by the individual described in paragraph (l)(1) or (l)(2);

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(iii) the written authorization is submitted to the Control Authority.

(4) If an authorization under paragraph (l)(3) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of paragraph (l)(3) of this section must be submitted to the Control Authority prior to or together with any reports to be signed by an authorized representative.

(m) *Signatory requirements for POTW reports.* Reports submitted to the Approval Authority by the POTW in accordance with paragraph (i) of this section must be signed by a principal executive officer, ranking elected official or other duly authorized employee. The duly authorized employee must be an individual or position having responsibility for the overall operation of the facility or the Pretreatment Program. This authorization must be made in writing by the principal executive officer or ranking elected official, and submitted to the Approval Authority prior to or together with the report being submitted.

(n) Provisions Governing Fraud and False Statements: The reports and other documents required to be submitted or maintained under this section shall be subject to:

(1) The provisions of 18 U.S.C. section 1001 relating to fraud and false statements;

(2) The provisions of sections 309(c)(4) of the Act, as amended, governing false statements, representation or certification; and

(3) The provisions of section 309(c)(6) regarding responsible corporate officers.

(o) *Record-keeping requirements.* (1) Any Industrial User and POTW subject to the reporting requirements established in this section shall maintain records of all information resulting from any monitoring activities required by this section, including documentation associated with Best Management Practices. Such records shall include for all samples:

(i) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;

(ii) The dates analyses were performed;

(iii) Who performed the analyses;

(iv) The analytical techniques/methods use; and

(v) The results of such analyses.

(2) Any Industrial User or POTW subject to the reporting requirements established in this section (including documentation associated with Best Management Practices) shall be required to retain for a minimum of 3 years any records of monitoring activities and results (whether or not such monitoring activities are required by this section) and shall make such records available for inspection and copying by the Director and the Regional Administrator (and POTW in the case of an Industrial User). This period of retention shall be extended during the course of any unresolved litigation regarding the Industrial User or POTW or when requested by the Director or the Regional Administrator.

(3) Any POTW to which reports are submitted by an Industrial User pursuant to paragraphs (b), (d), (e), and (h) of this section shall retain such reports for a minimum of 3 years and shall make such reports available for inspection and copying by the Director and the Regional Administrator. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.

(p)(1) The Industrial User shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the POTW of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the Industrial User discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent such information is known and readily available to the

Industrial User: An identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following twelve months. All notifications must take place within 180 days of the effective date of this rule. Industrial users who commence discharging after the effective date of this rule shall provide the notification no later than 180 days after the discharge of the listed or characteristic hazardous waste. Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed discharges must be submitted under 40 CFR 403.12 (j). The notification requirement in this section does not apply to pollutants already reported under the self-monitoring requirements of 40 CFR 403.12 (b), (d), and (e).

(2) Dischargers are exempt from the requirements of paragraph (p)(1) of this section during a calendar month in which they discharge no more than fifteen kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen kilograms of non-acute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification.

Subsequent months during which the Industrial User discharges more than such quantities of any hazardous waste do not require additional notification.

(3) In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the Industrial User must notify the POTW, the EPA Regional Waste Management Waste Division Director, and State hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.

(4) In the case of any notification made under paragraph (p) of this section, the Industrial User shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

(q) *Annual certification by Non-Significant Categorical Industrial Users.* A facility determined to be a Non-Significant Categorical Industrial User pursuant to §403.3(v)(2) must annually submit the following certification statement, signed in accordance with the signatory requirements in paragraph (l) of this section. This certification must accompany any alternative report required by the Control Authority:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical Pretreatment Standards under 40 CFR _____, I certify that, to the best of my knowledge and belief that during the period from _____ _____, to _____, _____ [month, days, year]:

(a) The facility described as _____ [facility name] met the definition of a non-significant categorical Industrial User as described in §403.3(v)(2); (b) the facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and (c) the facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period. This compliance certification is based upon the following information:

_____

_____

(r) The Control Authority that chooses to receive electronic documents must satisfy the requirements of 40 CFR Part 3—(Electronic reporting).

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 31225, Aug. 3, 1984; 51 FR 20429, June 4, 1986; 53 FR 40613, Oct. 17, 1988; 55 FR 30131, July 24, 1990; 58 FR 18017, Apr. 7, 1993; 60 FR 33932, June 29, 1995; 62 FR 38414, July 17, 1997; 70 FR 59889, Oct. 13, 2005; 70 FR 60195, Oct. 14, 2005]

§ 403.13 Variances from categorical pretreatment standards for fundamentally different factors.

(a) *Definition.* The term *Requester* means an Industrial User or a POTW or other interested person seeking a variance from the limits specified in a categorical Pretreatment Standard.

(b) *Purpose and scope.* In establishing categorical Pretreatment Standards for existing sources, the EPA will take

into account all the information it can collect, develop and solicit regarding the factors relevant to pretreatment standards under section 307(b). In some cases, information which may affect these Pretreatment Standards will not be available or, for other reasons, will not be considered during their development. As a result, it may be necessary on a case-by-case basis to adjust the limits in categorical Pretreatment Standards, making them either more or less stringent, as they apply to a certain Industrial User within an industrial category or subcategory. This will only be done if data specific to that Industrial User indicates it presents factors fundamentally different from those considered by EPA in developing the limit at issue. Any interested person believing that factors relating to an Industrial User are fundamentally different from the factors considered during development of a categorical Pretreatment Standard applicable to that User and further, that the existence of those factors justifies a different discharge limit than specified in the applicable categorical Pretreatment Standard, may request a fundamentally different factors variance under this section or such a variance request may be initiated by the EPA.

(c) *Criteria*—(1) *General criteria.* A request for a variance based upon fundamentally different factors shall be approved only if:

(i) There is an applicable categorical Pretreatment Standard which specifically controls the pollutant for which alternative limits have been requested; and

(ii) Factors relating to the discharge controlled by the categorical Pretreatment Standard are fundamentally different from the factors considered by EPA in establishing the Standards; and

(iii) The request for a variance is made in accordance with the procedural requirements in paragraphs (g) and (h) of this section.

(2) *Criteria applicable to less stringent limits.* A variance request for the establishment of limits less stringent than required by the Standard shall be approved only if:

(i) The alternative limit requested is no less stringent than justified by the fundamental difference;

(ii) The alternative limit will not result in a violation of prohibitive discharge standards prescribed by or established under § 403.5;

(iii) The alternative limit will not result in a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Pretreatment Standards; and

(iv) Compliance with the Standards (either by using the technologies upon which the Standards are based or by using other control alternatives) would result in either:

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(3) *Criteria applicable to more stringent limits.* A variance request for the establishment of limits more stringent than required by the Standards shall be approved only if:

(i) The alternative limit request is no more stringent than justified by the fundamental difference; and

(ii) Compliance with the alternative limit would not result in either:

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(d) *Factors considered fundamentally different.* Factors which may be considered fundamentally different are:

(1) The nature or quality of pollutants contained in the raw waste load of the User's process wastewater:

(2) The volume of the User's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the User's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the User's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technology.

(e) *Factors which will not be considered fundamentally different.* A variance request or portion of such a request under this section may not be granted on any of the following grounds:

(1) The feasibility of installing the required waste treatment equipment within the time the Act allows;

(2) The assertion that the Standards cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factors listed in paragraph (d) of this section;

(3) The User's ability to pay for the required waste treatment; or

(4) The impact of a Discharge on the quality of the POTW's receiving waters.

(f) *State or local law.* Nothing in this section shall be construed to impair the right of any state or locality under section 510 of the Act to impose more stringent limitations than required by Federal law.

(g) *Application deadline.* (1) Requests for a variance and supporting information must be submitted in writing to the Director or to the Administrator (or his delegate), as appropriate.

(2) In order to be considered, a request for a variance must be submitted no later than 180 days after the date on which a categorical Pretreatment Standard is published in the FEDERAL REGISTER.

(3) Where the User has requested a categorical determination pursuant to §403.6(a), the User may elect to await the results of the category determination before submitting a variance request under this section. Where the User so elects, he or she must submit the variance request within 30 days after a final decision has been made on the categorical determination pursuant to §403.6(a)(4).

(h) *Contents submission.* Written submissions for variance requests, whether made to the Administrator (or his delegate) or the Director, must include:

(1) The name and address of the person making the request;

(2) Identification of the interest of the Requester which is affected by the categorical Pretreatment Standard for which the variance is requested;

(3) Identification of the POTW currently receiving the waste from the Industrial User for which alternative discharge limits are requested;

(4) Identification of the categorical Pretreatment Standards which are applicable to the Industrial User;

(5) A list of each pollutant or pollutant parameter for which an alternative discharge limit is sought;

(6) The alternative discharge limits proposed by the Requester for each pollutant or pollutant parameter identified in paragraph (h)(5) of this section;

(7) A description of the Industrial User's existing water pollution control facilities;

(8) A schematic flow representation of the Industrial User's water system including water supply, process wastewater systems, and points of Discharge; and

(9) A Statement of facts clearly establishing why the variance request should be approved, including detailed support data, documentation, and evidence necessary to fully evaluate the merits of the request, e.g., technical and economic data collected by the EPA and used in developing each pollutant discharge limit in the Pretreatment Standard.

(i) *Deficient requests.* The Administrator (or his delegate) or the Director will only act on written requests for variances that contain all of the information required. Persons who have made incomplete submissions will be notified by the Administrator (or his delegate) or the Director that their requests are deficient and unless the time period is extended, will be given up to thirty days to remedy the deficiency. If the deficiency is not corrected within the time period allowed by the Administrator (or his delegate) or the Director, the request for a variance shall be denied.

(j) *Public notice.* Upon receipt of a complete request, the Administrator (or his delegate) or the Director will provide notice of receipt, opportunity to review the submission, and opportunity to comment.

(1) The public notice shall be circulated in a manner designed to inform interested and potentially interested persons of the request. Procedures for the circulation of public notice shall include mailing notices to:

(i) The POTW into which the Industrial User requesting the variance discharges;

(ii) Adjoining States whose waters may be affected; and

(iii) Designated 208 planning agencies, Federal and State fish, shellfish and wildlife resource agencies; and to any other person or group who has requested individual notice, including those on appropriate mailing lists.

(2) The public notice shall provide for a period not less than 30 days following the date of the public notice during which time interested persons may review the request and submit their written views on the request.

(3) Following the comment period, the Administrator (or his delegate) or the Director will make a determination on the request taking into consideration any comments received. Notice of this final decision shall be provided to the requester (and the Industrial User for which the variance is requested if different), the POTW into which the Industrial User discharges and all persons who submitted comments on the request.

(k) *Review of requests by state.* (1) Where the Director finds that fundamentally different factors do not exist, he may deny the request and notify the requester (and Industrial User where they are not the same) and the POTW of the denial.

(2) Where the Director finds that fundamentally different factors do exist, he shall forward the request, with a recommendation that the request be approved, to the Administrator (or his delegate).

(l) *Review of requests by EPA.* (1) Where the Administrator (or his delegate) finds that fundamentally different factors do not exist, he shall deny the request for a variance and send a copy of his determination to the Director, to the POTW, and to the requester (and to the Industrial User, where they are not the same).

(2) Where the Administrator (or his delegate) finds that fundamentally different factors do exist, and that a partial or full variance is justified, he will approve the variance. In approving the variance, the Administrator (or his delegate) will:

(i) Prepare recommended alternative discharge limits for the Industrial User either more or less stringent than those prescribed by the applicable categorical Pretreatment Standard to the extent warranted by the demonstrated fundamentally different factors;

(ii) Provide the following information in his written determination:

(A) The recommended alternative discharge limits for the Industrial User concerned;

(B) The rationale for the adjustment of the Pretreatment Standard (including the reasons for recommending that the variance be granted) and an explanation of how the recommended alternative discharge limits were derived;

(C) The supporting evidence submitted to the Administrator (or his delegate); and

(D) Other information considered by the Administrator (or his delegate) in developing the recommended alternative discharge limits;

(iii) Notify the Director and the POTW of his or her determination; and

(iv) Send the information described in paragraphs (l)(2) (i) and (ii) of this section to the Requestor (and to the Industrial User where they are not the same).

(m) *Request for hearing.* (1) Within 30 days following the date of receipt of the notice of the decision of the Administrator's delegate on a variance request, the requester or any other interested person may submit a petition to the Regional Administrator for a hearing to reconsider or contest the decision. If such a request is submitted by a person other than the Industrial User the person shall simultaneously serve a copy of the request on the Industrial User.

(2) If the Regional Administrator declines to hold a hearing and the Regional Administrator affirms the findings of the Administrator's delegate the requester may submit a petition for a hearing to the Environmental Appeals Board (which is described in § 1.25 of this title) within 30 days of the Regional Administrator's decision.

[46 FR 9439, Jan. 28, 1981, as amended at 49 FR 5132, Feb. 10, 1984; 50 FR 38811, Sept. 25, 1985; 51 FR 16030, Apr. 30, 1986; 54 FR 258, Jan. 4, 1989; 57 FR 5347, Feb. 13, 1992; 58 FR 18017, Apr. 7, 1993; 60 FR 33932, June 29, 1995; 70 FR 60198, Oct. 14, 2005]

§ 403.14 Confidentiality.

(a) *EPA authorities.* In accordance with 40 CFR part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions, or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR part 2 (Public Information).

(b) *Effluent data.* Information and data provided to the Control Authority pursuant to this part which is effluent data shall be available to the public without restriction.

(c) *State or POTW.* All other information which is submitted to the State or POTW shall be available to the public at least to the extent provided by 40 CFR 2.302.

§ 403.15 Net/Gross calculation.

(a) *Application.* Categorical Pretreatment Standards may be adjusted to reflect the presence of pollutants in the Industrial User's intake water in accordance with this section. Any Industrial User wishing to obtain credit for intake pollutants must make application to the Control Authority. Upon request of the Industrial User, the applicable Standard will be calculated on a "net" basis (*i.e.*, adjusted to reflect credit for pollutants in the intake water) if the requirements of paragraph (b) of this section are met.

(b) *Criteria.* (1) Either:

(i) The applicable categorical Pretreatment Standards contained in 40 CFR subchapter N specifically provide that they shall be applied on a net basis; or

(ii) The Industrial User demonstrates that the control system it proposes or uses to meet applicable categorical Pretreatment Standards would, if properly installed and operated, meet the Standards in the absence of pollutants in the intake waters.

(2) Credit for generic pollutants such as biochemical oxygen demand (BOD), total suspended solids (TSS), and oil and grease should not be granted unless the Industrial User demonstrates that the constituents of the generic measure in the User's effluent are substantially similar to the constituents of the generic measure in the intake water or unless appropriate additional limits are placed on process water pollutants either at the outfall or elsewhere.

(3) Credit shall be granted only to the extent necessary to meet the applicable categorical Pretreatment Standard(s), up to a maximum value equal to the influent value. Additional monitoring may be necessary to determine eligibility for credits and compliance with Standard(s) adjusted under this section.

(4) Credit shall be granted only if the User demonstrates that the intake water is drawn from the same body of water as that into which the POTW discharges. The Control Authority may waive this requirement if it finds that no environmental degradation will result.

[70 FR 60198, Oct. 14, 2005]

§ 403.16 Upset provision.

(a) *Definition.* For the purposes of this section, *Upset* means an exceptional incident in which there is unintentional and temporary noncompliance with categorical Pretreatment Standards because of factors beyond the reasonable control of the Industrial User. 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.

(b) *Effect of an upset.* An Upset shall constitute an affirmative defense to an action brought for noncompliance with categorical Pretreatment Standards if the requirements of paragraph (c) are met.

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

(1) An Upset occurred and the Industrial User can identify the cause(s) of the Upset;

(2) The facility was at the time being operated in a prudent and workmanlike manner and in compliance with applicable operation and maintenance procedures;

(3) The Industrial User has submitted the following information to the POTW and Control Authority within 24 hours of becoming aware of the Upset (if this information is provided orally, a written submission must be provided within five days):

(i) A description of the Indirect Discharge and cause of noncompliance;

(ii) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue;

(iii) Steps being taken and/or planned to reduce, eliminate and prevent recurrence of the noncompliance.

(d) *Burden of proof.* In any enforcement proceeding the Industrial User seeking to establish the occurrence of an Upset shall have the burden of proof.

(e) *Reviewability of agency consideration of claims of upset.* In the usual exercise of prosecutorial discretion, Agency enforcement personnel should review any claims that non-compliance was caused by an Upset. No determinations made in the course of the review constitute final Agency action subject to judicial review. Industrial Users will have the opportunity for a judicial determination on any claim of Upset only in an enforcement action brought for noncompliance with categorical Pretreatment Standards.

(f) *User responsibility in case of upset.* The Industrial User shall control production or all Discharges to the extent necessary to maintain compliance with categorical Pretreatment Standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost or fails.

[46 FR 9439, Jan. 28, 1981, as amended at 53 FR 40615, Oct. 17, 1988]

§ 403.17 Bypass.

(a) *Definitions.* (1) *Bypass* means the intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.

(2) *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.

(b) *Bypass not violating applicable Pretreatment Standards or Requirements.* An Industrial User may allow any bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (c) and (d) of this section.

(c) *Notice.* (1) If an Industrial User knows in advance of the need for a bypass, it shall submit prior notice to the Control Authority, if possible at least ten days before the date of the bypass.

(2) An Industrial User shall submit oral notice of an unanticipated bypass that exceeds applicable Pretreatment Standards to the Control Authority within 24 hours from the time the Industrial User becomes aware of the bypass. A written submission shall also be provided within 5 days of the time the Industrial User becomes aware of the bypass. The written submission

shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass 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 bypass. The Control Authority may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(d) *Prohibition of bypass.* (1) Bypass is prohibited, and the Control Authority may take enforcement action against an Industrial User for a bypass, unless;

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

(ii) 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 preventative maintenance; and

(iii) The Industrial User submitted notices as required under paragraph (c) of this section.

(2) The Control Authority may approve an anticipated bypass, after considering its adverse effects, if the Control Authority determines that it will meet the three conditions listed in paragraph (d)(1) of this section.

[53 FR 40615, Oct. 17, 1988, as amended at 58 FR 18017, Apr. 7, 1993]

§ 403.18 Modification of POTW pretreatment programs.

(a) *General.* Either the Approval Authority or a POTW with an approved POTW Pretreatment Program may initiate program modification at any time to reflect changing conditions at the POTW. Program modification is necessary whenever there is a significant change in the operation of a POTW Pretreatment Program that differs from the information in the POTW's submission, as approved under § 403.11.

