VPDES Permit Writers' Manual

Version 1.01

Revised: November 4, 2024

Revision History

Manual Version	Update Date	Section Updated
1.00	10/18/2024	Section IV.H.8 (Reporting of Flagged Data) - Revised
1.01	11/4/2024	Section II.A.3 (VPDES Permit Application Forms) - Revised

Change to Manual Version?
Yes - From Version 1.00 to Version 1.01
No

Overview of Updates to 2024 VPDES Permit Writers' Manual

- The following former sections from GM14-2003 have been removed: IN-1, IN-3, MN-1, MN-3.
- Renaming of former sections has taken place as follows: IN-2 is now referred to as IN-1, IN-4 as IN-2, IN-5 as IN-3, and MN-2 as MN-1.

Section I

- Revised the definition of "Monthly average discharge limitation".
- Removed the permit processing track sheet and the VPDES Process Flow Chart.
- Combined the definitions of "administratively complete" and "technically complete" permit applications.

Section II

- Clarified that any outbound email sent from a DEQ email account is equivalent to a message sent on Agency's letterhead.
- Added additional language addressing the electronic reporting rule requirements.
- Removed the EPA Form 2A sampling waiver section, as no sampling waivers for Form 2A can be granted.
- Clarified that a permit application shall not be considered complete unless all required quantitative data are collected using sufficiently sensitive analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapter N and O.
- Clarified the required application forms for POTW and PVOTW, and specified application requirements for each form.
- Added an Attachment A decision matrix.
- Clarified that a permit cannot be reissued or administratively continued unless all maintenance fee payments are up to date. If the fee is not paid before the expiration date, the permit should be allowed to expire.
- Combined administrative and technical reviews of permit application into one section.

Section III:

- Clarified that the Department has four months, rather than 120 days, to issue or deny a new permit upon determination that the application is deemed complete.

- Clarified that on February 2, 2023, EPA withdrew its waiver of permit review for the NPDES minor industrial categories specified in 40 CFR Part 122 Appendix A, which had originally been granted under the 1975 Memorandum of Understanding (MOU) between the State Water Control Board and the Regional Administrator, Region III Environmental Protection Agency. As per the amended MOU, permits in these categories must now also be submitted to the EPA for review.
- Specified the guidelines for establishing outfall numbers.
- Transferred former Sections III.C (Public Participation Procedures) and III.F (Public Hearing Procedures) to new Section VI.

Section IV:

- This is a new section.
- The former Section IV (Modification Procedures) has been combined with termination procedures (now located in the current Section V).

Section V:

- Added permit modification procedures.
- Revised the procedures for contested permit termination.

Section VI:

- This is a new section. Additionally, the former Sections III.C (Public Participation Procedures) and III.F (Public Hearing Procedures) have been transferred to new Section VI.

Section VII:

- This is a new section.

Section VIII:

- This is a new section.

Section MN-1 (formerly MN-2):

- Former Section MN-2 has been moved to this section.
- Added specifications for special standards and regulations under the sampling schedule table.

- Removed the reduced monitoring section due to pending guidance on reduced monitoring.
- Added information on influent monitoring and precent removal.
- Included details on adjustments to concentration limits derived from the secondary treatment standards or equivalent to secondary standards.
- Revised the CTC and CTO sections to reflect current procedures.
- Added a section on flow data used for municipal permit development.
- Added a section on establishing pH limitations

Section IN-1 (formerly IN-2):

- Former Section IN-2 has been moved to this section.
- Revised the instructions for the NPDES Permit Rating Worksheet to align with DEQ's current practices, removed Appendix C – Great Lakes Areas of Concern.

Section IN-2 (formerly IN-4):

- Added information on components of stormwater management.
- Added a table listing industrial activity sectors covered by the ISWGP.
- Added a table detailing sectors subject to effluent limitation guidelines.
- Included a table of benchmark monitoring parameters by the industry sector.
- Clarified numbering for commingled stormwater and stormwater-only outfalls.
- Removed sector-specific SWPPP requirements, as they are available in the ISWGP regulation

Section IN-3 (formerly IN-5):

- Revised sections related to laundries, petroleum storage and transportation, and water treatment plants to align with general permits for these industries.
- Updated the section on pulp and paper mills, removing outdated information about the Voluntary Advanced Technology Incentives Program, since the ELG compliance deadline was 4/15/2004. Added definitions for pollutants limited by these ELGs. Added a chart guide for determining the applicability of Subpart B and Subpart E standards, and clarified how compliance should be demonstrated.
- Revised the wood preserving operations section to specify pH limitations and added a footnote regarding the use of alternate standards for pH.

SECTION I

INTRODUCTION

Table of Contents

A. VPDES Permit Program

The Clean Water Act (CWA), Section 402, requires all point source discharges of pollutants to waters of the United States to obtain a National Pollutant Discharge Elimination System (NPDES) permit from either the U. S. Environmental Protection Agency (EPA) or a State authorized to issue the NPDES permit. To obtain this authorization, the State must have a Law and NPDES regulations comparable to the CWA and the EPA NPDES regulation. In addition, the State and EPA must agree to a Memorandum of Agreement (MOA) which establishes various operating procedures, such as the transfer of information between the two agencies and EPA's involvement in the daily activities of the State's administration of the permit program.

The Virginia State Water Control Board (SWCB) was authorized in 1975 by EPA to administer the NPDES Permit Program. The memorandum "Regarding Permit and Enforcement Programs between the SWCB and EPA" was signed in March 1975. EPA recognized that the State Water Control Law (SWCL) and the SWCB Regulation No. 6 provided adequate authority to carry out the federal program. This MOA was amended in 1982 to authorize the SWCB to administer the NPDES Permit Program for Federal facilities. It was amended in April, 1989 to include authorization for the federal pretreatment program and again in May, 1991 to include authority to issue general permits. The permit program name changed from NPDES to VPDES to indicate Virginia as the permitting agency when the Permit Regulation was adopted on July 1, 1988. This regulation was substantially rewritten in 1996 with the adoption of the VPDES Permit Regulation. The effect of this program delegation from EPA is that any point source discharger of pollutants in Virginia that obtains a VPDES permit from the SWCB and that subsequently complies with the issued VPDES permit is in compliance with both Federal and State Laws and regulations regarding such permit requirements.

On April 1, 1993 the State Water Control Board staff functions were merged by legislative action into the Department of Environmental Quality (DEQ), which was created on that date. In addition, the staff functions of the Department of Air Pollution Control, the Department of Waste Management, and the Council on the Environment were also merged into DEQ.

This permit manual describes the procedures for processing VPDES permits to ensure the SWCL, the VPDES Permit Regulation and the MOA are met. It presents the procedures for obtaining a complete application, preparing a draft VPDES permit, subjecting the draft permit to the public participation process, and issuing/reissuing/modifying/revoking and reissuing/terminating and denying permits.