(b) *Substantial modifications defined.* Substantial modifications include:

(1) Modifications that relax POTW legal authorities (as described in § 403.8(f)(1)), except for modifications that directly reflect a revision to this Part 403 or to 40 CFR chapter I, subchapter N, and are reported pursuant to paragraph (d) of this section;

(2) Modifications that relax local limits, except for the modifications to local limits for pH and reallocations of the Maximum Allowable Industrial Loading of a pollutant that do not increase the total industrial loadings for the pollutant, which are reported pursuant to paragraph (d) of this section. Maximum Allowable Industrial Loading means the total mass of a pollutant that all Industrial Users of a POTW (or a subgroup of Industrial Users identified by the POTW) may discharge pursuant to limits developed under § 403.5(c);

(3) Changes to the POTW's control mechanism, as described in § 403.8(f)(1)(iii);

(4) A decrease in the frequency of self-monitoring or reporting required of industrial users;

(5) A decrease in the frequency of industrial user inspections or sampling by the POTW;

(6) Changes to the POTW's confidentiality procedures; and

(7) Other modifications designated as substantial modifications by the Approval Authority on the basis that the modification could have a significant impact on the operation of the POTW's Pretreatment Program; could result in an increase in pollutant loadings at the POTW; or could result in less stringent requirements being imposed on Industrial Users of the POTW.

(c) *Approval procedures for substantial modifications.* (1) The POTW shall submit to the Approval Authority a statement of the basis for the desired program modification, a modified program description (see § 403.9(b)), or such other documents the Approval Authority determines to be necessary under the circumstances.

(2) The Approval Authority shall approve or disapprove the modification based on the requirements of § 403.8(f) and using the procedures in § 403.11(b)

through (f), except as provided in paragraphs (c) (3) and (4) of this section. The modification shall become effective upon approval by the Approval Authority.

(3) The Approval Authority need not publish a notice of decision under § 403.11(e) provided: The notice of request for approval under § 403.11(b)(1) states that the request will be approved if no comments are received by a date specified in the notice; no substantive comments are received; and the request is approved without change.

(4) Notices required by § 403.11 may be performed by the POTW provided that the Approval Authority finds that the POTW notice otherwise satisfies the requirements of § 403.11.

(d) *Approval procedures for non-substantial modifications.* (1) The POTW shall notify the Approval Authority of any non-substantial modification at least 45 days prior to implementation by the POTW, in a statement similar to that provided for in paragraph (c)(1) of this section.

(2) Within 45 days after the submission of the POTW's statement, the Approval Authority shall notify the POTW of its decision to approve or disapprove the non-substantial modification.

(3) If the Approval Authority does not notify the POTW within 45 days of its decision to approve or deny the modification, or to treat the modification as substantial under paragraph (b)(7) of this section, the POTW may implement the modification.

(e) *Incorporation in permit.* All modifications shall be incorporated into the POTW's NPDES permit upon approval. The permit will be modified to incorporate the approved modification in accordance with 40 CFR 122.63(g).

[62 FR 38414, July 17, 1997]

§ 403.19 Provisions of specific applicability to the Owatonna Waste Water Treatment Facility.

(a) For the purposes of this section, the term "Participating Industrial Users" includes the following Industrial Users in the City of Owatonna, Minnesota: Crown Cork and Seal Company, Inc.; Cybex International Inc.; Josten's Inc.—Southtown Facility; SPx Corporation, Service Solutions Division; Truth Hardware Corporation; and Uber Tanning Company.

(b) For a Participating Industrial User discharging to the Owatonna Waste Water Treatment Facility in Owatonna, Minnesota, when a categorical Pretreatment Standard is expressed in terms of pollutant concentration the City of Owatonna may convert the limit to a mass limit by multiplying the five-year, long-term average process flows of the Participating Industrial User (or a shorter period if production has significantly increased or decreased during the five year period) by the concentration-based categorical Pretreatment Standard. Participating Industrial Users must notify the City in the event production rates are expected to vary by more than 20 percent from a baseline production rate determined by Owatonna when it establishes a Participating Industrial User's initial mass limit. To remain eligible to receive equivalent mass limits the Participating Industrial User must maintain at least the same level of treatment as at the time the equivalent mass limit is established. Upon notification of a revised production rate from a Participating Industrial User, the City will reassess the appropriateness of the mass limit. Owatonna shall reestablish the concentration-based limit if a Participating Industrial User does not maintain at least the same level of treatment as when the equivalent mass limit was established.

(c) If a categorical Participating Industrial User of the Owatonna Waste Water Treatment Facility has demonstrated through sampling and other technical factors, including a comparison of three years of effluent data with background data, that pollutants regulated through categorical Pretreatment Standards, other than 40 CFR part 414, are not expected to be present in quantities greater than the background influent concentration to the industrial process, the City of Owatonna may reduce the sampling frequency specified in § 403.8(f)(2)(v) to once during the term of the categorical Participating Industrial User's permit.

(d) If a Participating Industrial User is discharging to the Owatonna Waste

Water Treatment Facility in Owatonna, Minnesota and is subject to a categorical Pretreatment Standard other than one codified at 40 CFR part 414, the City of Owatonna may authorize the Participating Industrial User to forego sampling of a pollutant if the Participating Industrial User has demonstrated through sampling and other technical factors, including a comparison of three years of effluent data with background data, that the pollutant is not expected to be present in quantities greater than the background influent concentration to the industrial process, and the Participating Industrial User certifies on each report, with the following statement, that there has been no increase in the pollutant in its wastestream due to activities of the Participating Industrial User. The following statement is to be included as a comment to the periodic reports required by § 403.12(e):

"Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for 40 CFR ___, I certify that, to the best of my knowledge and belief, the raw materials, industrial processes, and potential by-products have not contributed this pollutant to the wastewaters since filing of the last periodic report under 40 CFR 403.12(e)."

(e) If the average daily loading from the Participating Industrial Users to the Owatonna Waste Water Treatment Facility is equal to or less than 0.68 pounds per day of chromium, 0.25 pounds per day of copper, 1.17 pounds per day of nickel, and 1.01 pounds per day of zinc, Owatonna may authorize a categorical Participating Industrial User to satisfy the reporting requirements of § 403.12(e) with an annual report provided on a date specified by Owatonna, provided that the Participating Industrial User has no reasonable potential to violate a Pretreatment Standard for any pollutant for which reduced monitoring is being allowed, and has not been in Significant Noncompliance within the previous three years.

(f) The Owatonna Waste Water Treatment Facility in Owatonna, Minnesota shall post public notice of all Significant Noncompliance subject to the publication requirement in § 403.8(f)(2)(vii) at the Minnesota Pollution Control Agency website for a period of one year, as soon as practicable upon identifying the violations. In addition, the Owatonna Waste Water Treatment Facility shall post an explanation of how Significant Noncompliance is determined, and a contact name and phone number for information regarding other, non-Significant Noncompliance violations. If a violation is not corrected within thirty (30) calendar days or results in pass through or interference at the Owatonna Waste Water Treatment Facility, publication must also be made in the format specified in § 403.8(f)(2)(vii).

(g) The provisions of this section shall expire on October 6, 2005.

[65 FR 59747, Oct. 6, 2000]

§ 403.20 Pretreatment Program Reinvention Pilot Projects Under Project XL.

The Approval Authority may allow any publicly owned treatment works (POTW) that has a final "Project XL" agreement to implement a Pretreatment Program that includes legal authorities and requirements that are different than the administrative requirements otherwise applicable under this part. The POTW must submit any such alternative requirements as a substantial program modification in accordance with the procedures outlined in § 403.18. The approved modified program must be incorporated as an enforceable part of the POTW's NPDES permit. The Approval Authority must include a reopener clause in the POTW's NPDES permit that directs the POTW to discontinue implementing the approved alternative requirements and resume implementation of its previously approved pretreatment program if the Approval Authority determines that the primary objectives of the Local Pilot Pretreatment Program are not being met or the "Project XL" agreement expires or is otherwise terminated.

[66 FR 50339, Oct. 3, 2001]

APPENDIXES A–C TO PART 403
[RESERVED]

APPENDIX D TO PART 403—SELECTED INDUSTRIAL SUBCATEGORIES CONSIDERED DILUTE FOR PURPOSES OF THE COMBINED WASTESTREAM FORMULA

The following industrial subcategories are considered to have dilute wastestreams for purposes of the combined wastestream formula. They either were or could have been excluded from categorical pretreatment standards pursuant to paragraph 8 of the Natural Resources Defense Council, Inc., et al. v. Costle Consent Decree for one or more of the following four reasons: (1) The pollutants of concern are not detectable in the effluent from the industrial user (paragraph 8(a)(iii)); (2) the pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph 8(a)(iii)); (3) the pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph 8(a)(iii)); or (4) the wastestream contains only pollutants which are compatible with the POTW (paragraph 8(b)(i)). In some instances, different rationales were given for exclusion under paragraph 8. However, EPA has reviewed these subcategories and has determined that exclusion could have occurred due to one of the four reasons listed above.

This list is complete as of October 9, 1986. It will be updated periodically for the convenience of the reader.

Auto and Other Laundries (40 CFR part 444)
- Carpet and Upholstery Cleaning
- Coin-Operated Laundries and Dry Cleaning
- Diaper Services
- Dry Cleaning Plants except Rug Cleaning
- Industrial Laundries
- Laundry and Garment Services, Not Elsewhere Classified
- Linen Supply
- Power Laundries, Family and Commercial

Electrical and Electronic Components[1] (40 CFR part 469)
- Capacitors (Fluid Fill)
- Carbon and Graphite Products
- Dry Transformers
- Ferrite Electronic Devices
- Fixed Capacitors
- Fluorescent Lamps
- Fuel Cells
- Incandescent Lamps
- Magnetic Coatings
- Mica Paper Dielectric
- Motors, Generators, Alternators
- Receiving and Transmitting Tubes
- Resistance Heaters
- Resistors
- Swithchgear
- Transformer (Fluid Fill)

Metal Molding and Casting (40 CFR part 464)
- Nickel Casting
- Tin Casting
- Titanium Casting

Gum and Wood Chemicals (40 CFR part 454)
- Char and Charcoal Briquets

Inorganic Chemicals Manufacturing (40 CFR part 415)
- Ammonium Chloride
- Ammonium Hydroxide
- Barium Carbonate
- Calcium Carbonate
- Carbon Dioxide
- Carbon Monoxide and Byproduct Hydrogen
- Hydrochloric Acid
- Hydrogen Peroxide (Organic Process)
- Nitric Acid
- Oxygen and Nitrogen
- Potassium Iodide
- Sodium Chloride (Brine Mining Process)
- Sodium Hydrosulfide
- Sodium Hydrosulfite
- Sodium Metal
- Sodium Silicate
- Sodium Thiosulfate
- Sulfur Dioxide
- Sulfuric Acid

Leather (40 CFR part 425)
- Gloves
- Luggage

Paving and Roofing (40 CFR part 443)
- Asphalt Concrete
- Asphalt Emulsion
- Linoleum
- Printed Asphalt Felt
- Roofing

Pulp, Paper, and Paperboard, and Builders' Paper and Board Mills (40 CFR parts 430 and 431)
- Groundwood-Chemi-Mechanical

Rubber Manufacturing (40 CFR part 428)
- Tire and Inner Tube Plants
- Emulsion Crumb Rubber
- Solution Crumb Rubber
- Latex Rubber
- Small-sized General Molded, Extruded and Fabricated Rubber Plants,[2]
- Medium-sided General Molded, Extruded and Fabricated Rubber Plants[2]
- Large-sized General Molded, Extruded and Fabricated Rubber Plants[2]
- Wet Digestion Reclaimed Rubber
- Pan, Dry Digestion, and Mechanical Reclaimed Rubber

[1] The Paragraph 8 exemption for the manufacture of products in the Electrical and Electronic Components Category is for operations not covered by Electroplating/Metal Finishing pretreatment regulations (40 CFR parts 413/433).

[2] Footnote: Except for production attributed to lead-sheathed hose manufacturing operations.

Latex Dipped, Latex-Extruded, and Latex-Molded Rubber[3]
Latex Foam[4]
Soap and Detergent Manufacturing (40 CFR part 417)
Soap Manufacture by Batch Kettle
Fatty Acid Manufacture by Fat Splitting
Soap Manufacture by Fatty Acid Neutralization
Glycerine Concentration
Glycerine Distillation
Manufacture of Soap Flakes and Powders
Manufacture of Bar Soaps
Manufacture of Liquid Soaps
Manufacture of Spray Dried Detergents
Manufacture of Liquid Detergents
Manufacture of Dry Blended Detergents
Manufacture of Drum Dried Detergents
Manufacture of Detergent Bars and Cakes
Textile Mills (40 CFR part 410)
Apparel manufacturing
Cordage and Twine
Padding and Upholstery Filling
Timber Products Processing (40 CFR part 429)
Barking Process
Finishing Processes
Hardboard—Dry Process

[51 FR 36372, Oct. 9, 1986]

APPENDIX E TO PART 403—SAMPLING PROCEDURES

I. COMPOSITE METHOD

A. It is recommended that influent and effluent operational data be obtained through 24-hour flow proportional composite samples. Sampling may be done manually or automatically, and discretely or continuously. If discrete sampling is employed, at least 12 aliquots should be composited. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. All composites should be flow proportional to either the stream flow at the time of collection of the influent aliquot or to the total influent flow since the previous influent aliquot. Volatile pollutant aliquots must be combined in the laboratory immediately before analysis.

B. Effluent sample collection need not be delayed to compensate for hydraulic detention unless the POTW elects to include detention time compensation or unless the Approval Authority requires detention time compensation. The Approval Authority may require that each effluent sample is taken approximately one detention time later than the corresponding influent sample when failure to do so would result in an unrepresentative portrayal of actual POTW operation. The detention period should be based on a 24-hour average daily flow value. The average daily flow should in turn be based on the average of the daily flows during the same month of the previous year.

II. GRAB METHOD

If composite sampling is not an appropriate technique, grab samples should be taken to obtain influent and effluent operational data. A grab sample is an individual sample collected over a period of time not exceeding 15 minutes. The collection of influent grab samples should precede the collection of effluent samples by approximately one detention period except that where the detention period is greater than 24 hours such staggering of the sample collection may not be necessary or appropriate. The detention period should be based on a 24-hour average daily flow value. The average daily flow should in turn be based upon the average of the daily flows during the same month of the previous year. Grab sampling should be employed where the pollutants being evaluated are those, such as cyanide and phenol, which may not be held for an extended period because of biological, chemical or physical interaction which take place after sample collection and affect the results.

[49 FR 31225, Aug. 3, 1984]

APPENDIX F TO PART 403 [RESERVED]

APPENDIX G TO PART 403—POLLUTANTS ELIGIBLE FOR A REMOVAL CREDIT

I. REGULATED POLLUTANTS IN PART 503 ELIGIBLE FOR A REMOVAL CREDIT

Pollutants	Use or disposal practice		
	LA	SD	I
Arsenic	X	X	X
Beryllium			X
Cadmium	X		X
Chromium		X	X
Copper	X		
Lead	X		X
Mercury	X		X
Molybdenum	X		
Nickel	X	X	X
Selenium	X		
Zinc	X		
Total hydrocarbons			X[1]

Key:
LA—land application.
SD—surface disposal site without a liner and leachate collection system.
I—firing of sewage sludge in a sewage sludge incinerator.

[3] Footnote: Except for production attributed to chromic acid form-cleaning operations.

[4] Footnote: Except for production that generates zinc as a pollutant in discharge.

[1] The following organic pollutants are eligible for a removal credit if the requirements for total hydrocarbons (or carbon monoxide) in subpart E in 40 CFR Part 503 are met when sewage sludge is fired in a sewage sludge incinerator: Acrylonitrile, Idrin/Dieldrin(total), Benzene, Benzidine, Benzo(a)pyrene, Bis(2-chloroethyl)ether, Bis(2-ethylhexyl)phthalate, Bromodichloromethane, Bromoethane, Bromoform, Carbon tetrachloride, Chlordane, Chloroform, Chloromethane, DDD, DDE, DDT, Dibromochloromethane, Dibutyl phthalate, 1,2-dichloroethane, 1,1-dichloroethylene, 2,4-dichlorophenol, 1,3-dichloropropene, Diethyl phthalate, 2,4-dinitrophenol, 1,2-diphenylhydrazine, Din-butyl phthalate, Endosulfan, Endrin, Ethylbenzene, Heptachlor, Heptachlor epoxide, Hexachlorobutadiene, Alphahexachlorocyclohexane, Beta-hexachlorocyclohexane, Hexachlorocyclopentadiene, Hexachloroethane, Hydrogen cyanide, Isophorone, Lindane, Methylene chloride, Nitrobenzene, N-Nitrosodimethylamine, N-Nitrosodi-n-propylamine, Pentachlorophenol, Phenol, Polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzo-p-dioxin, 1,1,2,2,-tetrachloroethane, Tetrachloroethylene, Toluene, Toxaphene, Trichloroethylene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, and 2,4,6-Trichlorophenol.

II. Additional Pollutants Eligible for a Removal Credit

[Milligrams per kilogram—dry weight basis]

Pollutant	Use or disposal practice			
	LA	Surface disposal		I
		Unlined [1]	Lined [2]	
Arsenic	.....	.....	[3] 100	.....
Aldrin/Dieldrin (Total)	2.7	.....	.....	.....
Benzene	[3] 16	140	3400	.....
Benzo(a)pyrene	15	[3] 100	[3] 100	.....
Bis(2-ethylhexyl)phthalate	.....	[3] 100	[3] 100	.....
Cadmium	.....	[3] 100	[3] 100	.....
Chlordane	86	[3] 100	[3] 100	.....
Chromium (total)	[3] 100	.....	[3] 100	.....
Copper	.....	[3] 46	100	1400
DDD, DDE, DDT (Total)	1.2	2000	2000	.....
2,4 Dichlorophenoxy-acetic acid	.....	7	7	.....
Fluoride	730	.....	.....	.....
Heptachlor	7.4	.....	.....	.....
Hexachlorobenzene	29	.....	.....	.....
Hexachlorobutadiene	600	.....	.....	.....
Iron	[3] 78	.....	.....	.....
Lead	.....	[3] 100	[3] 100	.....
Lindane	84	[3] 28	[3] 28	.....
Malathion	.....	0.63	0.63	.....
Mercury	.....	[3] 100	[3] 100	.....
Molybdenum	.....	40	40	.....
Nickel	.....	.....	[3] 100	.....
N-Nitrosodimethylamine	2.1	0.088	0.088	.....
Pentachlorophenol	30	.....	.....	.....
Phenol	.....	82	82	.....
Polychlorinated biphenyls	4.6	<50	<50	.....
Selenium	.....	4.8	4.8	4.8
Toxaphene	10	[3] 26	[3] 26	.....
Trichloroethylene	[3] 10	9500	[3] 10	.....
Zinc	.....	4500	4500	4500

[1] Active sewage sludge unit without a liner and leachate collection system.
[2] Active sewage sludge unit with a liner and leachate collection system.
[3] Value expressed in grams per kilogram—dry weight basis.
KEY: LA—land application.
I—incineration.

[60 FR 54768, Oct. 25, 1995, as amended at 65 FR 42567, Aug. 4, 1999; 70 FR 60198, Oct. 14, 2005]

SUBCHAPTER D—WATER PROGRAMS (CONTINUED)

PART 136—GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS

Sec.

AUTHORITY: Secs. 301, 304(h), 307 and 501(a), Pub. L. 95-217, 91 Stat. 1566, *et seq.* (33 U.S.C. 1251, *et seq.*) (the Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977).

§ 136.1 Applicability.

(a) The procedures prescribed herein shall, except as noted in § 136.5, be used to perform the measurements indicated whenever the waste constituent specified is required to be measured for:

(1) An application submitted to the Administrator, or to a State having an approved NPDES program for a permit under section 402 of the Clean Water Act of 1977, as amended (CWA), and/or to reports required to be submitted under NPDES permits or other requests for quantitative or qualitative effluent data under parts 122 to 125 of title 40, and,

(2) Reports required to be submitted by dischargers under the NPDES established by parts 124 and 125 of this chapter, and,

(3) Certifications issued by States pursuant to section 401 of the CWA, as amended.

(b) The procedure prescribed herein and in part 503 of title 40 shall be used to perform the measurements required for an application submitted to the Administrator or to a State for a sewage sludge permit under section 405(f) of the Clean Water Act and for recordkeeping and reporting requirements under part 503 of title 40.

[72 FR 14224, Mar. 26, 2007]

§ 136.2 Definitions.

As used in this part, the term:

(a) *Act* means the Clean Water Act of 1977, Pub. L. 95-217, 91 Stat. 1566, *et seq.* (33 U.S.C. 1251 *et seq.*) (The Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977).

(b) *Administrator* means the Administrator of the U.S. Environmental Protection Agency.

(c) *Regional Administrator* means one of the EPA Regional Administrators.

(d) *Director* means the Director of the State Agency authorized to carry out an approved National Pollutant Discharge Elimination System Program under section 402 of the Act.

(e) *National Pollutant Discharge Elimination System (NPDES)* means the national system for the issuance of permits under section 402 of the Act and includes any State or interstate program which has been approved by the Administrator, in whole or in part, pursuant to section 402 of the Act.

(f) *Detection limit* means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure set forth at appendix B of this part.

[38 FR 28758, Oct. 16, 1973, as amended at 49 FR 43250, Oct. 26, 1984]

§ 136.3 Identification of test procedures.

(a) Parameters or pollutants, for which methods are approved, are listed together with test procedure descriptions and references in Tables IA, IB, IC, ID, IE, IF, IG, and IH. In the event

of a conflict between the reporting requirements of 40 CFR Parts 122 and 125 and any reporting requirements associated with the methods listed in these tables, the provisions of 40 CFR Parts 122 and 125 are controlling and will determine a permittee's reporting requirements. The full text of the referenced test procedures are incorporated by reference into Tables IA, IB, IC, ID, IE, IF, IG, and IH. The incorporation by reference of these documents, as specified in paragraph (b) of this section, was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of the documents may be obtained from the sources listed in paragraph (b) of this section. Documents may be inspected at EPA's Water Docket, EPA West, 1301 Constitution Avenue, NW., Room B102, Washington, DC (Telephone: 202–566–2426); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* These test procedures are incorporated as they exist on the day of approval and a notice of any change in these test procedures will be published in the FEDERAL REGISTER. The discharge parameter values for which reports are required must be determined by one of the standard analytical test procedures incorporated by reference and described in Tables IA, IB, IC, ID, IE, IF, IG, and IH or by any alternate test procedure which has been approved by the Administrator under the provisions of paragraph (d) of this section and §§ 136.4 and 136.5. Under certain circumstances paragraph (c) of this section, § 136.5(a) through (d) or 40 CFR 401.13, other additional or alternate test procedures may be used.

TABLE IA—LIST OF APPROVED BIOLOGICAL METHODS FOR WASTEWATER AND SEWAGE SLUDGE

Parameter and units	Method [1]	EPA	Standard methods 18th, 19th, 20th ed.	Standard methods on-line	AOAC, ASTM, USGS	Other
Bacteria:						
1. Coliform (fecal), number per 100 mL or number per gram dry weight.	Most Probable Number (MPN),[5] tube 3 dilution, or	p. 132 [3] 1680 [12,14] 1681 [12,19]	9221 C E	9221 C E–99.		
	Membrane filter (MF) [2], single step.	p. 124 [3]	9222 D	9222 D–97	B–0050–85 [5].	
2. Coliform (fecal) in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 132 [3]	9221 C E	9221 C E–99.		
	MF [2], single step	p. 124 [3]	9222 D	9222 D–97.		
3. Coliform (total), number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 114 [3]	9221 B	9221 B–99.		
	MF [2], single step or two step	p. 108 [3]	9222 B	9222 B–97	B–0025–8 [5].	
4. Coliform (total), in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 114 [3]	9221 B	9221 B–99.		
	MF [2] with enrichment	p. 111 [3]	9222 (B+B.5c)	9222 (B+B.5c)–97.		
5. *E. coli*, number per 100 mL [20].	MPN [7,9,15] multiple tube/multiple well.		9223 B [13]	9223 B–97 [13]	991.15 [11]	Colilert® [13,17] Colilert-18® [13,16,17]
	MF [2,6,7,8,9] single step	1603 [21]				mColiBlue-24® [18]
6. Fecal streptococci, number per 100 mL.	MPN, 5 tube 3 dilution,	p. 139 [3]	9230 B	9230 B–93.		
	MF [2], or	p. 136 [3]	9230 C	9230 C–93	B–0055–85 [5].	
	Plate count	p. 143 [3].				
7. Enterococci, number per 100 mL [20].	MPN [7,9], multiple tube/multiple well.				D6503–99 [10]	Enterolert® [13,23]
	MF [2,6,7,8,9] single step	1600 [24].				
8. Salmonella, number per gram dry weight [12].	MPN multiple tube	1682 [22].				
Aquatic Toxicity:						
9. Toxicity, acute, fresh water organisms, LC_{50}, percent effluent.	*Ceriodaphnia dubia* acute	2002.0 [25].				
	Daphnia puplex and *Daphnia magna* acute.	2021.0 [25].				
	Fathead Minnow, *Pimephales promelas*, and Bannerfin *shiner*, *Cyprinella leedsi*, acute.	2000.0 [25].				
	Rainbow Trout, *Oncorhynchus mykiss*, and brook trout, *Salvelinus fontinalis*, acute.	2019.0 [25].				

TABLE IA—LIST OF APPROVED BIOLOGICAL METHODS FOR WASTEWATER AND SEWAGE SLUDGE—Continued

Parameter and units	Method [1]	EPA	Standard methods 18th, 19th, 20th ed.	Standard methods on-line	AOAC, ASTM, USGS	Other
10. Toxicity, acute, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, LC_{50}, percent effluent.	Mysid, *Mysidopsis bahia*, acute	2007.0 [25].				
	Sheepshead Minnow, *Cyprinodon* variegatus, acute.	2004.0 [25].				
	Silverside, *Menidia beryllina*, *Menidia menidia*, and *Menidia peninsulae*, acute.	2006.0 [25].				
11. Toxicity, chronic, fresh water organisms, NOEC or IC_{25}, percent effluent.	Fathead minnow, *Pimephales promelas*, larval survival and growth.	1000.0 [26].				
	Fathead minnow, *Pimephales promelas*, embryo-larval survival and teratogenicity.	1001.0 [26].				
	Daphnia, *Ceriodaphnia dubia*, survival and reproduction.	1002.0 [26].				
	Green alga, *Selenastrum capricornutum*, growth.	1003.0 [26].				
12. Toxicity, chronic, estuarine and marine organisms of the Atlantic Ocean and Gulf of Mexico, NOEC or IC_{25}, percent effluent.	Sheepshead minnow, *Cyprinodon variegatus*, larval survival and growth.	1004.0 [27].				
	Sheepshed minnow, *Cyprinodon variegatus*, embryo-larval survival and teratogenicity.	1005.0 [27].				
	Inland silverside, *Menidia beryllina*, larval survival and growth.	1006.0 [27].				
	Mysid, *Mysidopsis bahia*, survival, growth, and fecundity.	1007.0 [27].				
	Sea urchin, *Arbacia punctulata*, fertilization.	1008.0 [27].				

[1] The method must be specified when results are reported.
[2] A 0.45 μm membrane filter (MF) or other pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with their growth.
[3] USEPA. 1978. Microbiological Methods for Monitoring the Environment, Water, and Wastes. Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH, EPA/600/8–78/017.
[4] [Reserved]

[5] USGS. 1989. U.S. Geological Survey Techniques of Water-Resource Investigations, Book 5, Laboratory Analysis, Chapter A4, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples, U.S. Geological Survey, U.S. Department of the Interior, Reston, VA.

[6] Because the MF technique usually yields low and variable recovery from chlorinated wastewaters, the Most Probable Number method will be required to resolve any controversies.

[7] Tests must be conducted to provide organism enumeration (density). Select the appropriate configuration of tubes/filtrations and dilutions/volumes to account for the quality, character, consistency, and anticipated organism density of the water sample.

[8] When the MF method has been used previously to test waters with high turbidity, large numbers of noncoliform bacteria, or samples that may contain organisms stressed by chlorine, a parallel test should be conducted with a multiple-tube technique to demonstrate applicability and comparability of results.

[9] To assess the comparability of results obtained with individual methods, it is suggested that side-by-side tests be conducted across seasons of the year with the water samples routinely tested in accordance with the most current Standard Methods for the Examination of Water and Wastewater or EPA alternate test procedure (ATP) guidelines.

[10] ASTM. 2000, 1999, 1996. Annual Book of ASTM Standards—Water and Environmental Technology. Section 11.02. ASTM International. 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[11] AOAC. 1995. Official Methods of Analysis of AOAC International, 16th Edition, Volume I, Chapter 17. Association of Official Analytical Chemists International. 481 North Frederick Avenue, Suite 500, Gaithersburg, MD 20877–2417.

[12] Recommended for enumeration of target organism in sewage sludge.

[13] These tests are collectively known as defined enzyme substrate tests, where, for example, a substrate is used to detect the enzyme β-glucuronidase produced by *E. coli*.

[14] USEPA. July 2006. Method 1680: Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple-Tube Fermentation Using Lauryl-Tryptose Broth (LTB) and EC Medium. US Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–012.

[15] Samples shall be enumerated by the multiple-tube or multiple-well procedure. Using multiple-tube procedures, employ an appropriate tube and dilution configuration of the sample as needed and report the Most Probable Number (MPN). Samples tested with Colilert® may be enumerated with the multiple-well procedures, Quanti-Tray® Quanti-Tray® 2000, and the MPN calculated from the table provided by the manufacturer.

[16] Colilert-18® is an optimized formulation of the Colilert® for the determination of total coliforms and *E. coli* that provides results within 18 h of incubation at 35 °C rather than the 24 h required for the Colilert® test and is recommended for marine water samples.

[17] Descriptions of the Colilert®, Colilert-18®, Quanti-Tray®, and Quanti-Tray®/2000 may be obtained from IDEXX Laboratories, Inc., 1 IDEXX Drive, Westbrook, ME 04092.

[18] A description of the mColiBlue24® test, Total Coliforms and *E. coli*, is available from Hach Company, 100 Dayton Ave., Ames, IA 50010.

[19] USEPA. July 2006. Method 1681: Fecal Coliforms in Sewage Sludge (Biosolids) by Multiple-Tube Fermentation using A–1 Medium. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–013.

[20] Recommended for enumeration of target organism in wastewater effluent.

[21] USEPA. July 2006. Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (modified mTEC). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–011.

[22] USEPA. July 2006. Method 1682: *Salmonella* in Sewage Sludge (Biosolids) by Modified Semisolid Rappaport-Vassiliadis (MSRV) Medium. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–014.

[23] A description of the Enterolert® test may be obtained from IDEXX Laboratories, Inc., 1 IDEXX Drive, Westbrook, ME 04092.

[24] USEPA. July 2006. Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-β-D-Glucoside Agar (mEI). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–009.

[25] USEPA. October 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA/821/R–02/012.

[26] USEPA. October 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Fourth Edition, U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA/821/R–02/013.

[27] USEPA. October 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA/821/R–02/014.

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
1. Acidity, as $CaCO_3$, mg/L.	Electrometric endpoint or phenolphthalein endpoint.	.....	2310 B(4a)	2310 B(4a)	2310 B(4a)–97 ...	D1067–92, 02	I–1020–85 [2]

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
2. Alkalinity, as $CaCO_3$, mg/L.	Electrometric or Colorimetric titration to pH 4.5, manual, or	.....	2320 B	2320 B	2320 B–97	D1067–92, 02	973.43 [3], I–1030–85 [2]
	automatic	310.2 (Rev. 1974) [1].	.....	.....	.....	.....	I–2030–85 [2]
3. Aluminum—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 D	.....	3111 D–99	.....	I–3051–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99.		
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–9750
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	Direct Current Plasma (DCP) [36].	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Colorimetric (Eriochrome cyanine R).	.....	3500–Al D	3500–Al B	3500–Al B–01.		
4. Ammonia (as N), mg/L	Manual, distillation (at pH 9.5) [6] followed by:	350.1, Rev. 2.0 (1993).	4500–NH B_3	4500–NH_3 B	4500–NH_3 B–97	.....	973.49 [3]
	Nesslerization	.....	4500–NH_3 C (18th only).	.....	.....	D1426–98, 03 (A).	973.49 [3], I–3520–85 [2]
	Titration	.....	4500–NH_3 C (19th) and 4500–NH_3 E (18th).	4500–NH_3 C	4500–NH_3 C–97.		
	Electrode	.....	4500–NH_3 D or E (19th) and 4500–NH_3 F or G (18th).	4500–NH_3 D or E.	4500–NH_3 D or E–97.	D1426–98, 03 (B).	

	Automated phenate, or.	350.1 [60], Rev. 2.0 (1993).	4500–NH_3 G (19th) and 4500–NH_3 H (18th).	4500–NH_3 G ...	4500–NH_3 G–97	.....	I–4523–85 [2]
	Automated electrode	.....	.....	.....	.....	.....	See footnote 7
	Ion Chromatography	.....	.....	.....	.....	D6919–03.	
5. Antimony—Total, [4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 B	.....	3111 B–99.		
	AA furnace	.....	3113 B	.....	3113 B–99.		
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
6. Arsenic—Total, [4] mg/L	Digestion [4] followed by.	206.5 (Issued 1978) [1].					
	AA gaseous hydride	.....	3114 B 4.d	.....	3114 B 4.d–97 ...	D2972–97, 03 (B).	I–3062–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D2972–97, 03 (C).	I–4063–98 [49]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	Colorimetric (SDDC)	.....	3500–As C	3500–As B	3500–As B–97 ...	D2972–97, 03 (A).	I–3060–85
7. Barium—Total, [4] mg/L ..	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 D	.....	3111 D–99	.....	I–3084–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D4382–95, 02.	
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP [36]	.....	.....	.....	.....	.....	See footnote [34]
8. Beryllium—Total, [4] mg/L	Digestion [4] followed by:						

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
	AA direct aspiration	.....	3111 D	.....	3111 D–99	D3645–93 (88), 03 (A).	I–3095–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D3645–93 (88), 03 (B).	
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP, or	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Colorimetric (aluminon).	.....	3500–Be D.				
9. Biochemical oxygen demand (BOD_5), mg/L.	Dissolved Oxygen Depletion.	.....	5210 B	5210 B	5210 B–01	.....	973.44,[3] p. 17.[9], I–1578–78 [8]
10. Boron—Total,[37] mg/L	Colorimetric (curcumin).	.....	4500–B B	4500–B B	4500–B B–00	.....	I–3112–85 [2]
	ICP/AES, or	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B 99	.....	I–4471–97 [50]
	DCP	.....	.....	.....	.....	D4190–94, 99	See footnote 34
11. Bromide, mg/L	Titrimetric	.....	.....	.....	.....	D1246–95, 99 (C).	p. S44.[10]
	.....	.....	.....	.....	.....	.....	I–1125–85 [2]
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2 [54]
12. Cadmium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 B or C	.....	3111 B or C–99	D3557–95, 02 (A or B).	974.27,[3] p. 37.[9], I–3135–85 [2] or I–3136–85 [2]

	AA furnace	.....	3113 B	.....	3113 B–99	D3557–95, 02 (D).	I–4138–89[51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES[36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–1472–85[2] or I–4471–97[50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14[3]
	DCP[36]	.....	.....	.....	.....	D4190–94, 99	See footnote[34]
	Voltametry[11], or	.....	.....	.....	.....	D3557–95, 02 (C).	
	Colorimetric (Dithizone).	.....	3500–Cd D.				
13. Calcium—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration	.....	3111 B	.....	3111 B–99	D511–93, 03(B)	I–3152–85[2]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97[50]
	DCP, or	.....	.....	.....	.....	.....	See footnote[34]
	Titrimetric (EDTA)	.....	3500–Ca D	3500–Ca B	3500–Ca B–97 ...	D511–93, 03(A).	
	Ion Chromatography	.....	.....	.....	.....	D6919–03.	
14. Carbonaceous biochemical oxygen demand ($CBOD_5$), mg/L[12].	Dissolved Oxygen Depletion with nitrification inhibitor.	.....	5210 B	5210 B	5210 B–01.		
15. Chemical oxygen demand (COD), mg/L.	Titrimetric	410.3 (Rev. 1978)[1].	5220 C	5220 C	5220 C–97	D1252–95, 00 (A).	973.46[3], p. 17[9] I–3560–85[2]
	Spectrophotometric, manual or automatic.	410.4, Rev. 2.0 (1993).	5220 D	5220 D	5220 D–97	D1252–95, 00 (B).	See footnotes[13, 14]. I–3561–85[2]
16. Chloride, mg/L	Titrimetric: (silver nitrate) or.	.....	4500–Cl–B	4500–Cl–B	4500–Cl–B–97 ...	D512–89(99) (B).	I–1183–85[2]
	(Mercuric nitrate)	.....	4500–Cl–C	4500–Cl–C	4500–Cl–C–97 ...	D512–89 (99) (A).	973.51[3], I–1184–85[2]
	Colorimetric: manual or.	.....	.....	.....	.....	.....	I–1187–85[2]
	Automated (Ferricyanide).	.....	4500–Cl–E	4500–Cl–E	4500–Cl–E–97 ...	.....	I–2187–85[2]
	Potentiometric Titration.	.....	4500–Cl–D	4500–Cl–D	4500–Cl–D–97.		
	Ion Selective Electrode.	.....	.....	.....	.....	D512–89(99)(C).	