According to 9VAC25-31-90, "the department may develop and use guidance, as appropriate, to implement technical and regulatory details of the VPDES permit program. Such guidance is distinguished from regulation by the fact that it is not binding on either the department or permittees. If a more appropriate methodology than that called for in guidance is available in a given situation, the more appropriate methodology shall be used to the extent it is consistent with applicable regulations and the State Water Control Law."

B. Purpose and Use of the Permit Manual

The purposes of this Permit Manual are to:

1. Provide VPDES permit writers, reviewers, and managers the procedures to ensure that:
   a. Individual VPDES permits are issued/reissued/denied/modified/terminated/revoked and reissued according to Federal and State Laws and Regulations.
   b. VPDES program is administered pursuant to our commitment to EPA;
2. Establish statewide procedures that promote Regional Office consistency when processing VPDES permits;
3. Define and set benchmark standards for the timely Regional Office processing of applications and permits; and
4. Provide a document that is a training tool for new staff in the correct procedures for administering the VPDES permit program.

The manual establishes procedures for application processing and permit issuance, reissuance, denial, modification, revocation and reissuance, and termination. It also contains definitions of terms, addresses, example forms and letters, and industrial and municipal permit language (including testing, sampling frequencies, effluent limitations and special conditions). Users should note that some procedures described in the manual are not universally applicable. Where a procedural step is unique to a particular process or type of permit, it will be indicated with a notation. **The processing of coverage under general VPDES permits is not addressed in this manual. Permit writers should consult the implementation procedures for each general permit for specific instructions.**

The department develops and uses guidance to implement technical and regulatory details of the VPDES permit program. The text of this procedural manual will be revised periodically to reflect newly issued VPDES permitting guidance memoranda. These revisions will also be posted on the agency's internal and external website. Users should refer to the electronic version of the manual on the website if they are in doubt whether or not they have the latest pages.

DISCLAIMER

This document provides implementation procedures to the DEQ permit staff. It does not establish or affect legal rights or obligations. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the State Water Control Law and the implementation regulations on the basis of the site-specific facts when permits are issued.

C. Basis of Manual

The following documents provide the legal and regulatory basis for this manual.

1. Clean Water Act (CWA) (Public Law 92-500 as amended)
2. State Water Control Law (SWCL) (Code of Virginia 62.1-44.2 et seq.)
3. VPDES Permit Regulation (9VAC25-31)
4. Procedural Rule No. 1 - Public and Formal Hearing Procedures (9VAC 25-230)
5. SWCB/EPA Memorandum of Agreement
6. Promulgated EPA Effluent Guidelines (40 CFR Parts 400 through 699)
7. Virginia Water Quality Standards (9VAC25-260)
8. State Water Control Board Approved Policies and Procedures
9. Sewage Collection and Treatment Regulation (9VAC25-790)

D. Abbreviations

ADA	American Disabilities Act
APLR	Annual Pollutant Loading Rate
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BEJ	Best Engineering Judgement
BMP	Best Management Practices
BNA	Bureau of National Affairs
BPJ	Best Professional Judgement
BPT	Best Practicable Control Technology Currently Available
BUR	Biosolids Use Regulation
CEDS	Comprehensive Environmental Data System
CFR	Code of Federal Regulations
CPLR	Cumulative Pollutant Loading Rate
COE	Corps of Engineers
CTC	Certificate to Construct
CTO	Certificate to Operate
CWA	Clean Water Act
DEQ	Department of Environmental Quality
DWR	Division of Wildlife Resources
DSS	Division of Shellfish Sanitation
DMR	Discharge Monitoring Report
DPL	Division of Policy and Legislation
ECM	Enterprise Content Management
e-DMR	Electronic Discharge Monitoring Report
EPA	U S Environmental Protection Agency
EQ	Exceptional Quality (sludge)
FDF	Fundamentally Different Factor
FFRF	Flow Frequency Request Form
F&WS	Fish and Wildlife Service
FS	Fact Sheet
IWC	Instream Waste Concentration
ISWGP	Industrial Stormwater General Permits (VPDES)
LGOF	Local Government Ordinance Form
LUST	Leaking Underground Storage Tanks
MGD	Million Gallons per Day
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit (EPA Industrial Stormwater General Permit)
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
OIS	Office of Information Services
OLAP	Office of Land Application Programs
OWQS	Office of Water Quality Standards
PEEP	Permitting Enhancement and Evaluation Platform
PC	Pollutant Concentration (sludge)
PN	Public Notice
POTW	Publicly Owned Treatment Works

PVOTW	Privately Owned Treatment Works
PWS	Public Water Supply
RD	Regional Director
RO	Regional Office
SASS	Stream Analysis for Small Systems
SCAT	Sewage Collection and Treatment Regulation
SCC	State Corporation Commission
SFH	Single Family Home
SIC	Standard Industrial Classification
SOB	Statement of Basis
STP	Sewage Treatment Plant
SWCB	State Water Control Board
SWCL	State Water Control Law
TMDL	Total Maximum Daily Load
TMP	Toxics Management Program
TRC	Total Residual Chlorine
TWTDS	Treatment Works Treating Domestic Sewage
TSS	Total Suspended Solids
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VDH	Virginia Department of Health
VIMS	Virginia Institute of Marine Science
VMRC	Virginia Marine Resources Commission
VPA	Virginia Pollution Abatement (Permit)
VPDES	Virginia Pollutant Discharge Elimination System
VWPP	Virginia Water Protection Permit
WPM	Water Permit Manager
WQS	Water Quality Standards
WET	Whole Effluent Toxicity

E. Definitions

Approved program or approved State - a State or interstate program which has been approved or authorized by EPA under Part 123.

Allocated Impact Zone - A sub area within a mixing zone. The concentrations within this zone may be higher than the concentrations specified by the acute standards but the exposure time must be sufficiently short to avoid lethality.

Average weekly discharge limitation - means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Available Technology Economically Achievable (BAT) - for discharges of nonconventional and toxic pollutants from existing industrial point sources. This treatment represents the best existing performance for the industrial category or subcategory. It is based on the very best pollution control and treatment measures developed to date or measures that are capable of being developed. BAT limitations are subject to "fundamentally different factors" variances (9VAC25-31-100 L). The deadline for compliance with BAT limitations was March 31, 1989.

Best Conventional Pollutant Control Technology (BCT) - for discharges of conventional pollutants from existing industrial point sources. BCT replaces BAT for the control of conventional pollutants and BCT limits must be at least as stringent as BPT limits. The CWA, □ 304, requires that BCT limitations be assessed in light of a two part "cost reasonableness" test. The first test compares the cost for private industry to reduce its conventional pollutants to the costs of publicly owned treatment works (POTW) to reduce their conventional pollutants. The second test examines the cost effectiveness of additional industrial treatment beyond BPT. EPA must find that limitations are "reasonable" under both tests before establishing BCT. The deadline for compliance with BCT limitations was March 31, 1989.