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV						D6508, Rev. 2 [54]
17. Chlorine—Total residual, mg/L; Titrimetric.	Amperometric direct, or.		4500–Cl D	4500–Cl D	4500–Cl D–00	D1253–86 (96), 03.	
	Amperometric direct (low level).		4500–Cl E	4500–Cl E	4500–Cl E–00.		
	Iodometric direct		4500–Cl B	4500–Cl B	4500–Cl B–00.		
	Back titration ether end–point [15] or.		4500–Cl C	4500–Cl C	4500–Cl C–00.		
	DPD–FAS		4500–Cl F	4500–Cl F	4500–Cl F–00.		
	Spectrophotometric, DPD or.		4500–Cl G	4500–Cl G	4500–Cl G–00.		
	Electrode						See footnote [16]
18. Chromium VI dissolved, mg/L.	0.45–micron Filtration followed by:						
	AA chelation–extraction or.		3111 C		3111 C–99		I–1232–85
	Ion Chromatography	218.6, Rev. 3.3 (1994).	3500–Cr E	3500–Cr C	3500–Cr C–01	D5257–97	993.23
	Colorimetric (Diphenyl–carbazide).		3500–Cr D	3500–Cr B	3500–Cr B–01	D1687–92, 02 (A).	I–1230–85
19. Chromium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration [36].		3111 B		3111 B–99	D1687–92, 02 (B).	974.27 [3], I–3236–85 [2]
	AA chelation–extraction.		3111 C		3111 C–99.		
	AA furnace		3113 B		3113 B–99	D1687–92, 02 (C).	I–3233–93 [46]
	STGFAA	200.9, Rev. 2.2 (1994).					

	ICP/AES[36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).				D5673–03	993.14[3]
	DCP,[36] or					D4190–94, 99	See footnote[34]
	Colorimetric (Diphenyl–carbazide).		3500–Cr D	3500–Cr B	3500–Cr B–01.		
20. Cobalt—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration		3111 B or C		3111 B or C–99	D3558–94, 03 (A or B).	p. 37[9], I–3239–85[2]
	AA furnace		3113 B		3113 B–99	D3558–94, 03 (C).	I–4243–89[51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99		I–4471–97[50]
	ICP/MS	200.8, Rev. 5.4 (1994).				D5673–03	993.14[3]
	DCP					D4190–94, 99	See footnote[34]
21. Color, platinum cobalt units or dominant wavelength, hue, luminance purity.	Colorimetric (ADMI), or.		2120 E	2120 E			See footnote[18]
	(Platinum cobalt), or		2120 B	2120 B	2120 B–01		I–1250–85[2]
	Spectrophotometric		2120 C	2120 C.			
22. Copper—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration[36].		3111 B or C		3111 B or C–99	D1688–95, 02 (A or B).	974.27[3] p. 37[9] I–3270–85[2] or I–3271–85[2]
	AA furnace		3113 B		3113 B–99	D1688–95, 02 (C).	I–4274–89[51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES[36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99		I–4471–97[50]
	ICP/MS	200.8, Rev. 5.4 (1994).				D5673–03	993.14[3]
	DCP[36] or					D4190–94, 99	See footnote[34]
	Colorimetric (Neocuproine) or.		3500–Cu D	3500–Cu B	3500–Cu B–99.		
	(Bicinchoninate)		3500–Cu E	3500–Cu C	3500–Cu C–99		See footnote[19]

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
23. Cyanide—Total, mg/L	Automated Distillation and Colorimetry, or.	.....	.....	.....	.....	.....	Kelada–01 [55]
	Manual distillation with $MgCl_2$ followed by:	335.4, Rev. 1.0 (1993) [57].	4500–CN–C	4500–CN–C	.....	D2036–98(A) ...	10–204–00–1–X [56]
	Titrimetric or	.....	4500–CN–D	4500–CN–D	4500–CN–D–99 ..	.....	p. 22 [9]
	Spectrophotometric, manual or.	.....	4500–CN–E	4500–CN–E	4500–CN–E–99 ..	D2036–98(A) ...	I–3300–85
	Automated [20] or	335.4, Rev. 1.0 (1993) [57].	.....	.....	.....	.....	10–204–00–1–X [56], I–4302–85 [2]
	Ion Selective Electrode.	.....	4500–CN–F	4500–CN–F	4500–CN–F–99 ..	D2036–98(A).	
24. Available Cyanide, mg/L.	Cyanide Amenable to Chlorination (CATC); Manual distillation with $MgCl_2$ followed by Titrimetric or Spectrophotometric.	.....	4500–CN–G	4500–CN–G	4500–CN–G–99	D2036–98(B).	
	Flow injection and ligand exchange, followed by amperometry [61].	.....	.....	.....	.....	D6888–04	OIA–1677 [44]
	Automated Distillation and Colorimetry.	.....	.....	.....	.....	.....	Kelada–01 [55]
25. Fluoride—Total, mg/L	Manual distillation[6] followed by:	.....	4500–F–B	4500–F–B	4500–F–B–97.		
	Electrode, manual or	.....	4500–F–B	4500–F–B	4500–F–C–97	D1179–93, 99 (B).	
	Automated	.....	.....	.....	.....	.....	I–4327–85 [2]
	Colorimetric, (SPADNS) or.	.....	4500–F–D	4500–F–D	4500–F–D–97	D1179–93, 99 (A).	

	Automated complexone.	.....	4500–F–E	4500–F–E	4500–F–E–97.		
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97,03 ...	993.30[3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2[54]
26. Gold—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration, or.	.....	3111 B	.....	3111 B–99.		
	AA furnace, or	231.2 (Rev. 1978)[1].					
	DCP	.....	.....	.....	.....	.....	See footnote[34]
27. Hardness—Total, as $CaCO_3$, mg/L.	Automated colorimetric,.	130.1 (Issued 1971)[1].					
	Titrimetric (EDTA) or	.....	2340 B or C	2340 B or C	2340 B or C–97	D1126–86(92), 02.	973.5 2B[3], I–1338–85[2]
	Ca plus Mg as their carbonates, by inductively coupled plasma or AA direct aspiration. (See Parameters 13 and 33)..						
28. Hydrogen ion (pH), pH units.	Electrometric measurement or.	.....	4500–H^+ B	4500–H^+ B	4500–H^+ B–00 ..	D1293–84 (90), 99 (A or B).	973.41.[3], I–1586–85[2]
	Automated electrode	150.2 (Dec. 1982)[1].	.....	.....	.....	.....	See footnote[21], I–2587–85[2]
29. Iridium—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration or.	.....	3111 B	.....	3111 B–99.		
	AA furnace	235.2 (Issued 1978)[1].					
30. Iron—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration[36].	.....	3111 B or C	.....	3111 B or C–99	D1068–96, 03 (A or B).	974.27[3], I–3381–85[2]
	AA furnace	.....	3113 B	.....	3113 B–99	D1068–96, 03 (C).	
	STGFAA	200.9, Rev. 2.2 (1994).					

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35,52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99		I–4471–97 [50]
	DCP [36] or					D4190–94, 99	See footnote [34]
	Colorimetric (Phenanthroline).		3500–Fe D	3500–Fe B	3500–Fe B–97	D1068–96, 03 (D).	See footnote [22]
31. Kjeldahl Nitrogen [5]—Total, (as N), mg/L.	Digestion and distillation followed by: [20]		4500–N_{org} B or C and 4500–NH_3 B.	4500–N_{org} B or C and 4500–NH_3 B.	4500–N_{org} B or C–97 and 4500–NH_3 B–97.	D3590–89, 02 (A).	
	Titration or		4500–NH_3 C (19th) and 4500–NH_3 E (18th).	4500–NH_3 C	4500–NH_3 C–97	D3590–89, 02 (A).	973.48 [3]
	Nesslerization or		4500–NH_3 C (18th Only).			D3590–89, 02 (A).	
	Electrode		4500–NH_3 F or G (18th) and 4500–NH_3 D or E (19th).	4500–NH_3 D or E.	4500–NH_3 D or E–97.		
	Automated phenate colorimetric.	351.1 (Rev. 1978) [1].					I–4551–78 [8]
	Semi-automated block digestor colorimetric.	351.2, Rev. 2.0 (1993).				D3590–89, 02 (B).	I–4515–91 [45]
	Manual or block digestor potentiometric.					D3590–89, 02 (A).	
	Block digester, followed by Auto distillation and Titration, or.						See footnote [39]
	Nesslerization, or						See footnote [40]
	Flow injection gas diffusion.						See footnote [41]
32. Lead—Total,[4] mg/L	Digestion [4] followed by:						

	AA direct aspiration [36].	.....	3111 B or C	.....	3111 B or C–99	D3559–96, 03 (A or B).	974.27 [3], I–3399–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D3559–96, 03 (D).	I–4403–89 [51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP [36]	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Voltametry [11] or	.....	.....	.....	.....	D3559–96, 03 (C).	
	Colorimetric (Dithizone).	.....	3500–Pb D	3500–Pb B	3500–Pb B–97.		
33. Magnesium—Total, [4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration	.....	3111 B	.....	3111 B–99	D511–93, 03(B)	974.27 [3], I–3447–85 [2]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	DCP or	.....	.....	.....	.....	.....	See footnote [34]
	Gravimetric	.....	3500–Mg D.				
	Ion Chromatography	.....	.....	.....	.....	D6919–03.	
34. Manganese—Total, [4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 B	.....	3111 B–99	D858–95, 02 (A or B).	974.27 [3], I–3454–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D858–95, 02 (C).	
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP36, or	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Colorimetric (Persulfate), or.	.....	3500—Mn D ...	3500–Mn B	3500–Mn B–99 ..	.....	920.203 [3]
	(Periodate)	.....	.....	.....	.....	.....	See footnote [23]
35. Mercury—Total [4], mg/L.	Cold vapor, manual or.	245.1, Rev. 3.0 (1994).	3112 B	.....	3112 B–99	D3223–97, 02	977.22 [3], I–3462–85 [2]
	Automated	245.2 (Issued 1974).					

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
	Cold vapor atomic fluorescence spectrometry (CVAFS).	245.7 Rev. 2.0 (2005) [59].					
	Purge and Trap CVAFS.	1631E [43].					
36. Molybdenum—Total [4], mg/L.	Digestion [4] followed by:						
	AA direct aspiration	.....	3111 D	.....	3111 D–99	.....	I–3490–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	.....	I–3492–96 [47]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
.....	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP	.....	.....	.....	.....	.....	See footnote [34]
37. Nickel—Total, [4] mg/L ..	Digestion [4] followed by:						
	AA direct aspiration [36].	.....	3111 B or C	.....	3111 B or C–99	D1886–90, 94 (98) (A or B).	I–3499–85 [2]
	AA furnace	.....	3113 B	.....	3113 B–99	D1886–90, 94 (98) (C).	I–4503–89 [51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP [36], or	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Colorimetric (heptoxime).	.....	3500–Ni D (17th Edition).				
38. Nitrate (as N), mg/L ...	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2 [54]

	Ion Selective Electrode.	.....	4500–NO_3^-–D ..	4500–NO_3^-–D ..	4500–NO_3^-–D–00.		
	Colorimetric (Brucine sulfate), or.	352.1 [1]	.....	.....	.....	.....	973.50 [3], 419D [1,7], p. 28 [9]
	Nitrate-nitrite N minus Nitrite N (See parameters 39 and 40)..						
39. Nitrate-nitrite (as N), mg/L.	Cadmium reduction, manual or.	.....	4500–NO_3^-–E ...	4500–NO_3^-–E ...	4500–NO3–E–00	D3867–99(B).	
	Automated, or	353.2, Rev. 2.0 (1993).	4500–NO_3^-–F	4500–NO_3^-–F	4500–NO_3^-–F–00	D3867–99(A) ...	I–4545–85 [2]
	Automated hydrazine	.....	4500–NO_3^-–H ...	4500–NO_3^-–H ...	4500–NO_3^-–H–00.		
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2 [54]
40. Nitrite (as N), mg/L	Spectrophotometric: Manual or.	.....	4500–NO_2^-–B ...	4500–NO_2^-–B ...	4500–NO_2^-–B–00	.....	See footnote [25]
	Automated (Diazotization).	.....	.....	.....	.....	.....	I–4540–85 [2]
	Automated (*bypass cadmium reduction).	353.2, Rev. 2.0 (1993).	4500–NO_3^-–F	4500–NO_3^-–F	4500–NO_3^-–F–00	D3867–99(A) ...	I–4545–85 [2]
	Manual (*bypass cadmium reduction).	.....	4500–NO_3^-–E ...	4500–NO_3^-–E ...	4500–NO_3^-–E–00	D3867–99(B).	
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev.2 [54]
41. Oil and grease—Total recoverable, mg/L.	Hexane extractable material (HEM): n–Hexane extraction and gravimetry.	1664A [42]	.....	5520 B [38]	5520 B–01 [38].		
	Silica gel treated HEM (SGT–HEM): Silica gel treatment and gravimetry..	1664A [42].					

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35,52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
42. Organic carbon—Total (TOC), mg/L.	Combustion or oxidation.	.....	5310 B, C, or D	5310 B, C, or D	5310 B, C, or D–00.	D2579–93 (A or B).	973.47,[3] p. 14 [24]
43. Organic nitrogen (as N), mg/L.	Total Kjeldahl N (Parameter 31) minus ammonia N (Parameter 4).						
44. Orthophosphate (as P), mg/L.	Ascorbic acid method:.						
	Automated, or	365.1, Rev. 2.0 (1993).	4500–P F	4500–P F	.....	.....	973.56 [3], I–4601–85 [2]
	Manual single reagent.	.....	4500–P E	4500–P E	.....	D515–88(A)	973.55 [3]
	Manual two reagent	365.3 (Issued 1978)[1].					
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2 [54]
45. Osmium—Total [4], mg/L.	Digestion [4] followed by:						
	AA direct aspiration, or.	.....	3111 D	.....	3111 D–99.		
	AA furnace	252.2 (Issued 1978) [1].					
46. Oxygen, dissolved, mg/L.	Winkler (Azide modification), or.	.....	4500–O C	4500–O C	4500–O C–01	D888–92, 03 (A).	973.4 5B [3], I–1575–78 [8]
	Electrode	.....	4500–O G	4500–O G	4500–O G–01	D888–92, 03 (B).	I–1576–78 [8]
47. Palladium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration, or.	.....	3111 B	.....	3111 B–99	.....	p. S27 [10]
	AA furnace	253.2 [1] (Issued 1978).	.....	.....	.....	.....	p. S28 [10]

	DCP						See footnote [34]
48. Phenols, mg/L	Manual distillation [26] Followed by:	420.1 [1] (Rev. 1978).					See footnote [27]
	Colorimetric (4AAP) manual, or.	420.1 [1] (Rev. 1978).					See footnote [27]
	Automated	420.4 Rev. 1.0 (1993).					
49. Phosphorus (elemental), mg/L.	Gas–liquid chromatography.						See footnote [28]
50. Phosphorus—Total, mg/L.	Persulfate digestion followed by: [20]		4500–P B.5	4500–P B.5			973.55 [3]
	Manual or	365.3 [1] (Issued 1978).	4500–P E	4500–P E		D515–88(A).	
	Automated ascorbic acid reduction.	365.1 Rev. 2.0 (1993).	4500–P F	4500–P F			973.56 [3], I–4600–85 [2]
	Semi–automated block digestor.	365.4 [1] (Issued 1974).				D515–88(B)	I–4610–91 [48]
51. Platinum—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration		3111 B		3111 B–99.		
	AA furnace	255.2 [1].					
	DCP						See footnote [34]
52. Potassium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration		3111 B		3111 B–99		973.53 [3], I–3630–85 [2]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	Flame photometric, or.		3500–K D	3500–K B	3500–K B–97.		
	Colorimetric						317 B [17]
	Ion Chromatography					D6919–03.	
53. Residue—Total, mg/L	Gravimetric, 103–105°.		2540 B	2540 B	2540 B–97		I–3750–85 [2]
54. Residue—filterable, mg/L.	Gravimetric, 180°		2540 C	2540 C	2540 C–97		I–1750–85 [2]
55. Residue—non–filterable (TSS), mg/L.	Gravimetric, 103–105 °C post washing of residue.		2540 D	2540 D	2540 D–97		I–3765–85 [2]
56. Residue—settleable, mg/L.	Volumetric, (Imhoff cone), or gravimetric.		2540 F	2540 F	2540 F–97.		
57. Residue—Volatile, mg/L.	Gravimetric, 550 °C	160.4 [1]					I–3753–85 [2]

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
58. Rhodium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration, or.		3111 B		3111 B–99.		
	AA furnace	265.2 [1].					
59. Ruthenium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration, or.		3111 B		3111 B–99.		
	AA furnace	267.2 [1].					
60. Selenium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA furnace		3113 B		3113 B–99	D3859–98, 03 (B).	I–4668–98 [49]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES [36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).				D5673–03	993.14 [3]
	AA gaseous hydride		3114 B		3114 B–97	D3859–98, 03 (A).	I–3667–85 [2]
61. Silica—Dissolved,[37] mg/L.	0.45 micron filtration followed by:						
	Colorimetric, Manual or.		4500–Si D	4500–SiO_2 C	4500–SiO_2C–97	D859–94, 00	I–1700–85 [2]
	Automated (Molybdosilicate), or.						I–2700–85 [2]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99		I–4471–97 [50]
62. Silver—Total,[4, 31] mg/L.	Digestion [4, 29] followed by:						
	AA direct aspiration		3111 B or C		3111 B or C–99		974.27 [3], p. 37 [9], I–3720–85 [2]

	AA furnace	.....	3113 B	.....	3113 B–99	.....	I–4724–89 [51]
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP	.....	.....	.....	.....	.....	See footnote [34]
63. Sodium—Total,[4] mg/L	Digestion[4] followed by:						
	AA direct aspiration	.....	3111 B	.....	3111 B–99	.....	973.54 [3], I–3735–85 [2]
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	DCP, or	.....	.....	.....	.....	.....	See footnote [34]
	Flame photometric	.....	3500–Na D	3500–Na B	3500–Na B–97.		
	Ion Chromatography	.....	.....	.....	.....	D 6919–03.	
64. Specific conductance, micromhos/cm at 25 °C.	Wheatstone bridge ..	120.1 [1] (Rev. 1982).	2510 B	2510 B	2510 B–97	D1125–95 (99) (A).	973.40 [3], I–2781–85 [2]
65. Sulfate (as SO_4), mg/L	Automated colorimetric.	375.2, Rev. 2.0 (1993).					
	Gravimetric	.....	4500–SO_4^{2-}C or D.	4500–SO_4^{2-}C or D.	.....	.....	925.54 [3]
	Turbidimetric	.....	.....	.....	.....	D516–90, 02 ...	426C [30]
	Ion Chromatography	300.0, Rev 2.1 (1993) and 300.1, Rev 1.0 (1997).	4110 B	4110 B	4110 B–00	D4327–97, 03	993.30 [3]
	CIE/UV	.....	.....	.....	.....	.....	D6508, Rev. 2 [54]
66. Sulfide (as S), mg/L ...	Titrimetric (iodine), or	.....	4500–S^{2-}F (19th) 4500–S^{2-}E (18th).	4500–S^{2-}F	4500–S^{2-}F–00 ...	.....	I–3840–85 [2]
	Colorimetric (methylene blue).	.....	4500–S^{2-}D	4500–S^{2-}D	4500–S^{2-}D–00.		
	Ion Selective Electrode.	.....	4500–S^{2-}G	4500–S^{2-}G	4500–S^{2-}G–00 ..	D4658–03.	
67. Sulfite (as SO_3), mg/L	Titrimetric (iodine-iodate).	.....	4500–SO_3^{2-}B ..	4500–SO_3^{2-}B ..	4500–SO_3^{2-}B–00.		
68. Surfactants, mg/L	Colorimetric (methylene blue).	.....	5540 C	5540 C	5540 C–00	D2330–88, 02.	
69. Temperature, °C	Thermometric	.....	2550 B	2550 B	2550 B–00	.....	See footnote [32]
70. Thallium—Total,[4] mg/L.	Digestion[4] followed by:						

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology [58]	Reference (method number or page)					
		EPA [35 52]	Standard methods (18th, 19th)	Standard methods (20th)	Standard methods online	ASTM	USGS/AOAC/ other
	AA direct aspiration	.....	3111 B	.....	3111 B–99.		
	AA furnace	279.2 [1] (Issued 1978).					
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99.		
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
71. Tin—Total,[4] mg/L	Digestion [4] followed by:						
	AA direct aspiration	.....	3111 B	.....	3111 B–99	.....	I–3850–78 [8]
	AA furnace, or	.....	3113 B	.....	3113 B–99.		
	STGFAA	200.9, Rev. 2.2 (1994).					
	ICP/AES	200.7, Rev. 4.4 (1994).					
72. Titanium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration	.....	3111 D	.....	3111 D–99.		
	AA furnace	283.2 [1] (Issued 1978).					
	DCP	.....	.....	.....	.....	.....	See footnote [34]
73. Turbidity, NTU [53]	Nephelometric	180.1, Rev. 2.0 (1993).	2130 B	2130 B	2130 B–01	D1889–94, 00	I–3860–85 [2]
74. Vanadium—Total,[4] mg/L.	Digestion [4] followed by:						
	AA direct aspiration	.....	3111 D	.....	3111 D–99.		
	AA furnace	.....	.....	.....	.....	D3373–93, 03.	
	ICP/AES	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99	.....	I–4471–97 [50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14 [3]
	DCP, or	.....	.....	.....	.....	D4190–94, 99	See footnote [34]
	Colorimetric (Gallic Acid).	.....	3500–V D	3500–V B	3500–V B–97.		

75. Zinc –Total[4], mg/L	Digestion[4] followed by:						
	AA direct aspiration[36].	.....	3111 B or C	.....	3111 B or C–99	D1691–95, 02 (A or B).	974.27[3], p. 37[9], I–3900–85[2]
	AA furnace	289.2[1] (Issued 1978).					
	ICP/AES[36]	200.7, Rev. 4.4 (1994).	3120 B	3120 B	3120 B–99[59]	.....	I–4471–97[50]
	ICP/MS	200.8, Rev. 5.4 (1994).	.....	.....	.....	D5673–03	993.14[3]
	DCP,[36] or	.....	.....	.....	.....	D4190–94, 99	See footnote[34]
	Colorimetric (Dithizone) or.	.....	3500–Zn E.				
	(Zincon)	.....	3500–Zn F	3500–Zn B	3500–Zn B–97 ...	.....	See footnote[33]

Table 1B Notes:

[1] "Methods for Chemical Analysis of Water and Wastes," Environmental Protection Agency, Environmental Monitoring Systems Laboratory–Cincinnati (EMSL–CI), EPA–600/4–79–020 (NTIS PB 84–128677), Revised March 1983 and 1979 where applicable.

[2] Fishman, M. J., *et al.* "Methods for Analysis of Inorganic Substances in Water and Fluvial Sediments," U.S. Department of the Interior, Techniques of Water-Resource Investigations of the U.S. Geological Survey, Denver, CO, Revised 1989, unless otherwise stated.

[3] "Official Methods of Analysis of the Association of Official Analytical Chemists," Methods Manual, Sixteenth Edition, 4th Revision, 1998.

[4] For the determination of total metals (which are equivalent to total recoverable metals) the sample is not filtered before processing. A digestion procedure is required to solubilize analytes in suspended material and to break down organic-metal complexes (to convert the analyte to a detectable form for colorimetric analysis). For non–platform graphite furnace atomic absorption determinations a digestion using nitric acid (as specified in Section 4.1.3 of Methods for the Chemical Analysis of Water and Wastes) is required prior to analysis. The procedure used should subject the sample to gentle, acid refluxing and at no time should the sample be taken to dryness. For direct aspiration flame atomic absorption determinations (FLAA) a combination acid (nitric and hydrochloric acids) digestion is preferred prior to analysis. The approved total recoverable digestion is described as Method 200.2 in Supplement I of "Methods for the Determination of Metals in Environmental Samples" EPA/600R–94/111, May, 1994, and is reproduced in EPA Methods 200.7, 200.8, and 200.9 from the same Supplement. However, when using the gaseous hydride technique or for the determination of certain elements such as antimony, arsenic, selenium, silver, and tin by non–EPA graphite furnace atomic absorption methods, mercury by cold vapor atomic absorption, the noble metals and titanium by FLAA, a specific or modified sample digestion procedure may be required and in all cases the referenced method write–up should be consulted for specific instruction and/or cautions. For analyses using inductively coupled plasma-atomic emission spectrometry (ICP–AES), the direct current plasma (DCP) technique or the EPA spectrochemical techniques (platform furnace AA, ICP–AES, and ICP–MS) use EPA Method 200.2 or an approved alternate procedure (e.g., CEM microwave digestion, which may be used with certain analytes as indicated in Table IB); the total recoverable digestion procedures in EPA Methods 200.7, 200.8, and 200.9 may be used for those respective methods. Regardless of the digestion procedure, the results of the analysis after digestion procedure are reported as "total" metals.

[5] Copper sulfate may be used in place of mercuric sulfate.

[6] Manual distillation is not required if comparability data on representative effluent samples are on file to show that this preliminary distillation step is not necessary: however, manual distillation will be required to resolve any controversies.

[7] Ammonia, Automated Electrode Method, Industrial Method Number 379–75 WE, dated February 19, 1976, Bran & Luebbe (Technicon) Auto Analyzer II, Bran & Luebbe Analyzing Technologies, Inc., Elmsford, NY 10523.

[8] The approved method is that cited in "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments", USGS TWRI, Book 5, Chapter A1 (1979).

[9] American National Standard on Photographic Processing Effluents, April 2, 1975. Available from ANSI, 25 West 43rd st., New York, NY 10036.

[10] "Selected Analytical Methods Approved and Cited by the United States Environmental Protection Agency," Supplement to the Fifteenth Edition of *Standard Methods for the Examination of Water and Wastewater* (1981).

[11] The use of normal and differential pulse voltage ramps to increase sensitivity and resolution is acceptable.

[12] Carbonaceous biochemical oxygen demand ($CBOD_5$) must not be confused with the traditional BOD_5 test method which measures "total BOD." The addition of the nitrification inhibitor is not a procedural option, but must be included to report the $CBOD_5$ parameter. A discharger whose permit requires reporting the traditional BOD_5 may not use a nitrification inhibitor in the procedure for reporting the results. Only when a discharger's permit specifically states $CBOD_5$ is required can the permittee report data using a nitrification inhibitor.

[13] OIC Chemical Oxygen Demand Method, Oceanography International Corporation, 1978, 512 West Loop, P.O. Box 2980, College Station, TX 77840.

[14] Chemical Oxygen Demand, Method 8000, Hach Handbook of Water Analysis, 1979, Hach Chemical Company, P.O. Box 389, Loveland, CO 80537.

[15] The back titration method will be used to resolve controversy.

[16] Orion Research Instruction Manual, Residual Chlorine Electrode Model 97–70, 1977, Orion Research Incorporated, 840 Memorial Drive, Cambridge, MA 02138. The calibration graph for the Orion residual chlorine method must be derived using a reagent blank and three standard solutions, containing 0.2, 1.0, and 5.0 mL 0.00281 N potassium iodate/100 mL solution, respectively.

[17] The approved method is that cited in *Standard Methods for the Examination of Water and Wastewater,* 14th Edition, 1976.

[18] National Council of the Paper Industry for Air and Stream Improvement, Inc., Technical Bulletin 253, December 1971.

[19] Copper, Biocinchoinate Method, Method 8506, Hach Handbook of Water Analysis, 1979, Hach Chemical Company, P.O. Box 389, Loveland, CO 80537.

[20] When using a method with block digestion, this treatment is not required.

[21] Hydrogen ion (pH) Automated Electrode Method, Industrial Method Number 378–75WA, October 1976, Bran & Luebbe (Technicon) Autoanalyzer II. Bran & Luebbe Analyzing Technologies, Inc., Elmsford, NY 10523.

[22] Iron, 1,10-Phenanthroline Method, Method 8008, 1980, Hach Chemical Company, P.O. Box 389, Loveland, CO 80537.

[23] Manganese, Periodate Oxidation Method, Method 8034, Hach Handbook of Wastewater Analysis, 1979, pages 2–113 and 2–117, Hach Chemical Company, Loveland, CO 80537.

[24] Wershaw, R. L.,*et al.*, "Methods for Analysis of Organic Substances in Water," Techniques of Water-Resources Investigation of the U.S. Geological Survey, Book 5, Chapter A3, (1972 Revised 1987) p. 14.

[25] Nitrogen, Nitrite, Method 8507, Hach Chemical Company, P.O. Box 389, Loveland, CO 80537.

[26] Just prior to distillation, adjust the sulfuric-acid-preserved sample to pH 4 with 1 + 9 NaOH.

[27] The approved method is cited in *Standard Methods for the Examination of Water and Wastewater,* 14th Edition. The colorimetric reaction is conducted at a pH of 10.0±0.2. The approved methods are given on pp 576–81 of the 14th Edition: Method 510A for distillation, Method 510B for the manual colorimetric procedure, or Method 510C for the manual spectrometric procedure.

[28] R.F. Addison and R. G. Ackman, "Direct Determination of Elemental Phosphorus by Gas–Liquid Chromatography," *Journal of Chromatography,* Vol. 47, No.3, pp. 421–426, 1970.

[29] Approved methods for the analysis of silver in industrial wastewaters at concentrations of 1 mg/L and above are inadequate where silver exists as an inorganic halide. Silver halides such as the bromide and chloride are relatively insoluble in reagents such as nitric acid but are readily soluble in an aqueous buffer of sodium thiosulfate and sodium hydroxide to pH of 12. Therefore, for levels of silver above 1 mg/L, 20 mL of sample should be diluted to 100 mL by adding 40 mL each of 2 M $Na_2S_2O_3$ and NaOH. Standards should be prepared in the same manner. For levels of silver below 1 mg/L the approved method is satisfactory.

[30] The approved method is that cited in *Standard Methods for the Examination of Water and Wastewater,* 15th Edition.

[31] For samples known or suspected to contain high levels of silver (e.g., in excess of 4 mg/L), cyanogen iodide should be used to keep the silver in solution for analysis. Prepare a cyanogen iodide solution by adding 4.0 mL of concentrated NH_4OH, 6.5 g of KCN, and 5.0 mL of a 1.0 N solution of I_2 to 50 mL of reagent water in a volumetric flask and dilute to 100.0 mL. After digestion of the sample, adjust the pH of the digestate to >7 to prevent the formation of HCN under acidic conditions. Add 1 mL of the cyanogen iodide solution to the sample digestate and adjust the volume to 100 mL with reagent water (NOT acid). If cyanogen iodide is added to sample digestates, then silver standards must be prepared that contain cyanogen iodide as well. Prepare working standards by diluting a small volume of a silver stock solution with water and adjusting the pH>7 with NH_4OH. Add 1 mL of the cyanogen iodide solution and let stand 1 hour. Transfer to a 100-mL volumetric flask and dilute to volume with water.

[32] Stevens, H.H., Ficke, J. F., and Smoot, G. F., "Water Temperature—Influential Factors, Field Measurement and Data Presentation," Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 1, Chapter D1, 1975.

[33] Zinc, Zincon Method, Method 8009, Hach Handbook of Water Analysis, 1979, pages 2–231 and 2–333, Hach Chemical Company, Loveland, CO 80537.

[34] "Direct Current Plasma (DCP) Optical Emission Spectrometric Method for Trace Elemental Analysis of Water and Wastes, Method AES0029," 1986—Revised 1991, Thermo Jarrell Ash Corporation, 27 Forge Parkway, Franklin, MA 02038

[35] Precision and recovery statements for the atomic absorption direct aspiration and graphite furnace methods, and for the spectrophotometric SDDC method for arsenic are provided in Appendix D of this part titled, "Precision and Recovery Statements for Methods for Measuring Metals."

[36] Microwave-assisted digestion may be employed for this metal, when analyzed by this methodology. "Closed Vessel Microwave Digestion of Wastewater Samples for Determination of Metals", CEM Corporation, P.O. Box 200, Matthews, NC 28106–0200, April 16, 1992. Available from the CEM Corporation.

[37] When determining boron and silica, only plastic, PTFE, or quartz laboratory ware may be used from start until completion of analysis.

[38] Only use n-hexane extraction solvent when determining Oil and Grease parameters—Hexane Extractable Material (HEM), or Silica Gel Treated HEM (analogous to EPA Method 1664A). Use of other extraction solvents (e.g., those in the 18th and 19th editions) is prohibited.

[39] Nitrogen, Total Kjeldahl, Method PAI-DK01 (Block Digestion, Steam Distillation, Titrimetric Detection), revised 12/22/94, OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX 77842.

[40] Nitrogen, Total Kjeldahl, Method PAI–DK02 (Block Digestion, Steam Distillation, Colorimetric Detection), revised 12/22/94, OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX 77842.

[41] Nitrogen, Total Kjeldahl, Method PAI–DK03 (Block Digestion, Automated FIA Gas Diffusion), revised 12/22/94, OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX 77842.

[42] Method 1664, Revision A "*n*-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated *n*-Hexane Extractable Material (SGT-HEM; Nonpolar Material) by Extraction and Gravimetry" EPA–821–R–98–002, February 1999. Available at NTIS, PB–121949, U.S. Department of Commerce, 5285 Port Royal, Springfield, VA 22161.

[43] USEPA. 2001. Method 1631, Revision E, "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry" September 2002, Office of Water, U.S. Environmental Protection Agency (EPA–821–R–02–024). The application of clean techniques described in EPA's draft Method 1669: *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels* (EPA–821–R–96–011) are recommended to preclude contamination at low-level, trace metal determinations.

[44] Available Cyanide, Method OIA–1677, "Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry," ALPKEM, A Division of OI Analytical, P.O. Box 9010, College Station, TX 77842–9010.

[45] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Ammonia Plus Organic Nitrogen by a Kjeldahl Digestion Method," Open File Report (OFR) 00–170.

[46] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Chromium in Water by Graphite Furnace Atomic Absorption Spectrophotometry," Open File Report (OFR) 93–449.

[47] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Molybdenum by Graphite Furnace Atomic Absorption Spectrophotometry," Open File Report (OFR) 97–198.

[48] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Total Phosphorus by Kjeldahl Digestion Method and an Automated Colorimetric Finish That Includes Dialysis" Open File Report (OFR) 92–146.

[49] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Arsenic and Selenium in Water and Sediment by Graphite Furnace-Atomic Absorption Spectrometry" Open File Report (OFR) 98–639.

[50] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Elements in Whole-water Digests Using Inductively Coupled Plasma-Optical Emission Spectrometry and Inductively Coupled Plasma-Mass Spectrometry," Open File Report (OFR) 98-165.

[51] "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediment," Open File Report (OFR) 93–125.

[52] All EPA methods, excluding EPA Method 300.1, are published in "Methods for the Determination of Metals in Environmental Samples," Supplement I, National Exposure Risk Laboratory-Cincinnati (NERL–CI), EPA/600/R–94/111, May 1994; and "Methods for the Determination of Inorganic Substances in Environmental Samples," NERL–CI, EPA/600/R–93/100, August, 1993. EPA Method 300.1 is available from *http://www.epa.gov/safewater/methods/pdfs/met300.pdf.*

[53] Styrene divinyl benzene beads (e.g., AMCO–AEPA–1 or equivalent) and stabilized formazin (e.g., Hach StablCal™ or equivalent) are acceptable substitutes for formazin.

[54] Method D6508, Rev. 2, "Test Method for Determination of Dissolved Inorganic Anions in Aqueous Matrices Using Capillary Ion Electrophoresis and Chromate Electrolyte," available from Waters Corp, 34 Maple St., Milford, MA, 01757, Telephone: 508/482–2131, Fax: 508/482–3625.

[55] Kelada-01, "Kelada Automated Test Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate," EPA 821–B–01–009, Revision 1.2, August 2001, National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161 [Order Number PB 2001–108275]. The toll free telephone number is: 800–553–6847. Note: A 450–W UV lamp may be used in this method instead of the 550–W lamp specified if it provides performance within the quality control (QC) acceptance criteria of the method in a given instrument. Similarly, modified flow cell configurations and flow conditions may be used in the method, provided that the QC acceptance criteria are met.