Best Management Practices (BMPs) - schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce water pollution. BMPs may address plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Practicable Control Technology Currently Available (BPT) - technologybased limitations in which the total cost of applying the technology is balanced against the effluent reduction benefits. BPT was the first level of effluent standards established by the CWA. It applies to conventional, nonconventional and toxic pollutants. Limitations are generally based on existing performance of various sized plants within the industry or subcategory. -The deadline for compliance with BPT requirements was July 1, 1977.

Professional Judgement (PJ) – limitations or conditions developed on a technology or water quality basis for a category of discharges or for individual discharges. Case-by-case PJ limitations or conditions may be developed by DEQ staff based on knowledge of treatment processes, analytical data, empirical evidence from similar facilities, site conditions, etc. Limitations or conditions that are to be applied to a category of discharges, when EPA guidelines have not been promulgated, may only be established in accordance with the applicable requirements of 40 CFR Part 125 and the Virginia Administrative Process Act. As a general rule, BPJ for BCT limitations are set using promulgated BPT guidelines. Rationale for all PJ limitations and conditions should be provided in the FS.

Bypass (9VAC25-31-10) - the intentional diversion of waste streams from any portion of a treatment facility.

Biochemical Oxygen Demand (BOD) - the amount of oxygen used by bacteria when decomposing organic matter. This may include the oxygen consumed by reduced forms of nitrogen (nitrogenous demand) as well as the organics (carbonaceous demand).

Carbonaceous Biochemical Oxygen Demand (CBOD) - the oxygen required for the biochemical degradation of organic matter. Excludes oxygen used to oxidize reduced forms of nitrogen (nitrogenous demand).

Certified Mail – means postal certified mail, except for the mailing of plan approvals, permits, or certificates issued under the provisions of chapter 10.1 of the Code of Virginia and the State Water Control Law (§ 62.1-44.2 et seq.) where the recipient has notified the Department of his consent to receive plan approvals, permits, or certificates by electronically certified mail.

Chemical Oxygen Demand (COD) - a quantitative measure of the amount of oxygen required for the chemical oxidation of inorganic and organic material in wastewater.

Clean Water Act (CWA) - (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Laws 95-217, 96-483, 97-117, 33 U.S.C. 1251 et. seq.

Complete Application – an application is complete when all necessary blanks are accurately filled in, the proper signature applied, all necessary documents are attached, the permit fee paid, and no further information from the permittee is necessary to develop the fact sheet and draft permit.

Completely Mixed - The condition where there is no more than a specified difference in the concentration of a material across the width and/or depth of a flowing stream. Note that, when referring to a lake or estuary, complete mix may need to be defined to include the length of the water body as well as the width and depth. However, this consideration is not addressed herein.

Composite Sample - means a combination of individual samples of water or wastewater taken in proportion to flow or time which ensures that a representative sample is obtained. Composites can represent samples collected over 24 hours or they may be from shorter time periods (e.g., 8-hour composite).

Consent Decree - a unilateral instruction by a judge to the parties involved (this may or may not involve DEQ/SWCB).

Consent Order - an administrative action of the State Water Control Board directed to a permittee.

Continuous discharge (9VAC25-31-10) - a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Control measure means any best management practice or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to surface waters.

Conventional Pollutants (40 CFR Part 401.16) - pollutants which have biodegradable, oxygen demanding materials and solids which have characteristics similar to naturally occurring biodegradable substances (e.g., total suspended solids, BOD, pH, oil and grease).

Daily discharge (9VAC25-31-10) - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents a calendar day for the purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement (e.g., concentration) "daily discharge" is calculated as the average measurement of the pollutant over the day.

Design Flow - based on the design capacity of the facility, which is determined as the average rate of influent flow per 24 hours that can be reliably treated by that facility based on flows received at full build out. The facility must be designed to process this influent flow 365 days a year with appropriate peak factors provided to meet reliability and redundancy requirements.

Director -the EPA Regional Administrator or the DEQ Director, as the context requires, or an authorized representative.

Discharge of a pollutant (9VAC25-31-10) - a) any addition of any pollutant or combination of pollutants to surface waters from any "point source,"; or (b) any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft used as a means of transportation.

Discharge Monitoring Report (DMR) (9VAC25-31-10) - a form (including e-DMR) approved by the department for the reporting of self-monitoring results by permittees.

Domestic Facility - means any facility that treats kitchen and bathroom waste with no direct or indirect contribution of industrial process waste and is not a POTW or PVOTW.

Draft permit (9VAC25-31-10) - a document indicating the tentative decision to issue, deny, reissue, modify, revoke and reissue, or terminate a permit. A Notice of Intent to Terminate is a type of draft permit but denials of requests for modification, revocation and reissuance or termination are not.

Drifting organism - means a planktonic aquatic organism depending solely on the stream current for bulk movement. A drifting organism is unable to move against the current. A drifting organism has a mean velocity at least equal to the mean velocity of the current through a PMA or RMZ.

Dry season - the contiguous months that have a monthly average flow less than or equal to the period of record average flow.

Effluent Limitation (9VAC25-31-10) - any restriction imposed by the department on quantities, discharge rates, and concentrations of pollutants discharged from point sources into surface waters, the waters of the contiguous zone or the ocean.

Effluent Limitations Guidelines (9VAC25-31-10) - a regulation published by the EPA Administrator under section 304(b) of CWA to adopt or revise effluent limitations. (See 40 CFR Parts 400 through 699)

Ephemeral Stream - any drainage way, ditch, hollow, or swale that contains only (1) flowing water during or immediately following periods of rainfall or (2) water supplied by the discharger.

Estuarine Waters - those waters located at the mouth of a river where the river current meets the tide. Consult the Water Quality Standards regulation, 9VAC25-260-140 C, for specific designations of estuarine waters in Virginia.

Facility or activity (9VAC25-31-10) - any VPDES point source, or treatment works treating domestic sewage or any other facility, or activity (including land or appurtenances thereto) that is subject to regulation under the VPDES program.

Fall Zone - an imaginary line or narrow zone marking the points where rivers make a sudden descent from the Piedmont Plateau to the Atlantic Coastal Plain. It also marks the limit of navigability of the rivers.

General Permit - a regulation promulgated under 9VAC25-31-170 to provide permit coverage to a class of facilities with similar effluent characteristics. Instead of applying for and being issued an individual permit, facilities qualifying for a general permit submit a registration statement and are then covered under the general permit.

Grab Sample - means an individual sample collected at a randomly selected time over a period not exceeding 15 minutes.

Gray Water - the term given to domestic wastewater composed of washwater from sinks, kitchen sinks, bathroom sinks, showers and tubs and laundry tubs.

Harmonic Mean - the critical receiving stream flow used to calculate carcinogenic human health standards. It is the reciprocal of the arithmetic mean of the flow reciprocals.