[56] QuikChem Method 10–204–00–1–X, "Digestion and Distillation of Total Cyanide in Drinking and Wastewaters using MICRO DIST and Determination of Cyanide by Flow Injection Analysis" is available from Lachat Instruments 6645 W. Mill Road, Milwaukee, WI 53218, Telephone: 414–358–4200.

[57] When using sulfide removal test procedures described in Method 335.4, reconstitute particulate that is filtered with the sample prior to distillation.

[58] Unless otherwise stated, if the language of this table specifies a sample digestion and/or distillation "followed by" analysis with a method, approved digestion and/or distillation are required prior to analysis.

[59] Method 245.7, Rev. 2.0, "Mercury in Water by Cold Vapor Atomic Fluorescence Spectrometry," February 2005, EPA–821–R–05–001, available from the U.S. EPA Sample Control Center (operated by CSC), 6101 Stevenson Avenue, Alexandria, VA 22304, Telephone: 703–461–2100, Fax: 703–461–8056.

[60] The use of EDTA may decrease method sensitivity in some samples. Analysts may omit EDTA provided that all method specified quality control acceptance criteria are met.

[61] Samples analyzed for available cyanide using Methods OIA–1677 or D6888–04 that contain particulate matter may be filtered only after the ligand exchange reagents have been added to the samples, because the ligand exchange process converts complexes containing available cyanide to free cyanide, which is not removed by filtration. Analysts are further cautioned to limit the time between the addition of the ligand exchange reagents and sample analysis to no more than 30 minutes to preclude settling of materials in samples.

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS

Parameter[1]	EPA method number[2,7]			Other approved methods			
	GC	GC/MS	HPLC	Standard Methods [Edition(s)]	Standard Methods Online	ASTM	Other
1. Acenaphthene	610	625, 1625B	610	6440 B [18th, 19th, 20th].		D4657–92 (99)	See footnote[9], p. 27
2. Acenaphthylene	610	625, 1625B	610	6410 B, 6440 B, [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
3. Acrolein	603	624[4], 1624B.					
4. Acrylonitrile	603	624[4], 1624B.					
5. Anthracene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
6. Benzene	602	624, 1624B		6200 B [20th] and 6210 B [18th,19th], 6200 C [20th] and 6220 B [18th,19th].	6200 B and C–97.		
7. Benzidine		625[5], 1625B	605				See footnote[3], p.1
8. Benzo(a)anthracene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
9. Benzo(a)pyrene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
10. Benzo(b)fluoranthene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
11. Benzo(g,h,i) perylene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
12. Benzo(k) fluoranthene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote[9], p. 27
13. Benzyl chloride							See footnote[3], p. 130: See footnote[6], p. S102
14. Benzyl butyl phthalate	606	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote[9], p. 27

15. Bis(2-chloroethoxy) methane.	611	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
16. Bis(2-chloroethyl) ether.	611	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
17. Bis(2-ethylhexyl) phthalate.	606	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
18. Bromodichloro-methane.	601	624, 1624B	.....	6200 C [20th] and 6230 B [18th, 19th], 6200 B [20th] and 6210 B [18th, 19th].	6200 B and C–97.		
19. Bromoform	601	624, 1624B	.....	6200 C [20th] and 6230 B [18th, 19th], 6200 B [20th] and 6210 B [18th, 19th].	6200 B and C–97.		
20. Bromomethane	601	624, 1624B	.....	6200 C [20th] and 6230 B [18th, 19th], 6200 B [20th] and 6210 B [18th, 19th].	6200 B and C–97.		
21. 4-Bromophenyl phenyl ether.	611	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
22. Carbon tetrachloride	601	624, 1624B	.....	6200 C [20th] and 6230 B [18th, 19th].	6200 C–97	.....	See footnote [3], p. 130
23. 4-Chloro-3-methyl phenol.	604	625, 1625B	.....	6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.	.....	See footnote [9], p. 27
24. Chlorobenzene	601, 602	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6220 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97	.....	See footnote [3], p. 130
25. Chloroethane	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter [1]	EPA method number [2, 7]			Other approved methods			
	GC	GC/MS	HPLC	Standard Methods [Edition(s)]	Standard Methods Online	ASTM	Other
26. 2-Chloroethylvinyl ether.	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
27. Chloroform	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97	.....	See footnote [3], p. 130
28. Chloromethane	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th] 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
29. 2-Chloronaph-thalene	612	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
30. 2-Chlorophenol	604	625, 1625B	.....	6410 B, 6420 B [18th, 19th, 20th].	6410 B(00, 6420 B–00.	.....	See footnote [9], p. 27
31. 4-Chlorophenyl phenyl ether.	611	625, 1625B	.....	6410 B [18th, 19th, 20th].	6410 B–00	.....	See footnote [9], p. 27
32. Chrysene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
33. Dibenzo(a,h)an-thracene.	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
34. Dibromochloro-meth-ane.	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th] 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
35. 1,2-Dichloro-benzene	601, 602	624, 1625B	.....	6200 C [20th] and 6220 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 C–97	.....	See footnote [9], p. 27

36. 1,3-Dichloro-benzene	601, 602	624, 1625B	.....	6200 C [20th] and 6220 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 C–97	.....	See footnote [9], p. 27
37. 1,4-Dichloro-benzene	601, 602	624, 1625B	.....	6200 C [20th] and 6220 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 C–97	.....	See footnote [9], p. 27
38. 3,3-Dichloro-benzidine.	.....	625, 1625B	605	6410 B [18th, 19th, 20th].	6410 B–00.		
39. Dichlorodifluoro-methane.	601	.....	.....	6200 C [20th] and 6230 B [18th, 19th].	6200 C–97.		
40. 1,1-Dichloroethane	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
41. 1,2-Dichloroethane	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
42. 1,1-Dichloroethene	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
43. trans-1,2-Dichloro-ethene.	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
44. 2,4-Dichlorophenol	604	625, 1625B	.....	6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.	.....	See footnote [9], p. 27
45. 1,2-Dichloro-propane	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter [1]	EPA method number [2, 7]			Other approved methods			
	GC	GC/MS	HPLC	Standard Methods [Edition(s)]	Standard Methods Online	ASTM	Other
46. cis-1,3-Dichloropropene.	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
47. trans-1,3-Dichloropropene.	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
48. Diethyl phthalate	606	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
49. 2,4-Dimethylphenol	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27
50. Dimethyl phthalate	606	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
51. Di-n-butyl phthalate	606	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
52. Di-n-octyl phthalate	606	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
53. 2,3-Dinitrophenol	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		
54. 2,4-Dinitrotoluene	609	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
55. 2,6-Dinitrotoluene	609	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
56. Epichlorohydrin							See footnote [3], p. 130; See footnote [6], p. S102
57. Ethylbenzene	602	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6220 B [18th, 19th].	6200 B and C–97		
58. Fluoranthene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27

59. Fluorene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
60. 1,2,3,4,6,7,8-Heptachlorodibenzofuran.		1613B [10].					
61. 1,2,3,4,7,8,9-Heptachlorodibenzofuran.		1613B [10].					
62. 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin.		1613B [10].					
63. Hexachlorobenzene	612	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
64. Hexachloro-butadiene	612	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
65. Hexachlorocyclo-pentadiene.	612	625 [5], 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
66. 1,2,3,4,7,8-Hexachlorodibenzofuran.		1613B [10].					
67. 1,2,3,6,7,8-Hexachlorodibenzofuran.		1613B [10].					
68. 1,2,3,7,8,9-Hexachlorodibenzofuran.		1613B [10].					
69. 2,3,4,6,7,8-Hexachlorodibenzofuran.		1613B [10].					
70. 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin.		1613B [10].					
71. 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin.		1613B [10].					
72. 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin 1613B [10].		1613B [10].					
73. Hexachloroethane	612	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
74. Ideno(1,2,3-cd) pyrene.	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
75. Isophorone	609	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter [1]	EPA method number [2, 7]			Other approved methods			
	GC	GC/MS	HPLC	Standard Methods [Edition(s)]	Standard Methods Online	ASTM	Other
76. Methylene chloride	601	624, 1624B		6200 C [20th] and 6230 B [18th, 19th].	6200 C–97		See footnote [3], p. 130
77. 2-Methyl-4,6-dinitrophenol.	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27
78. Naphthalene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
79. Nitrobenzene	609	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
80. 2-Nitrophenol	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27
81. 4-Nitrophenol	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27
82. N-Nitrosodimethylamine.	607	6255, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
83. N-Nitrosodi-n-propylamine.	607	6255, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
84. N-Nitrosodiphenylamine.	607	6255, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [9], p. 27
85. Octachlorodibenzofuran.		1613B [10*].					
86. Octachlorodibenzo-p-dioxin.		1613B [10].					
87. 2,2'-Oxybis(2-chloropropane) [also known as bis(2-chloroisopropyl) ether].	611	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00.		
88. PCB–1016	608	625		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 43; See footnote [8]
89. PCB–1221	608	625		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 43; See footnote [8]
90. PCB–1232	608	625		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 43; See footnote [8]

91. PCB–1242	608	625		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 43; See footnote [8]
92. PCB–1248	608	625.					
93. PCB–1254	608	625		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 43; See footnote [8]
94. PCB–1260	608	625		6410 B, 6630 B [18th, 19th, 20th].	6410 B–00		See footnote 3, p. 43; See footnote 8
95. 1,2,3,7,8-Pentachlorodibenzofuran .		1613B[10].					
96. 2,3,4,7,8-Pentachlorodibenzofuran .		1613B[10].					
97. 1,2,3,7,8,-Pentachlorodibenzo-*p*-dioxin.		1613B[10].					
98. Pentachlorophenol	604	625, 1625B		6410 B, 6630 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 140; See footnote [9], p. 27
99. Phenanthrene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
100. Phenol	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27
101. Pyrene	610	625, 1625B	610	6410 B, 6440 B [18th, 19th, 20th].	6410 B–00	D4657–92 (99)	See footnote [9], p. 27
102. 2,3,7,8-Tetrachlorodibenzofuran.		1613B10.					
103. 2,3,7,8-Tetrachlorodibenzo-p-dioxin.		613, 625 [5a], 1613B [10].					
104. 1,1,2,2-Tetra-chloro ethane .	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97		See footnote [3], p. 130
105. Tetrachloroethene	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97		See footnote [3], p. 130

TABLE IC—LIST OF APPROVED TEST PROCEDURES FOR NON-PESTICIDE ORGANIC COMPOUNDS—Continued

Parameter [1]	EPA method number [2,7]			Other approved methods			
	GC	GC/MS	HPLC	Standard Methods [Edition(s)]	Standard Methods Online	ASTM	Other
106. Toluene	602	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6220 B [18th, 19th].	6200 B and C–97.		
107. 1,2,4-Trichloro-benzene.	612	625, 1625B		6410 B [18th, 19th, 20th].	6410 B–00		See footnote [3], p. 130; See footnote [9], p. 27
108. 1,1,1-Trichloro-ethane.	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
109. 1,1,2-Trichloro-ethane.	601	624, 1624B	6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th]	6200 B and C–97		See footnote [3], p. 130.	
110. Trichloroethene	601	624, 1624B		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
111. Trichlorofluoro-methane.	601	624		6200 B [20th] and 6210 B [18th, 19th], 6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		
112. 2,4,6-Trichlorophenol.	604	625, 1625B		6410 B, 6420 B [18th, 19th, 20th].	6410 B–00, 6420 B–00.		See footnote [9], p. 27

113. Vinyl chloride	601	624, 1624B	.....	6200 B [20th] and 6210 B [18th, 19th], ≤6200 C [20th] and 6230 B [18th, 19th].	6200 B and C–97.		

[1] All parameters are expressed in micrograms per liter (µg/L) except for Method 1613B in which the parameters are expressed in picograms per liter (pg/L).

[2] The full text of Methods 601–613, 624, 625, 1624B, and 1625B, are given at Appendix A, "Test Procedures for Analysis of Organic Pollutants," of this Part 136. The full text of Method 1613B is incorporated by reference into this Part 136 and is available from the National Technical Information Services as stock number PB95–104774. The standardized test procedure to be used to determine the method detection limit (MDL) for these test procedures is given at Appendix B, "Definition and Procedure for the Determination of the Method Detection Limit," of this Part 136.

[3] "Methods for Benzidine: Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater," U.S. Environmental Protection Agency, September, 1978.

[4] Method 624 may be extended to screen samples for Acrolein and Acrylonitrile. However, when they are known to be present, the preferred method for these two compounds is Method 603 or Method 1624B.

[5] Method 625 may be extended to include benzidine, hexachlorocyclopentadiene, N-nitrosodimethylamine, and N-nitrosodiphenylamine. However, when they are known to be present, Methods 605, 607, and 612, or Method 1625B, are preferred methods for these compounds.

[5a] 625, screening only.

[6] "Selected Analytical Methods Approved and Cited by the United States Environmental Protection Agency," Supplement to the *Fifteenth Edition of Standard Methods for the Examination of Water and Wastewater* (1981).

[7] Each analyst must make an initial, one-time demonstration of their ability to generate acceptable precision and accuracy with Methods 601–603, 624, 625, 1624B, and 1625B (See Appendix A of this Part 136) in accordance with procedures each in Section 8.2 of each of these methods. Additionally, each laboratory, on an on-going basis must spike and analyze 10% (5% for methods 624 and 625 and 100% for methods 1624B and 1625B) of all samples to monitor and evaluate laboratory data quality in accordance with Sections 8.3 and 8.4 of these methods. When the recovery of any parameter falls outside the warning limits, the analytical results for that parameter in the unspiked sample are suspect. The results should be reported, but cannot be used to demonstrate regulatory compliance. These quality control requirements also apply to the Standard Methods, ASTM Methods, and other methods cited.

[8] "Organochlorine Pesticides and PCBs in Wastewater Using Empore™ Disk" 3M Corporation Revised 10/28/94.

[9] USGS Method 0–3116–87 from "Methods of Analysis by U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediments," U.S. Geological Survey, Open File Report 93–125.

[10] Analysts may use Fluid Management Systems, Inc. PowerPrep system in place of manual cleanup provided that the analysis meet the requirements of Method 1613B (as specified in Section 9 of the method) and permitting authorities.

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES [1]

Parameter	Method	EPA [2,7]	Standard Methods 18th, 19th, 20th Ed.	Standard Methods Online	ASTM	Other
1. Aldrin	GC	608	6630 B & C	.....	D3086–90, ... D5812-96 (2002) ..	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
2. Ametryn	GC		.....	.....	.....	See footnote [3], p. 83; See footnote [6], p S68
3. Aminocarb	TLC		.....	.....	.....	See footnote [3], p. 94; See footnote [6], p. S16
4. Atraton	GC		.....	.....	.....	See footnote [3], p. 83; See footnote [6], p. S68

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES [1]—Continued

Parameter	Method	EPA [2,7]	Standard Methods 18th, 19th, 20th Ed.	Standard Methods Online	ASTM	Other
5. Atrazine	GC					See footnote [3], p. 83; See footnote [6], p. S68; See footnote [9]
6. Azinphos methyl	GC					See footnote [3], p. 25; See footnote [6], p. S51
7. Barban	TLC					See footnote [3], p. 104; See footnote [6], p. S64
8. α–BHC	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [8]
	GC/MS	625 [5]	6410 B	6410 B–00.		
9. β–BHC	GC	608	6630 C		D3086–90, D5812–96(02)	See footnote [8]
	GC/MS	625 [5]	6410 B	6410 B–00.		
10. δ–BHC	GC	608	6630 C		D3086–90, D5812–96(02)	See footnote [8]
	GC/MS	625 [5]	6410 B	6410 B–00.		
11. γ-BHC (Lindane)	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
12. Captan	GC		6630 B		D3086–90, D5812–96(02)	See footnote [3], p. 7
13. Carbaryl	TLC					See footnote [3], p. 94, See footnote [6], p. S60
14. Carbo-phenothion	GC					See footnote [4], p. 27; See footnote [6], p. S73
15. Chlordane	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
16. Chloro-propham	TLC					See footnote [3], p. 104; See footnote [6], p. S64.
17. 2,4-D	GC		6640 B			See footnote [3], p. 115; See footnote [4], p. 40
18. 4,4′-DDD	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
19. 4,4′-DDE	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		

20. 4,4′-DDT	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
21. Demeton-O	GC					See footnote [3], p. 25; See footnote [6], p. S51
22. Demeton-S	GC					See footnote [3], p. 25; See footnote [6], p. S51
23. Diazinon	GC					See footnote [3], p. 25; See footnote [4], p. 27; See footnote [6], p. S51
24. Dicamba	GC					See footnote [3], p. 115
25. Dichlofen-thion	GC					See footnote [4], p. 27; See footnote [6], p. S73
26. Dichloran	GC		6630 B & C			See footnote [3], p. 7
27. Dicofol	GC				D3086–90, D5812–96(02).	
28. Dieldrin	GC	608	6630 B & C			See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
29. Dioxathion	GC					See footnote [4], p. 27; See footnote [6], p. S73
30. Disulfoton	GC					See footnote [3], p. 25; See footnote [6], p. S51
31. Diuron	TLC					See footnote [3], p. 104; See footnote [6], p. S64
32. Endosulfan I	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625[5]	6410 B	6410 B–00.		
33. Endosulfan II	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [8]
	GC/MS	625[5]	6410 B	6410 B–00.		
34. Endosulfan Sulfate	GC	608	6630 C			See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
35. Endrin	GC	608	6630 B & C		D3086–90, D5812–96(02)	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625[5]	6410 B	6410 B–00.		
36. Endrin aldehyde	GC	608				See footnote [8]
	GC/MS	625				
37. Ethion	GC					See footnote [4], p. 27; See footnote [6], p. S73
38. Fenuron	TLC					See footnote [3], p. 104; See footnote [6], p. S64
39. Fenuron-TCA	TLC					See footnote [3], p. 104; See footnote [6], p. S64