Hazardous Substance - any substance designated under the Code of Virginia or 40 CFR Part 116 pursuant to Section 311 of CWA.

High Flow Season - the two or more contiguous months that have a monthly average flow greater than the period of record average flow.

Indirect Discharge - the introduction of pollutants into a POTW from any nondomestic source regulated under Section 307(b), (c) or (d) of the Clean Water Act and the SWCL.

Indirect Discharger (9VAC25-31-10) - a nondomestic discharger introducing pollutants to a publicly owned treatment works.

Industrial Facility - establishments with activity in which they are engaged as an economic unit, generally at a single location where business is conducted, services or industrial operations performed, or in which raw materials are changed into useful products.

Instream Waste Concentration (IWC) - the concentration of an effluent, expressed as a percentage, which occurs in the receiving waterbody after complete mixing.

Internal Outfall - a discharge point within a facility which combines with one or more flow streams prior to releasing to a surface water.

Intermittent Stream - a stream that contains flowing water for extended periods during a year but does not carry flow at all times.

Laboratory Inspection - a comprehensive review of a lab's sampling, analytical, and record-keeping procedures. The inspection is documented on the DEQ Laboratory Inspection Report form.

Lethality, (includes "acute lethality") - In reference to a specific chemical, lethality means the exposure of an organism to concentrations higher than the acute criteria listed in 9 VAC 260-25-140.B for a period of one hour or longer.

Low Flow Season - the two or more contiguous months that have a monthly average flow less than or equal to the "period of record average flow".

Major Facilities - municipal facilities with design capacities equal to or greater than 1.0 MGD and industrial facilities that score 80 or more points on the NPDES Permit Rating Worksheet. Permits for major facilities must go to EPA for review and concurrence prior to issuance.

Maximum daily discharge limitation (9VAC25-31-10) - the highest allowable daily discharge.

Minor Facilities - all facilities not falling within the major category.

Minor Modification - permit modifications which do not require public notice and opportunity for hearing. (Refer to 9VAC25-31-400)

Mixing Zone: An area or volume in a stream wherein mixing is allowed. All criteria may be exceeded within this zone but must be met at its boundaries.

Mixing zone concepts - The concentration of pollutants and the exposure times for various classes of non-resident organisms are estimated for locations near an effluent outfall. These are compared

to the requirements of the mixing zone standard to ascertain if the expected PMA results in conditions sufficient to justify a complete mix assumption or if a RMZ must be specified in the VPDES permit for that outfall.

Model - a series of mathematical equations directed at predicting a quantitative relationship between a particular waste stream and its impact on the quality of the receiving waters. Models may be calibrated and verified with field data.

Monthly average discharge limitations (9VAC25-31-10) - the highest allowable average of "daily discharges" over a calendar month, being either the value of the single monthly measurement or calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Monthly average stream flow - this is the average of all the flows measured in a particular month over the entire period of record. Stream flow values for individual years are tabulated in the U.S.G.S Water Resources Data books. The value for the period of record must be calculated using these values.

Municipal Facility - a treatment works, other than an industrial facility, whose primary function is to receive and treat wastewater from domestic sources or from indirect industrial sources. Analogous to TWTDS.

Municipality (9VAC25-31-10) - a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of CWA.

New Discharger (9VAC25-31-10) - any building, structure, facility or installation from which there is or may be a discharge of pollutants and which:

1. on August 13, 1979, had never discharged pollutants;
2. has never received a final effective VPDES permit for discharges at the site; and
3 cannot be defined as a new source; or
4. is an indirect discharger that begins discharging to State waters after August 13, 1979 and does not have an existing permit.

New Source (9VAC25-31-10) - any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after publication of proposed standards of performance under Section 306 of the Act applicable to such source if such standards are thereafter promulgated in accordance with that section within 120 days of their proposal.

New Source Performance Standards - effluent limitations or guidelines that apply to facilities that can be defined as new sources. NSPS represent the most stringent numerical values attainable through the application of the best available demonstrated control technology for all pollutants (toxic, conventional and nonconventional).

Nonconventional Pollutants - pollutants not specifically designated as a toxic pollutant in Section 307(a)(1) of the Clean Water Act, or not a conventional pollutant (e.g., COD, ammonia, phosphorus).

Non-Process Wastewater - water that does not contact raw materials, intermediate products, finished products, by-products, waste, or wastewater (e.g., noncontact cooling water).

NPDES Permit Rating Worksheet - an EPA provided mechanism used to classify industrial permits as major or minor.

Nutrient Enriched Water - a special standard set by the SWCB based on an evaluation of the historical water quality data for one or more of the following indicators of nutrient enrichment: chlorophyll "a" concentrations, dissolved oxygen fluctuations, and concentrations of total phosphorus. Locate these waters in the WQS Nutrient Enriched Waters, 9VAC25-260-350. Currently, these special standards only apply to four free flowing non-Bay watersheds due to adoption of nutrient criteria for the Chesapeake Bay.

1Q10 - the critical receiving stream flow used to calculate acute aquatic life standards. It is the lowest stream flow which, on a statistical basis, would occur over a 1-day period once every 10 years.

Overflow - the unintentional discharge of wastes from any portion of a treatment works.

Passing organism - A free swimming aquatic organism that has a mean velocity, in any direction, at least equal to the mean velocity of the current through a PMA or RMZ.

Permanent Stream - a stream that contains flowing water at all times, absent anthropomorphic influences, and has a well-established aquatic community.

Period of record average flow - this is the average of all the flows measured over the entire period of record. This value is published in the U.S.G.S. Water Resources Data books.

Physical Mixing Area (PMA) - The actual physical space required for an effluent to become completely mixed with its receiving stream. Note that, by definition, a PMA must extend from the discharge point to the complete mix point and must eventually occupy the entire width and depth of the receiving water. The size of a PMA and the distribution of materials within it are functions of the design of the outfall structure, the relative volumes and velocities of the mixing streams and the physical conditions in the stream. Changes in any of these parameters will usually result in a different PMA. However, the discharge of an effluent always results in a PMA and always requires a finite time and space regardless of the characteristics of the mixing streams.

In this regard, please note that physical mixing always takes place. When a mixing zone is "not allowed" what it really means that the parameter of interest must be equal to the ambient or background concentration prior to discharge (e.g. “end of pipe” limits equal to the existing quality of the stream).

Point Source (9VAC25-31-10) - any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agricultural land or agricultural storm water runoff.

Pollutant (9VAC25-31-10) - dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean: 1) Sewage from vessels; or 2) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the department, and if the department determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Pollution (§ 62.1-44.3) - means such alteration of the physical, chemical or biological properties of any state waters as will or is likely to create a nuisance or render such waters: (a) harmful or

detrimental or injurious to the public health, safety or welfare, or to the health of animals, fish or aquatic life; (b) unsuitable with reasonable treatment for use as present or possible future sources of public water supply; or (c) unsuitable for recreational, commercial, industrial, agricultural, or other reasonable uses; provided that (i) an alteration of the physical, chemical, or biological property of state waters, or a discharge or deposit of sewage, industrial wastes or other wastes to state waters by any owner which by itself is not sufficient to cause pollution, but which, in combination with such alteration of or discharge or deposit to state waters by other owners is sufficient to cause pollution; (ii) the discharge of untreated sewage by any owner into state waters; and (iii) contributing to the contravention of standards of water quality duly established by the department, are "pollution".

Primary Industry Category - any industry category listed in 40 CFR, Part 122, Appendix A.

Priority Pollutants - serve as the basis for BAT, new source performance standards, and pretreatment standards for new and existing sources. The 126 priority pollutants consist of 111 organics, 13 heavy metals, cyanide, and asbestos. (Promulgated by EPA in 1976).

Privately Owned Treatment Works (PVOTW) (9VAC25-31-10) - any device or system which is: 1) used to treat wastes from any facility whose operator is not the operator of the treatment works; and 2) is not a POTW.

Process Wastewater (9VAC25-31-10) - any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

Publicly Owned Treatment Works (POTW) (9VAC25-31-10) - any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. Sewers, pipes, or other conveyances are included in this definition only if they convey wastewater to a POTW providing treatment.

Quantification Level (QL) - the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

Reissuance - internal DEQ language not defined in the regulations. Reissuance refers to the issuance of a permit which has previously been issued.

Regulatory mixing zone (RMZ) - An area or volume in a stream, the boundaries of which must be specified in a VPDES permit or other legal document adopted or approved by the department or its designee, wherein a specific amount of mixing is allowed to take place. The maximum size of a RMZ is specified in the water quality standards at 9VAC25-260-20.B.

Resident organism - means any organism that has a mean velocity less than the mean velocity of the current through a PMA or RMZ.

Schedule of Compliance (9VAC25-31-10) - a schedule of remedial measures in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the SWCL, the CWA and regulations.

Seasonal Low Flow (Seasonal 7Q10) - the seven consecutive day average flow that occurs during the wet season with a 10-year recurrence.

Seasonal year - this year is analogous to the "water year" used for flood analysis and the "climatic year" used for annual 7Q10 analysis. It is defined as beginning on the first day of the dry season and ending on the last day of the wet season.

Secondary Treatment - the second step in most waste treatment systems in which bacteria consume the organic parts of the waste. It is accomplished by bringing together waste, bacteria, and oxygen in trickling filters or in the activated sludge process. The minimum technology-based

level of effluent quality attainable by municipal facilities, with secondary treatment, is currently 30 mg/l for BOD and TSS and pH 6.0-9.0. (See 40 CFR Part 133)

7Q10 - the critical receiving stream flow used to calculate chronic aquatic life standards. It is the low flow which, on a statistical basis, would occur for a 7 consecutive day period once every 10 years.

Shall - means a mandatory requirement.

Should - means a recommendation.

Single Family Home - means a treatment works with a design capacity ≤1000 gpd at a single family dwelling. This does not include treatment works at duplexes, apartments, etc.

Standard Industrial Classification (SIC) - is the classification of establishments by type of activity in which they are engaged. The SICs are listed in the U.S. Office of Management and Budget Standard Industrial Classification Manual.

State Waters (§ 62.1-44.3)- all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction.

Stormwater Runoff - water discharged as a result of rain, snow, or other precipitation.

Stormwater Associated with Industrial Activity (See the definition at 9VAC25-31-10)

Technical Inspection - a complete and detailed evaluation of the operations and maintenance of the wastewater treatment process and/or sludge treatment process, and an evaluation of the facility's record keeping, sampling, lab testing procedures, and pretreatment program implementation. The inspection is documented on the VDH-SWCB Wastewater Facility Inspection Report form.

Technology-based Effluent Limitation – a limit based on federal effluent guidelines regulations, 40 CFR Parts 400 through 699.

TKN (Total Kjeldahl Nitrogen) - the sum of ammonia-nitrogen and organic nitrogen, determined together by one analytic technique.

30Q5 - the critical receiving stream flow which is used to calculate the non-carcinogenic human health standards. It is the lowest stream flow which, on a statistical basis, would occur for a 30 day consecutive period once every 5 years.

30Q10 - the critical receiving stream flow which is used to calculate ammonia waste load allocations. It is the lowest stream flow which, on a statistical basis, would occur for a 30 day consecutive period once every 10 years.

Tiered (Seasonal) Limits - tiers are used in permits to establish effluent limits associated with a "wet season" and a "dry season", or "cold" and a "warm" season. There should be no more than two tiers in a permit primarily because of the administrative and technical difficulties of drafting, tracking, monitoring and enforcing the permit. Tiered permit limits are acceptable for ammonia, BOD and the associated TSS. [Even though ammonia has toxic properties, it is nonpersistent and biodegradable and therefore tiering ammonia limits is acceptable]. The toxics listed in the Water Quality Standards should not be tiered due to the potential for bioaccumulation. The volatile portion of the toxic pollutants do not have a pronounced tendency to bioaccumulate, but may have interactions with others that do have that tendency.

Toxicity - the inherent potential or capacity of a material to cause adverse effects in a living organism, including acute or chronic effects to aquatic life, bioaccumulation of pollutants in the tissues of aquatic organisms at levels which result in potential harm to the organism or pose a risk

to organisms in the food chain, or detrimental effects on human health or other adverse environmental effects.

Treatment Facility - only those mechanical power driven devices necessary for the transmission and treatment of pollutants (e.g., pump stations, unit treatment processes).

Treatment Works - any devices and systems used for the storage, treatment, recycling and/or reclamation of sewage or liquid industrial waste, or other waste or necessary to recycle or reuse water, including intercepting sewers, outfall sewers, sewage collection systems, individual systems, pumping, power and other equipment and their appurtenances; extensions, improvements, remodeling, additions, or alterations thereof; and any works, including land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment; or any other method or system used for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined sewer water and sanitary sewer systems.

Treatment Works Treating Domestic Sewage (TWTDS) -a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices. For purposes of this definition, domestic sewage includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works.

"Virginia Environmental Excellence Program" or "VEEP" means a voluntary program established by the department to provide public recognition and regulatory incentives to encourage higher levels of environmental performance for program participants that develop and implement environmental management systems (EMSs). The program is based on the use of EMSs that improve compliance, prevent pollution, and utilize other measures to improve environmental performance.

Wasteload Allocation (WLA) - a calculation used in establishing limits for water quality standard parameters. The wasteload allocation represents the amount of a pollutant a given facility is allowed to discharge to a receiving stream. However, the wasteload allocation may not be the same as the permit limit.