TABLE ID—LIST OF APPROVED TEST PROCEDURES FOR PESTICIDES [1]—Continued

Parameter	Method	EPA [2, 7]	Standard Methods 18th, 19th, 20th Ed.	Standard Methods Online	ASTM	Other
40. Heptachlor	GC	608	6630 B & C		D3086–90,	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.	D5812–96(02)	
41. Heptachlor epoxide	GC	608	6630 B & C		D3086–90,	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [6], p. S73; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.	D5812– 96(02)	
42. Isodrin	GC					See footnote [4], p. 27; See footnote [6], p. S73
43. Linuron	GC					See footnote [3], p. 104; See footnote [6], p. S64
44. Malathion	GC		6630 C			See footnote [3], p. 25; See footnote [4], p. 27; See footnote [6], p. S51
45. Methiocarb	TLC					See footnote [3], p. 94; See footnote [6], p. S60
46. Methoxy-chlor	GC		6630 B & C		D3086–90, D5812–96(02).	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
47. Mexacar-bate	TLC					See footnote [3], p. 94; See footnote [6], p. S60
48. Mirex	GC		6630 B & C			See footnote [3], p. 7; See footnote [4], p. 27
49. Monuron	TLC					See footnote [3], p. 104; See footnote [6], p. S64
50. Monuron-TCA	TLC					See footnote [3], p. 104; See footnote [6], p. S64
51. Nuburon	TLC					See footnote [3], p. 104; See footnote [6], p. S64
52. Parathion methyl	GC		6630 C			See footnote [3], p. 25; See footnote [4], p. 27
53. Parathion ethyl	GC		6630 C			See footnote [3], p. 25; See footnote [4], p. 27
54. PCNB	GC		6630 B & C			See footnote [3], p. 7
55. Perthane	GC				D3086–90, D5812–96(02).	See footnote [4], p. 27
56. Prometon	GC					See footnote [3], p. 83; See footnote [6], p. S68; See footnote [9]
57. Prometryn	GC					See footnote [3], p. 83; See footnote [6], p. S68; See footnote [9]
58. Propazine	GC					See footnote [3], p. 83; See footnote [6], p. S68; See footnote [9]

59. Propham	TLC					See footnote [3], p. 104; See footnote [6], p. S64
60. Propoxur	TLC					See footnote [3], p. 94; See footnote [6], p. S60
61. Secbumeton	TLC					See footnote [3], p. 83; See footnote [6], p. S68
62. Siduron	TLC					See footnote [3], p. 104; See footnote [6], p. S64
63. Simazine	GC					See footnote [3], p. 83; See footnote [6], p. S68; See footnote [9]
64. Strobane	GC		6630 B & C			See footnote [3], p. 7
65. Swep	TLC					See footnote [3], p. 104; See footnote [6], p. S64
66. 2,4,5–T	GC		6640 B			See footnote [3], p. 115; See footnote [4], p. 40
67. 2,4,5–TP (Silvex)	GC		6640 B			See footnote [3], p. 115; See footnote [4], p. 40
68. Terbuthylazine	GC					See footnote [3], p. 83; See footnote [6], p. S68
69. Toxaphene	GC	608	6630 B & C		D3086–90, D5812–96(02).	See footnote [3], p. 7; See footnote [4], p. 27; See footnote [8]
	GC/MS	625	6410 B	6410 B–00.		
70. Trifluralin	GC		6630 B			See footnote [3], p. 7; See footnote [9]

[1] Pesticides are listed in this table by common name for the convenience of the reader. Additional pesticides may be found under Table IC, where entries are listed by chemical name.

[2] The full text of Methods 608 and 625 are given at Appendix A, "Test Procedures for Analysis of Organic Pollutants," of this Part 136. The standardized test procedure to be used to determine the method detection limit (MDL) for these test procedures is given at Appendix B, "Definition and Procedure for the Determination of the Method Detection Limit," of this Part 136.

[3] "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater," U.S. Environmental Protection Agency, September 1978. This EPA publication includes thin-layer chromatography (TLC) methods.

[4] "Methods for Analysis of Organic Substances in Water and Fluvial Sediments," Techniques of Water-Resources Investigations of the U.S. Geological Survey, Book 5, Chapter A3 (1987).

[5] The method may be extended to include α-BHC, γ-BHC, endosulfan I, endosulfan II, and endrin. However, when they are known to exist, Method 608 is the preferred method.

[6] "Selected Analytical Methods Approved and Cited by the United States Environmental Protection Agency." Supplement to the Fifteenth Edition of *Standard Methods for the Examination of Water and Wastewater* (1981).

[7] Each analyst must make an initial, one-time, demonstration of their ability to generate acceptable precision and accuracy with Methods 608 and 625 (See Appendix A of this Part 136) in accordance with procedures given in Section 8.2 of each of these methods. Additionally, each laboratory, on an on-going basis, must spike and analyze 10% of all samples analyzed with Method 608 or 5% of all samples analyzed with Method 625 to monitor and evaluate laboratory data quality in accordance with Sections 8.3 and 8.4 of these methods. When the recovery of any parameter falls outside the warning limits, the analytical results for that parameter in the unspiked sample are suspect. The results should be reported, but cannot be used to demonstrate regulatory compliance. These quality control requirements also apply to the Standard Methods, ASTM Methods, and other methods cited.

[8] "Organochlorine Pesticides and PCBs in Wastewater Using Empore™ Disk", 3M Corporation, Revised 10/28/94.

[9] USGS Method 0–3106–93 from "Methods of Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Triazine and Other Nitrogen-containing Compounds by Gas Chromatography with Nitrogen Phosphorus Detectors" U.S. Geological Survey Open File Report 94–37.

TABLE IE—LIST OF APPROVED RADIOLOGIC TEST TEST PROCEDURES

Parameter and units	Method	Reference (method number or page)				
		EPA[1]	Standard Methods 18th, 19th, 20th Ed.	Standard Methods On-line	ASTM	USGS[2]
1. Alpha-Total, pCi per liter	Proportional or scintillation counter.	900.0	7110 B	7110 B–00	D1943–90, 96	pp. 75 and 78[3]
2. Alpha-Counting error, pCi per liter.	Proportional or scintillation counter.	Appendix B	7110 B	7110 B–00	D1943–90, 96	p. 79
3. Beta-Total, pCi per liter	Proportional counter	900.0	7110 B	7110 B–00	D1890–90, 96	pp. 75 and 78[3]
4. Beta-Counting error, pCi	Proportional counter	Appendix B	7110 B	7110 B–00	D1890–90, 96	p. 79
5. (a) Radium Total pCi per liter.	Proportional counter	903.0	7500-Ra B	7500-Ra B–01	D2460–90, 97	
(b) Ra, pCi per liter	Scintillation counter	903.1	7500-Ra C	7500-Ra C–01	D3454–91, 97	p. 81

[1] Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA–600/4–80–032 (1980), U.S. Environmental Protection Agency, August 1980.
[2] Fishman, M. J. and Brown, Eugene, "Selected Methods of the U.S. Geological Survey of Analysis of Wastewaters," U.S. Geological Survey, Open-File Report 76–177 (1976).
[3] The method found on p. 75 measures only the dissolved portion while the method on p. 78 measures only the suspended portion. Therefore, the two results must be added to obtain the "total."

TABLE IF—LIST OF APPROVED METHODS FOR PHARMACEUTICAL POLLUTANTS

Pharmaceuticals pollutants	CAS registry No.	Analytical method number
acetonitrile	75–05–8	1666/1671/D3371/D3695.
n-amyl acetate	628–63–7	1666/D3695.
n-amyl alcohol	71–41–0	1666/D3695
benzene	71–43–2	D4763/D3695/502.2/524.2.
n-butyl-acetate	123–86–4	1666/D3695.
tert-butyl alcohol	75–65–0	1666.
chlorobenzene	108–90–7	502.2/524.2.
chloroform	67–66–3	502.2/524.2/551.
o-dichlorobenzene	95–50–1	1625C/502.2/524.2.
1,2-dichloroethane	107–06–2	D3695/502.2/524.2.
diethylamine	109–89–7	1666/1671.
dimethyl sulfoxide	67–68–5	1666/1671.
ethanol	64–17–5	1666/1671/D3695.
ethyl acetate	141–78–6	1666/D3695.
n-heptane	142–82–5	1666/D3695.
n-hexane	110–54–3	1666/D3695.
isobutyraldehyde	78–84–2	1666/1667.
isopropanol	67–63–0	1666/D3695.
isopropyl acetate	108–21–4	1666/D3695.
isopropyl ether	108–20–3	1666/D3695.
methanol	67–56–1	1666/1671/D3695.
Methyl Cellosolve Δ	109–86–4	1666/1671
methylene chloride	75–09–2	502.2/524.2
methyl formate	107–31–3	1666.
4-methyl-2-pentanone (MIBK)	108–10–1	1624C/1666/D3695/D4763/524.2.
phenol	108–95–2	D4763.
n-propanol	71–23–8	1666/1671/D3695.
2-propanone (acetone)	67–64–1	D3695/D4763/524.2.
tetrahydrofuran	109–99–9	1666/524.2.
toluene	108–88–3	D3695/D4763/502.2/524.2.
triethlyamine	121–44–8	1666/1671.
xylenes	(Note 1)	1624C/1666.

TABLE 1F NOTE:
1. 1624C: m-xylene 108–38–3, o,p-xylene E–14095 (Not a CAS number; this is the number provided in the Environmental Monitoring Methods Index (EMMI) database.); 1666: m,p-xylene 136777–61–2, o-xylene 95–47–6.

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS

EPA Survey Code	Pesticide name	CAS No.	EPA Analytical Method No.(s)
8	Triadimefon	43121–43–3	507/633/525.1/1656
12	Dichlorvos	62–73–7	1657/507/622/525.1
16	2,4–D; 2,4–D Salts and Esters [2,4–Dichloro-phenoxyacetic acid].	94–75–7	1658/515.1/615/515.2/555
17	2,4–DB; 2,4–DB Salts and Esters [2,4–Dichlorophenoxybutyric acid].	94–82–6	1658/515.1/615/515.2/555
22	Mevinphos	7786–34–7	1657/507/622/525.1
25	Cyanazine	21725–46–2	629/507
26	Propachlor	1918–16–7	1656/508/608.1/525.1
27	MCPA; MCPA Salts and Esters [2–Methyl-4-chlorophenoxyacetic acid].	94–74–6	1658/615/555
30	Dichlorprop; Dichlorprop Salts and Esters [2–(2,4–Dichlorophenoxy) propionic acid].	120–36–5	1658/515.1/615/515.2/555
31	MCPP; MCPP Salts and Esters [2–(2–Methyl-4-chlorophenoxy) propionic acid].	93–65–2	1658/615/555
35	TCMTB [2–(Thiocyanomethylthio) benzo-thiazole].	21564–17–0	637
39	Pronamide	23950–58–5	525.1/507/633.1
41	Propanil	709–98–8	632.1/1656
45	Metribuzin	21087–64–9	507/633/525.1/1656
52	Acephate	30560–19–1	1656/1657

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS—Continued

EPA Survey Code	Pesticide name	CAS No.	EPA Analytical Method No.(s)
53	Acifluorfen	50594–66–6	515.1/515.2/555
54	Alachlor	15972–60–8	505/507/645/525.1/1656
55	Aldicarb	116–06–3	531.1
58	Ametryn	834–12–8	507/619/525.1
60	Atrazine	1912–24–9	505/507/619/525.1/1656
62	Benomyl	17804–35–2	631
68	Bromacil; Bromacil Salts and Esters.	314–40–9	507/633/525.1/1656
69	Bromoxynil	1689–84–5	1625/1661
69	Bromoxynil octanoate	1689–99–2	1656
70	Butachlor	23184–66–9	507/645/525.1/1656
73	Captafol	2425–06–1	1656
75	Carbaryl [Sevin]	63–25–2	531.1/632/553
76	Carbofuran	1563–66–2	531.1/632
80	Chloroneb	2675–77–6	1656/508/608.1/525.1
82	Chlorothalonil	1897–45–6	508/608.2/525.1/1656
84	Stirofos	961–11–5	1657/507/622/525.1
86	Chlorpyrifos	2921–88–2	1657/508/622
90	Fenvalerate	51630–58–1	1660
103	Diazinon	333–41–5	1657/507/614/622/525.1
107	Parathion methyl	298–00–0	1657/614/622
110	DCPA [Dimethyl 2,3,5,6-tetra-chloro-terephthalate].	1861–32–1	508/608.2/525.1/515.1/515.2/1656
112	Dinoseb	88–85–7	1658/515.1/615/515.2/555
113	Dioxathion	78–34–2	1657/614.1
118	Nabonate [Disodium cyanodithio-imidocarbonate].	138–93–2	630.1
119	Diuron	330–54–1	632/553
123	Endothall	145–73–3	548/548.1
124	Endrin	72–20–8	1656/505/508/608/617/525.1
125	Ethalfluralin	55283–68–6	1656/627 See footnote 1
126	Ethion	563–12–2	1657/614/614.1
127	Ethoprop	13194–48–4	1657/507/622/525.1
132	Fenarimol	60168–88–9	507/633.1/525.1/1656
133	Fenthion	55–38–9	1657/622
138	Glyphosate [N(Phosphonomethyl) glycine].	1071–83–6	547
140	Heptachlor	76–44–8	1656/505/508/608/617/525.1
144	Isopropalin	33820–53–0	1656/627
148	Linuron	330–55–2	553/632
150	Malathion	121–75–5	1657/614
154	Methamidophos	10265–92–6	1657
156	Methomyl	16752–77–5	531.1/632
158	Methoxychlor	72–43–5	1656/505/508/608.2/617/525.1
172	Nabam	142–59–6	630/630.1
173	Naled	300–76–5	1657/622
175	Norflurazon	27314–13–2	507/645/525.1/1656
178	Benfluralin	1861–40–1	11656/1627
182	Fensulfothion	115–90–2	1657/622
183	Disulfoton	298–04–4	1657/507/614/622/525.1
185	Phosmet	732–11–6	1657/622.1
186	Azinphos Methyl	86–50–0	1657/614/622
192	Organo-tin pesticides	12379–54–3	Ind-01/200.7/200.9
197	Bolstar	35400–43–2	1657/622
203	Parathion	56–38–2	1657/614
204	Pendimethalin	40487–42–1	1656
205	Pentachloronitrobenzene	82–68–8	1656/608.1/617
206	Pentachlorophenol	87–86–5	625/1625/515.2/555/515.1/ 525.1
208	Permethrin	52645–53–1	608.2/508/525.1/1656/1660
212	Phorate	298–02–2	1657/622
218	Busan 85 [Potassium dimethyldithiocarbamate].	128–03–0	630/630.1

TABLE IG—TEST METHODS FOR PESTICIDE ACTIVE INGREDIENTS—Continued

EPA Survey Code	Pesticide name	CAS No.	EPA Analytical Method No.(s)
219	Busan 40 [Potassium N-hydroxymethyl-N-methyldithiocarbamate].	51026–28–9	630/630.1
220	KN Methyl [Potassium N-methyl-dithiocarbamate].	137–41–7	630/630.1
223	Prometon	1610–18–0	507/619/525.1
224	Prometryn	7287–19–6	507/619/525.1
226	Propazine	139–40–2	507/619/525.1/1656
230	Pyrethrin I	121–21–1	1660
232	Pyrethrin II	121–29–9	1660
236	DEF [S,S,S–Tributyl phosphorotrithioate].	78–48–8	1657
239	Simazine	122–34–9	505/507/619/525.1/1656
241	Carbam-S [Sodium dimethyldithiocarbanate].	128–04–1	630/630.1
243	Vapam [Sodium methyldithiocarbamate].	137–42–8	630/630.1
252	Tebuthiuron	34014–18–1	507/525.1
254	Terbacil	5902–51–2	507/633/525.1/1656
255	Terbufos	13071–79–9	1657/507/614.1/525.1
256	Terbuthylazine	5915–41–3	619/1656
257	Terbutryn	886–50–0	507/619/525.1
259	Dazomet	533–74–4	630/630.1/1659
262	Toxaphene	8001–35–2	1656/505/508/608/617/525.1
263	Merphos [Tributyl phosphorotrithioate].	150–50–5	1657/507/525.1/622
264	Trifluralin	1582–09–8	1656/508/617/627/525.1
268	Ziram [Zinc dimethyldithiocarbamate].	137–30–4	630/630.1

[1] Monitor and report as total Trifluralin.

TABLE IH—LIST OF APPROVED MICROBIOLOGICAL METHODS FOR AMBIENT WATER

Parameter and units	Method [1]	EPA	Standard methods 18th, 19th, 20th Ed.	Standard methods online	AOAC, ASTM, USGS	Other
Bacteria:						
1. E. coli, number per 100 mL.	MPN [6,8,14] multiple tube,		9221 B.1/9221 F [11,13]	9221 B.1–99/9221 F [11,13].		
	Multiple tube/multiple well,		9223 B [12]	9223 B–97 [12]	991.15 [10]	Colilert® [12,16] Colilert-18® [12,15,16].
	MF [2,5,6,7,8] two step, or	1103.1 [19]	9222 B/9222 G [18], 9213 D.	9222 B–97/9222 G [18]	D5392–93 [9].	
	Single step	1603 [20], 1604 [21]				mColiBlue-24® [17].
2. Enterococci, number per 100 mL.	MPN [6,8] multiple tube,		9230 B	9230 B–93.		
	Multiple tube/multiple well				D6503–99 [9]	Enterolert® [12,22].
	MF [2,5,6,7,8] two step	1106.1 [23]	9230 C	9230 C–93	D5259–92 [9].	
	Single step, or	1600 [24].				
	Plate count	p. 143 [3].				
Protozoa:						
3. *Cryptosporidium*	Filtration/IMS/FA	1622 [25],1623 [26].				
4. *Giardia*	Filtration/IMS/FA	1623 [26].				

[1] The method must be specified when results are reported.

[2] A 0.45 μm membrane filter (MF) or other pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with their growth.

[3] USEPA. 1978. Microbiological Methods for Monitoring the Environment, Water, and Wastes. Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. EPA/600/8–78/017.

[4] [Reserved]

[5] Because the MF technique usually yields low and variable recovery from chlorinated wastewaters, the Most Probable Number method will be required to resolve any controversies.

[6] Tests must be conducted to provide organism enumeration (density). Select the appropriate configuration of tubes/filtrations and dilutions/volumes to account for the quality, character, consistency, and anticipated organism density of the water sample.

[7] When the MF method has not been used previously to test waters with high turbidity, large number of noncoliform bacteria, or samples that may contain organisms stressed by chlorine, a parallel test should be conducted with a multiple-tube technique to demonstrate applicability and comparability of results.

[8] To assess the comparability of results obtained with individual methods, it is suggested that side-by-side tests be conducted across seasons of the year with the water samples routinely tested in accordance with the most current Standard Methods for the Examination of Water and Wastewater or EPA alternate test procedure (ATP) guidelines.