Water Quality Standards - regulations that describe water quality requirements in general terms or numerical limits for specific physical, chemical and biological characteristics of water. Water quality standards consist of numeric or narrative water quality criteria, use designations for state waters and an antidegradation policy. These statements and limits serve as the enforceable means, particularly through their use in VPDES permit limits and certification of 401 applications, to protect the beneficial use of State waters such as swimming, fishing, propagation and growth of aquatic life, and domestic water supply. (See 9VAC25-260-00 et seq.)

Weekly average discharge limitation (9VAC25-31 10) - the highest allowable average of "daily discharges" over a full calendar week, calculated as the sum of all "daily discharges" measured during a full calendar week divided by the number of "daily discharges" measured during that week.

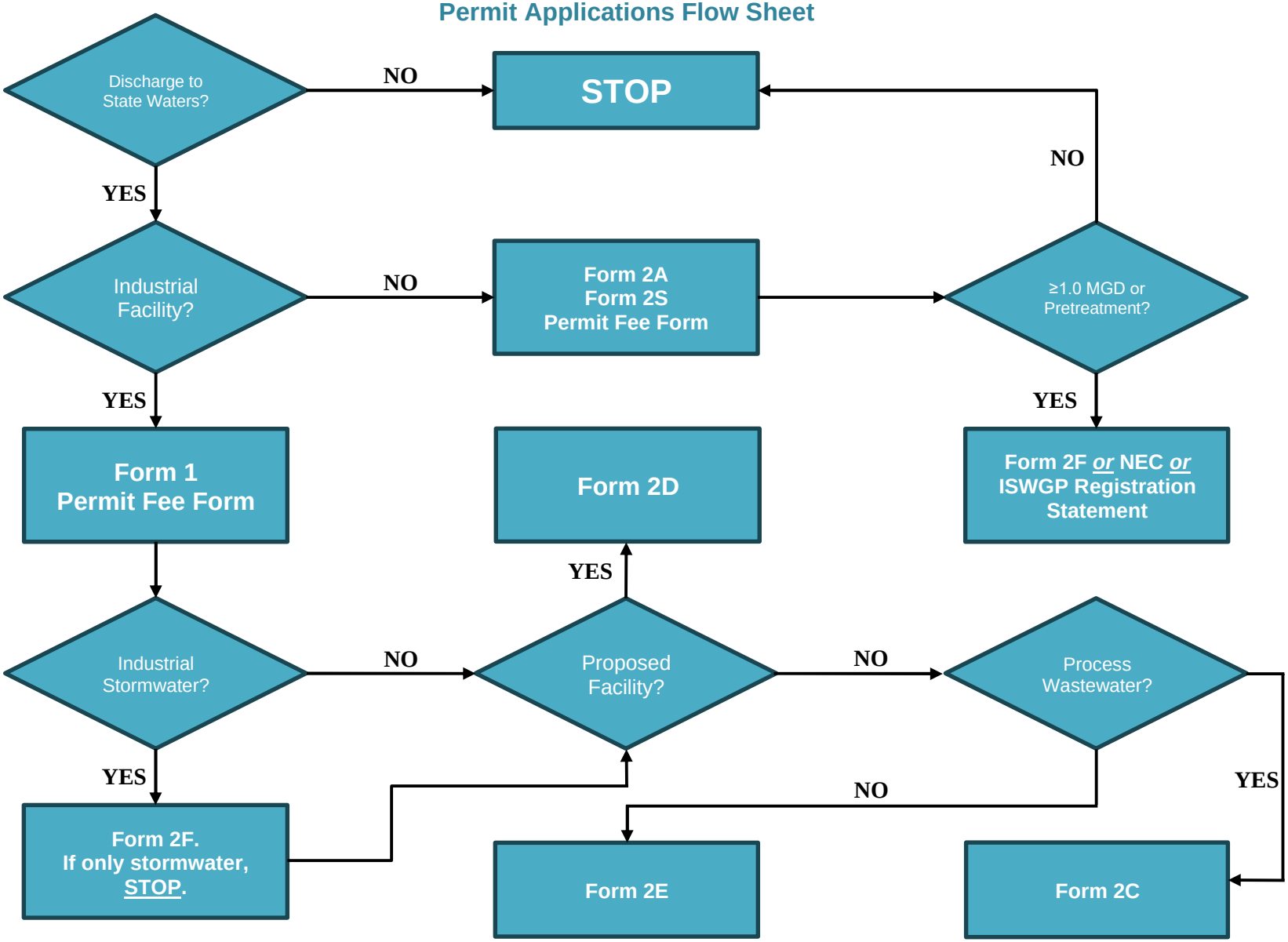
Wet season - The contiguous months that have a monthly average flow greater than the period of record average flow.

SECTION II

PERMIT APPLICATION PROCEDURES

Table of Contents

Permit Applications Flow Sheet



A. Application Processing

Due to changes in the Code of Virginia at § 10.1-1183 by HB 2089 during the 2013 General Assembly session and changes made to the permit regulation in 9VAC25-31-290 C 1, E and G2, section 360 D, section 830 B 1 and 850 J 1, some additional electronic transmittals from DEQ to the permittees, public and other agencies are allowed. Generally, anything sent by DEQ previously by hard copy mail to outside parties may be sent via email. This includes notices and permit related information (e.g. draft permit, fact sheet and application) to the applicant, interested parties, local government, other state agencies and riparian owners. According to Agency Policy Statement 3-2020 (Computer Internet Policy), any outbound email sent using a DEQ email account is to be considered as equivalent to a message sent on Agency letterhead, therefore the content and tone of any such message must reflect the official responsibilities of the author. Therefore, you may transmit applicable letters (available on DEQnet) in the body of an email or as a letterhead attachment to an email. Transmittal of the final permit (issuances and reissuances), modifications, denials or terminations via certified mail have additional procedures described in section III D before it can be emailed. If any parties prefer postal mail, we should honor that request.

Electronic submittal of all permit applications and associated application documents via myDEQ Portal should be highly encouraged.

1. Reissuance Reminder Letter and Pre-application Meeting

CEDS contains a master file of all VPDES permits within each region, including permit expiration dates. Reissuance reminder letters should be sent as a courtesy one year in advance of permit expiration for minors and two years in advance for major facilities, informing the permittee that they must file for reissuance of their permit no later than **180 days** prior to the expiration of the permit (9VAC 25-31-100 D). Provide application, permit fee forms, instructions, and other appropriate enclosures with the notification letter. The letters for notifying the permittee of reissuance requirements are linked in Section L of this manual.

To minimize deficiencies in applications, it is recommended that when transmitting application forms to a permit applicant, the permit writer offers to meet with the applicant to discuss application requirements. In this meeting, the applicant can provide an overview of the facility, operation, and discharge, and the permit writer can provide a description of the necessary application forms, the permit administrative process, and provide guidance on application completion and testing requirements. The permit writer may also want to request any additional information outside of the application that would be specifically required to process this permit.

2. Update CEDS and Initiate PEEP Workflow

Update CEDS upon transmittal of the reissuance reminder letter and initiate a PEEP workflow upon receipt of the application. PEEP workflows should be updated daily as actions and events occur. See the PEEP VPDES Permitting User Manual for more information.

3. VPDES Permit Application Forms

(See applicability discussion in Sections II.B and C)

Form 1 - All industrial applicants must complete this form and attach to the appropriate form(s) from the list below.

Permit Fee Form (for issuances and major permit modifications) - All applications must include this form and the appropriate fee. The form and the fee are not returned to the regional

office with the application rather are returned to DEQ, Receipts Control, P.O. Box 1104, Richmond, VA 23218.

Public Notice Billing Authorization Form – All applications must include this form that is signed by an authorized agent. See Section 5 for further information.

Form 2A – All POTWs and other TWTDS

Form 2B – Animal Feeding Operations (only if they can't qualify for VPA permit)

Form 2C – Industrial Process Wastewater Discharges

Form 2D – Proposed Industrial Discharges

Form 2E – Industrial Nonprocess Wastewater Discharges

Form 2F – Stormwater Associated with Industrial Activity

VPDES Sewage Sludge Application Form for Reissuance (Short form) – The reissuance form is to be used for reissuance of all VPDES permits that treat municipal wastewater, whether or not there have been/will be any changes in the sludge handling practices. Use of this form ensures that we have up-to-date information about the facility's sludge handling practices, even if they are not land applying. The form covers the scenario where permittees they 1) dispose sludge in a landfill, 2) send sludge to another facility for treatment, storage, or blending, 3) generate Class B biosolids and send to a contractor, 4) generate Class B biosolids and land apply themselves, and 5) generate EQ biosolids and distribute and market under the VPDES permit or send to a third party to distribute and market. If scenario #4 applies (generate and land apply under the VPDES permit), it will be necessary for OLAP staff to review the site books submitted to ensure that they meet all the regulatory requirements and that the agency GIS system is updated.

VPDES Sewage Sludge Application Form (Long form) – Is to be used for new facilities only.

Form 2S – Use of the EPA Form 2S is not necessary, and exclusive use of the DEQ forms is preferred.

VPDES Permit Addendum Form – This form requests information the permit writer will use in processing the permit, which is not included on the standard EPA application forms. It should be sent with all permit application packages. An example addendum form is available on DEQnet. For reclamation and reuse projects the water reclamation and reuse application addendum is needed in addition to the VPDES permit application addendum in most issuances and reissuances. See GM No.10-2001, Revision No. 1 for full guidance on implementation of water reclamation and reuse in conjunction with VPDES permitting.

4. Application Package Enclosures

a. Pollution Prevention Flyer

DEQ is emphasizing pollution prevention in all aspects of our regulatory functions. This is a voluntary program designed to improve environmental quality by helping dischargers avoid activities that create pollution. The facility can realize economic benefits as well as environmental benefits.

Permit writers should take every opportunity to promote P2 to VPDES permitted facilities. An informational flyer has been developed by the Office of Pollution Prevention for distribution to permittees. The flyer introduces the P2 concept and offers DEQ technical assistance if the recipient wishes to take advantage of the program. One of these flyers

should be included with each permit application, new or reissuance. The flyer is available on DEQnet.

b. Paperwork Reduction Act Notice

The Paperwork Reduction Act Notice must accompany every industrial permit application. It estimates the amount of time required to complete each application form. The instructions for Form 2A have this notice paragraph built in. The notice format is available on DEQnet.

c. Common Application Errors Sheet

In an effort to help applicants avoid common mistakes on their applications, DEQ has developed a short list of common application errors. Permit writers may modify the list of problems as they see fit. This sheet may be sent with all application packages, at the permit writer's discretion. See DEQnet for an example.

d. Local Government Ordinance Form (for new issuances)

The Local Government Ordinance Form (LGOF) is required by State Water Control Law at §62.1-44.15:3:

- Whenever a new individual VPDES permit is issued for a discharge of sewage, industrial waste or other wastes. The permit application cannot be considered complete without this local government certification. An example LGOF is available on DEQnet. While the applicant can forward the form to the locality via email, the form should be returned as a hard copy with the appropriate signatures.

If the locality does not respond to the applicant's LGOF request within 30 days, the law says the notification requirement is waived. In order to verify that the 30 day time limit has expired, the applicant should send a copy of the LGOF request, which shows the date the request was made, to the regional office with his application.

Since the law (§62.1-44.15.4) also requires the Board to notify local governments when an application is received for a new or modified permit, the regional office may want to advise the locality in the application notice letter that the LGOF was not received (See Section L for template).

f. Public Notice Billing Authorization Form

This form requests an authorized signature and billing contact information that the permit writer will need when they contact the newspaper to set up the public notice. 9VAC 25-31-100.F allows the department to request "any supplemental information…completed to its satisfaction" along with the application. This form should not be considered a permittee's concurrence with the draft permit. **If this signed form is not received with the application, the permit writer shall not send the application complete notice.**

5. Application Filing Requirements

The owner or owner's agent files an original and an electronic version if submitted via email) with the appropriate DEQ regional office. It is acceptable to receive an electronic application via email and use the electronic submittal date as the application received date. However, the electronic application not submitted via myDEQ Portal must be followed up with the original, hard copy signed application in order to make the determination of a totally and technically

complete application. The permit writer should send a copy of the application to the Virginia Department of Health (VDH) Office of Drinking Water Field Office. If the discharge for municipal facilities is below the fall zone (except in the Chowan Basin) a copy of the permit application should also be forwarded to the VDH Division of Shellfish Sanitation. For industrial facilities, if the discharge contains 10% or more sewage and is below the fall zone (except in the Chowan Basin) the permit writer should forward the application form to the VDH Division of Shellfish Sanitation. See further discussion of permits to send to DSS and other agencies under the "Application Review by Other Agencies" heading in this section. Refer to Section L for VDH addresses, emails, and telephone numbers.

6. Testing Waiver Procedures

a. All applicants are to provide all of the information (including sample type and frequency) required by the application form unless a waiver is specifically requested, and the waiver is granted. Otherwise, the application must be considered incomplete. The applicant must submit a written request (this may be in an email) for the waiver. Permit writers may inform applicants of the availability of waivers when sending application forms. Note: We no longer send any type of waiver request to EPA for approval and granting of waivers for municipalities is significantly reduced (see below).

b. Waivers for all forms. The regional office may grant application testing waivers with the following exceptions:

(1) Some application forms have application testing requirements for certain parameters which cannot be waived. See the application instructions for more information.