[9] ASTM. 2000, 1999, 1996. Annual Book of ASTM Standards—Water and Environmental Technology. Section 11.02. ASTM International. 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[10] AOAC. 1995. Official Methods of Analysis of AOAC International, 16th Edition, Volume I, Chapter 17. Association of Official Analytical Chemists International. 481 North Frederick Avenue, Suite 500, Gaithersburg, MD 20877–2417.

[11] The multiple-tube fermentation test is used in 9221B.1. Lactose broth may be used in lieu of lauryl tryptose broth (LTB), if at least 25 parallel tests are conducted between this broth and LTB using the water samples normally tested, and this comparison demonstrates that the false-positive rate and false-negative rate for total coliform using lactose broth is less than 10 percent. No requirement exists to run the completed phase on 10 percent of all total coliform-positive tubes on a seasonal basis.

[12] These tests are collectively known as defined enzyme substrate tests, where, for example, a substrate is used to detect the enzyme β-glucuronidase produced by *E. coli*.

[13] After prior enrichment in a presumptive medium for total coliform using 9221B.1, all presumptive tubes or bottles showing any amount of gas, growth or acidity within 48 h ± 3 h of incubation shall be submitted to 9221F. Commercially available EC–MUG media or EC media supplemented in the laboratory with 50 μg/mL of MUG may be used.

[14] Samples shall be enumerated by the multiple-tube or multiple-well procedure. Using multiple-tube procedures, employ an appropriate tube and dilution configuration of the sample as needed and report the Most Probable Number (MPN). Samples tested with Colilert® may be enumerated with the multiple-well procedures, Quanti-Tray® or Quanti-Tray® 2000, and the MPN calculated from the table provided by the manufacturer.

[15] Colilert-18® is an optimized formulation of the Colilert® for the determination of total coliforms and E. coli that provides results within 18 h of incubation at 35 °C rather than the 24 h required for the Colilert® test and is recommended for marine water samples.

[16] Descriptions of the Colilert®, Colilert-18®, Quanti-Tray®, and Quanti-Tray®/2000 may be obtained from IDEXX Laboratories, Inc., 1 IDEXX Drive, Westbrook, ME 04092.

[17] A description of the mColiBlue24® test, Total Coliforms and *E. coli*, is available from Hach Company, 100 Dayton Ave., Ames, IA 50010.

[18] Subject total coliform positive samples determined by 9222B or other membrane filter procedure to 9222G using NA–MUG media.

[19] USEPA. July 2006. Method 1103.1: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using membrane-Thermotolerant *Escherichia coli* Agar (mTEC). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–010.

[20] USEPA. July 2006. Method 1603: *Escherichia coli* (*E. coli*) in Water by Membrane Filtration Using Modified membrane-Thermotolerant *Escherichia coli* Agar (Modified mTEC). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–011.

[21] Preparation and use of MI agar with a standard membrane filter procedure is set forth in the article, Brenner et al. 1993. "New Medium for the Simultaneous Detection of Total Coliform and *Escherichia coli* in Water." Appl. Environ. Microbiol. 59:3534–3544 and in USEPA. September 2002.: Method 1604: Total Coliforms and *Escherichia coli* (*E. coli*) in Water by Membrane Filtration by Using a Simultaneous Detection Technique (MI Medium). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA 821–R–02–024.

[22] A description of the Enterolert® test may be obtained from IDEXX Laboratories, Inc., 1 IDEXX Drive, Westbrook, ME 04092.

[23] USEPA. July 2006. Method 1106.1: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus-Esculin Iron Agar (mE–EIA). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–008.

[24] USEPA. July 2006. Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl-β-D-Glucoside Agar (mEI). U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–06–009.

[25] Method 1622 uses filtration, concentration, immunomagnetic separation of oocysts from captured material, immunofluorescence assay to determine concentrations, and confirmation through vital dye staining and differential interference contrast microscopy for the detection of *Cryptosporidium*. USEPA. 2001. Method 1622: *Cryptosporidium* in Water by Filtration/IMS/FA. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–01–026.

[26] Method 1623 uses filtration, concentration, immunomagnetic separation of oocysts and cysts from captured material, immunofluorescence assay to determine concentrations, and confirmation through vital dye staining and differential interference contrast microscopy for the simultaneous detection of *Cryptosporidium* and *Giardia* oocysts and cysts. USEPA. 2001. Method 1623. *Cryptosporidium* and *Giardia* in Water by Filtration/IMS/FA. U.S. Environmental Protection Agency, Office of Water, Washington, DC EPA–821–R–01–025.

SPRINGFIELD

Protecting Water For Future Generations

INDUSTRIAL PRETREATMENT DIVISION

ENFORCEMENT RESPONSE PLAN

INTRODUCTION

In accordance with Title 40 Code of Federal Regulation (CFR), Part 403.8 (f) (5) and the City of Springfield NPDES permit, the City of Springfield is required to develop and implement an Enforcement Response Plan. As part of these implementation responsibilities, the City of Springfield must establish requirements for significant Industrial User pollution control, monitoring and reporting, and must incorporate these requirements into control mechanisms (Wastewater Contribution Permits). Pollution control requirements must reflect Federal categorical standards, general pretreatment standards, and local limitations. Each control mechanism must enable the City of Springfield to monitor and control discharges to the sewer system (POTW), implement the pretreatment program, and meet the goals of the General Pretreatment Regulations. In order to meet these goals the US Environmental Protection Agency (EPA) requires the City of Springfield to describe its compliance monitoring procedures, their use, and escalation of various enforcement responses as well as time frames and responsibilities. To assist in this requirement, the Guidance For Developing Control Authority Enforcement Response Plans was used.

The City of Springfield has enforcement powers to the extent of its legal authority. The legal authority to implement and enforce the pretreatment program is detailed in Chapter 120 of the Springfield City Code, "Wastewater Regulations" (sewer use ordinance).

Any enforcement response must be appropriate to the violation. For example, while in some instances telephone calls may be appropriate responses for late reports, violations causing treatment plant upsets merit a more immediate and severe response.

MONITORING AND ANALYSIS

If an Industrial User sampling indicates a violation, the user shall notify the City of Springfield within twenty-four (24) hours of becoming aware of such violation(s). The user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the Control Authority within thirty (30) days after becoming aware of the violation(s). If the City of Springfield performs sampling at the Industrial User facility between the time when the Industrial User performs its initial sampling and the time when said user receives the results of the sampling or the User will be required by its Wastewater Contribution Permit to sample within thirty (30) days, the Industrial User is not required to resample.

The frequency of sampling, monitoring, and reporting shall be prescribed in the Wastewater Contribution Permit issued to the Significant Industrial User. All analysis and sampling shall be performed in accordance with procedures and techniques approved by the EPA as contained in 40 CFR Part 136, and amendments thereto, or in accordance with any other test procedures approved by the EPA.

The City of Springfield is required to inspect the facilities of any Industrial User to determine whether they are complying with the requirements of the Pretreatment Standards as presented by the sewer use ordinance. Persons or occupants of the Industrial User premises shall allow the

Director of Environmental Services or his representative ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination and copying, or the performance of any of their duties. The Director of Environmental Services or his representative shall have the right to install on the user property such devices as are necessary to conduct sampling, inspection, compliance monitoring, metering operations and records copying. Also, the Director of Environmental Services or an authorized representative shall gather sufficient volume of sample when practicable so the sample can be split into two equal volumes, one for the Industrial User and one for the City of Springfield. In order for the City of Springfield to insure that Industrial Users are meeting their compliance responsibilities, inspections and collection of wastewater samples must be performed at least annually.

COMPLIANCE SCREENING

This process involves reviewing all available information to sort out noncompliant dischargers for appropriate enforcement response. This first review must assess, as appropriate, compliance with schedules, reporting requirements (including slug discharge notices), and applicable treatment standards.

The screening process must verify that reports are submitted on schedule, cover the proper time period, include all information requirements and are properly signed. The person performing the screening process must compare the parameters reported, the number of measurements for each parameter, the method of analysis, the sampling procedures, the discharge concentration (or mass per day), and other information supplied by the Industrial User with the requirements in the Industrial User permit as mandated by the sewer use ordinance. Any discrepancy is a violation that the Industrial User must be required to correct.

All alleged violations must be identified by the City of Springfield and recorded in a violation summary specific to each Industrial User. This summary will serve as a log for the compliance history of the Industrial User and the enforcement responses of the City of Springfield.

The compliance screening process will also include notifying an Industrial User when certain types of obvious noncompliance are found, i.e., establishment of procedures for routinely notifying the Industrial User when a report is not received. This notification will include a deadline by which the Industrial User must respond. Although all violations must be identified, significant noncompliance requires swift and appropriate enforcement action. To determine significant noncompliance the Control Authority shall use the criteria promulgated by 40 CFR 403.8 (f) (2) (vii) and referenced in Section 120-10 of Chapter 120.

ENFORCEMENT RESPONSE

The violations and discrepancies identified during compliance screening will be reviewed to evaluate the type of enforcement response needed. An Enforcement Response Guide reflecting the following concepts is included to assist in this evaluation.

- All violations of requirements must be reviewed and by the City of Springfield.

- The City of Springfield will notify the Industrial User when a violation is found.

- For most violations, the City of Springfield will receive an explanation and, as appropriate, a plan from the Industrial User to correct the violation within a specified time period.

- If the violations persist or the explanation and the plan are not adequate, the City of Springfield response will become more formal and commitments (or schedules, as appropriate) for compliance will be established in an enforceable document.

- The enforcement response selected will be related to the seriousness of the violation. Enforcement responses will be escalated if compliance is not achieved expeditiously after taking initial action. The enforcement responses are divided into informal responses and formal responses.

Informal actions can include:

- Informal notice to industrial users, i.e., telephone call or Notice of Violation (NOV)

- Informal meeting

- Warning letter

Formal actions include:

- Administrative orders and meetings to show cause

- Civil suit for injunctive relief and/or civil penalties and damages

- Criminal prosecution

- Termination of service (revoke permit)

All of these categories of enforcement activity are promulgated in Chapter 120, "Wastewater Regulations".

ENFORCEMENT RESPONSE GUIDE

The enforcement response guide is used as follows:

1. Locate the type of noncompliance in the first column and identify the most accurate description of the violation in column two.

2. Assess the appropriateness of the recommended response (s) in column three. First offenders or users may offer a more lenient response. Repeat offenders or those demonstrating negligence will require a more stringent response.

3. Apply the enforcement response to the Industrial User. Specify corrective action or other responses required of the Industrial User, if any. Column four indicates personnel to take each response and present it to the Industrial User.

4. Follow-up with escalated enforcement action if the Industrial Users response is not received or violation continues. Deviation from this guide is permitted at the discretion of the Director of Environmental Services.

Terms and abbreviations used in this guide are defined below.

AO - Administrative Order

CA - City Attorney

Civil Action - Civil litigation against the industrial user seeking equitable relief, monetary penalties and actual damages

Criminal Prosecution - Pursuing punitive measures against an individual and/or organization through a court of law

CFR - Code of Federal Regulations

DES - Director of Environmental Services

I - Pretreatment Inspector

IU - Industrial User

Meeting- Informal compliance meeting with the IU to resolve recurring noncompliance

NOV - Notice of Violation

ECO - Environmental Compliance Officer

S - Superintendent of Clean Water Services

SNC - Significant Noncompliance

Show Cause - Formal meeting requiring the IU to appear and demonstrate why the City of Springfield should not take a proposed enforcement action against it. The meeting may also serve as a forum to discuss corrective actions and compliance schedules.

POTW - Publicly Owned Treatment Works

Enforcement Response Guide

UNAUTHORIZED DISCHARGES (No permit)

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
1.	Unpermitted discharge	IU unaware of requirement; No harm to POTW/environment	Phone call; NOV with application form	I
		IU unaware of requirement; Harm to POTW	- AO - Civil action	I, ECO DES, CA
		Failure to apply continues after notice by the POTW	- Civil action - Criminal investigation - Terminate service	DES, CA DES, CA DES, CA
2.	Nonpermitted discharge (Failure to renew)	IU has not submitted application application within 10 days of due date	Phone call; NOV	I

DISCHARGE LIMIT VIOLATION

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
1.	Exceedance of local or Federal Standard (Permit limit)	Isolated, not significant	Phone call; NOV	I
		Isolated, significant noncompliance (no harm)	AO	I, ECO

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
		Isolated, harm to POTW or environment	- Show cause order - Civil action	ECO, S DES, CA
		Recurring, no harm to POTW/ environment	- AO	I, PC
		Recurring; significant noncompliance (harm)	- AO - Show cause order - Civil action - Terminate service	I, PC ECO, S DES, CA DES, CA

MONITORING AND REPORTING VIOLATIONS

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
1.	Reporting violation	Report is improperly signed or certified	Phone call or NOV	I
		Report is improperly signed or certified after notice by POTW	- AO - Show cause order	I, ECO ECO, S
		Isolated, not significant (e.g., 5 days late)	Phone call; NOV	I, ECO
		Significant noncompliance (e.g., report 30 days or more late)	-AO	I, ECO

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
		Reports are often late or no report submitted at all	- AO - Show cause order -Civil action	I, ECO ECO, S DES, CA
		Failure to report spill or non-routine discharge (no harm)	NOV	I
		Failure to report spill or non-routine discharge (results in harm)	- AO - Civil action	ECO, S DES, CA
		Repeated failure to report spills	- Show cause order - Terminate service	ECO, S DES, CA
		Report Falsification	- Criminal investigation - Terminate service	DES, CA DES, CA
2.	Incorrect monitoring	Failure to monitor all pollutants as required by permit	NOV or AO	I
		Recurring failure to monitor	- AO - Civil action	ECO, S DES, CA
3.	Improper sampling	Evidence of intent	- Criminal investigation - Terminate service	DES, CA DES, CA
4.	Failure to install monitoring equipment	Delay of less than 30 days	NOV	I

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
		Delay of 30 days or more	AO to install monitoring equipment	ECP, S
		Recurring, violation of AO	- Civil action - Criminal investigation - Terminate service	DES, CA DES, CA DES, CA
5.	Compliance Schedules (In permit)	Missed milestone by less than 30 days, or will not affect final milestone	NOV or AO	I
		Missed milestone by more than 30 days, or will affect final milestone (good cause for delay)	AO	I, ECO
		Missed milestone by more than 30 days, or will affect final milestone (insufficient reason for delay)	- Show cause order - Civil action - Terminate service	ECO, S DES, CA DES, CA
		Recurring violation or violation of schedule in AO	- Civil action - Criminal investigation - Terminate service	DES, CA DES, CA DES, CA

OTHER PERMIT VIOLATIONS

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
1.	Wastestreams are diluted in lieu of treatment	Initial violation	AO	I
		Recurring	- Show cause order - Terminate service	ECO, S DES, CA

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
2.	Failure to mitigate noncompliance or halt production	Does not result in harm	NOV	I
		Does result in harm	- AO - Civil action	ECO, S DES, CA
3.	Failure to properly operate and maintain pretreatment facility	Does not result in harm	NOV	I
		Does result in harm	- AO - Civil action	ECO, S DES, CA

VIOLATIONS DETECTED DURING SITE VISITS

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
1.	Entry Denial	Entry denied or consent withdrawn Copies of records denied	Obtain warrant and return to IU	I, CA
2.	Illegal Discharge	No harm to POTW or environment	NOV, AO	I, ECO
		Discharges cause harm or evidence of intent / negligence	- Civil action - Criminal investigation	DES, CA DES, CA
		Recurring, violation of AO	Terminate service	DES, CA
3.	Improper Sampling	Unintentional sampling at incorrect location	NOV	I
		Unintentionally using incorrect sample type	NOV	I
		Unintentionally using incorrect sample collection techniques	NOV	I

	NONCOMPLIANCE	NATURE OF THE VIOLATION	ENFORCEMENT RESPONSES	PERSONNEL
4.	Inadequate record-keeping	Inspector finds files incomplete or missing (no evidence of intent)	NOV	I
		Recurring	AO	I, ECO
5.	Failure to report additional monitoring	Inspection finds additional files	NOV	I
		Recurring	AO	I, ECO

TIMEFRAMES FOR RESPONSES

1. All violations will be identified and documented within ten days of receiving compliance information.

2. Initial enforcement responses [involving contact with the industrial user and requesting information on corrective or preventative action(s)] will occur within 30 days of violation detection.

3. Follow-up actions for continuing or reoccurring violations will be taken within 60 days of the initial enforcement response. For all continuing violations, the response will include a compliance schedule.

4. Violations which threaten health, property, or environmental quality are considered emergencies and will receive immediate responses such as halting the discharge or terminating service.

5. All violations meeting the criteria for significant noncompliance will be addressed with an enforceable order within 30-60 days of the identification of significant noncompliance.

THE DIRECTOR OF ENVIRONMENTAL SERVICES

Person(s) responsible for the overall operation and maintenance of the POTW, including employee safety, protection of the collection system, and the treatment plants, effluent quality, and sludge use and quality.

CITY ATTORNEY

Person responsible to advise technical and managerial personnel on enforcement matters to orchestrate judicial responses such as civil actions, criminal investigations/prosecution, and termination of service.

ENVIRONMENTAL COMPLIANCE OFFICER

Person responsible for directly administering and enforcing pretreatment standards and requirements applicable to Industrial Users in accordance with the Pretreatment Program as approved by the Missouri Department of Natural Resources.

INSPECTOR

Person(s) authorized by the Director of Environmental Services to screen compliance monitoring data (including their own inspection reports), detect noncompliance, inform the Environmental Compliance Officer of noncompliance, and immediately respond to noncompliance with informal warnings, notices of violation, and administrative orders.

The City of Springfield and the Director of Environmental Services shall have the authority and responsibility to administer and implement enforcement responses to the extent practicable and consistent with the requirements of the General Pretreatment Regulations set forth by 40 CFR 403 and as promulgated by Chapter 120 of the Springfield City Code. Any municipality which contracts with the City of Springfield to discharge wastewater to the POTW shall keep officials of the City of Springfield reasonably informed of pretreatment implementation and enforcement activities involving users located in their respective municipalities.

Chapter 120 of the City Code of Springfield, Missouri

Chapter 120 of the City of Springfield Municipal Code is frequently updated by the City.

In an effort to provide all industrial pretreatment facilities with the current and/or most recent revision of Chapter 120, it is requested that the official copy of the electronic version of Chapter 120 be viewed online. You may find the City Code online at either:

https://www.municode.com/library/mo/springfield/codes/code_of_ordinances?nodeId=PTIICO_CH120WARE

Or

Go to www.municode.com/Library and choose Missouri, then choose Springfield.