(2) DEQ has established recommended minimum testing requirements for certain discharge classes. See the discussion under the specific application forms later in this section.

c. Maintain documentation in the permit file of both the waiver request and the granting of the waiver. A testing waiver request shall be submitted with each reissuance. The waiver justification should be documented in the Fact Sheet for each reissuance.

d. The RO may grant a waiver from the requirement for 24-hour composite samples where the discharge is not continuous over a 24-hour period. The case-by-case sampling requirements developed in lieu of the 24-hour composite must be representative of the average discharge over the discharge period and include a minimum of 4 grab samples.

e. Waivers may be allowed for municipalities for dissolved vs. total recoverable metals when TSS limits have been met. However, please note that the Water Quality Criteria Monitoring form requires dissolved metals to be sampled.

f. Waivers for Form 2A cannot be granted for parameters just because there is no corresponding numeric water quality standard. Waivers for parameters or sampling type (grab or composites) on Form 2A for major municipalities should not be provided.

g. *E. coli* or enterococci may substitute for fecal coliform.

7. Analytical Methods

Except as specified in subdivision (b) below, a permit application shall not be considered complete unless all required quantitative data are collected in accordance with sufficiently sensitive analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N (Effluent Guidelines and Standards) or O (Sewage Sludge).

a. For the purposes of this requirement, a method approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O is "sufficiently sensitive" when:

   1) The method minimum level (ML) is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter; or

   2) The method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

   3) The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter.

b. When there is no analytical method that has been approved under 40 CFR part 136, required under 40 CFR chapter I, subchapter N or O, and is not otherwise required by the Director, the applicant may use any suitable method but shall provide a description of the method. When selecting a suitable method, other factors such as a method's precision, accuracy, or resolution, may be considered when assessing the performance of the method.

Note to paragraph 7.a.:

Consistent with 40 CFR part 136, applicants have the option of providing matrix or sample specific minimum levels rather than the published levels. Further, where an applicant can demonstrate that, despite a good faith effort to use a method that would otherwise meet the definition of "sufficiently sensitive", the analytical results are not consistent with the QA/QC specifications for that method, then the Director may determine that the method is not performing adequately and the applicant should select a different method from the remaining EPA-approved methods that is sufficiently sensitive consistent with 40 CFR 122.21(e)(3)(i). Where no other EPA-approved methods exist, the applicant should select a method consistent with 40 CFR 122.21(e)(3)(ii).

B. Municipal Permit Application Requirements

1. Privately Owned Treatment Works (PVOTW)

a. State Corporation Commission Registration Requirements

Article 2, § 62.1-44.15:3 of the State Water Control Law states the following in regards to PVOTWs:

"No application for a certificate to discharge sewage into or adjacent to state waters from a privately owned wastewater treatment system serving fifty or more residences shall be considered complete unless the applicant has provided the Executive Director with notification from the State Corporation Commission that the applicant is incorporated in the Commonwealth and is in compliance with all regulations and relevant orders of the State Corporation Commission."

All PVOTWs serving or designed to serve 50 or more residences must be registered with the State Corporation Commission (SCC) when applying for a permit issuance or reissuance. PVOTWs expanding to serve 50 or more residences who apply for modification of an existing permit are also required to provide this notice. Applications for Federal facilities are not required to provide this certification even though they are considered PVOTWs and may fit the "serving 50 residences" criteria.

Verification can be accomplished by having the applicant provide a copy of the SCC Certificate of Incorporation (for Virginia based operations), evidence of status as a Limited Liability Company (LLC) with the SCC or the Certificate of Authority (for operations based out of state or out of the country) with the application. Verification must also be included that they are in compliance with all regulations and relevant orders of the State Corporation Commission. This may be a letter, email, certificate from the SCC or a screenshot from the SCC database indicating their status. Applications from these facilities cannot be deemed complete unless their registration is verified. SCC information can be found here: https://www.scc.virginia.gov/pages/Businesses

b. Financial Assurance/Closure Requirements

The Financial Assurance Regulation 9VAC25-650 applies to all privately owned sewerage systems that treat sewage generated by private residences and discharge more than 1,000 gpd and less than 40,000 gpd. A private residence is defined by this regulation as "any building, buildings or part of a building owned by a private entity which serves as a permanent residence where sewage is generated. Private residences include, but are not limited to, single family homes, town homes, duplexes, condominiums, mobile homes, and apartments. Private residences do not include hotels, motels, seasonal camps, nursing homes, schools and industrial facilities that do not also serve as residences. Therefore, the financial assurance requirements apply to any privately owned treatment works within the stated flow regime where interruption of sewer service would mean that residents served by the facility could no longer occupy their permanent homes.

If the treatment works was permitted prior to January 1, 2001 and has a **permitted** flow of less than 5,000 gpd and was not in violation of their permit or the Law for the past 5 years, they may seek a waiver from the financial assurance requirements under 9VAC25-650-150. The waiver has to be approved by the local governing body after a public hearing is held. The Department may revoke the waiver at any time for good cause.

The regulation requires that the following three items be submitted with the VPDES permit application for new issuances or reissuance after December 14, 2000:

- Closure plan

- Cost estimate for facility closure
- One, or a combination of, the financial assurance mechanisms

> The VPDES permit should not be issued/reissued unless the closure plan, cost estimate and draft financial assurance mechanism have been approved. Prior to reissuance of a permit to an existing facility, it is the Department's policy that the final, approved financial assurance mechanism must be in place. Central Office financial assurance staff will review and approve the financial assurance mechanism.

The regional office is responsible for reviewing the facility closure plan and cost estimate and for ensuring that the facility closure plan and cost estimate are updated to reflect changes in flow or other facility characteristics that substantially affect the facility closure plan. Technical assistance in the review of closure plans and cost estimates will be provided by the Office of VPDES Permits.

2. Permit Application Requirements for POTW and PVOTW:

The following permit application forms are required for POTW and PVOTW:

- Local Government Ordinance Form (for new issuances)
- EPA Form 2A
- EPA Form 2F (TWTDS with a design flow > 1.0 MGD or required to have an approved pretreatment program unless a No Exposure Certification is obtained)
- VPDES Permit Application Addendum
- VPDES Sewage Sludge Permit Application Form (for new issuances)
- VPDES Sewage Sludge Permit Application Form for Permit Reissuance
- Water Quality Criteria Monitoring Form (on a case-by-case basis; see Attachment A decision matrix)
- Public Notice Billing Authorization Form
- Reclamation and reuse application addendum (for reclamation and reuse projects; see GM10-2001 for full guidance)

The following documents are required to be submitted by all PVOTW that treat sewage generated by private residences and discharge more than 1,000 gpd and less than 40,000 gpd. See Section II.B.1.b for additional information:

- Closure plan
- Cost estimate
- Draft financial assurance mechanism

a. Local Government Ordinance Form (LGOF)

See Section II.A.4.d for more details when this form is required. Ann LGOF template form is available on DEQnet.

b. EPA Form 2A

As of September 27, 2000, Form 2A is the only form used for applications for discharges from POTWs and all other TWTDS (9VAC 25-31-100 J). Form 2A contains six sections. Sections 1, 2, 3, and 6 are required for **ALL** applicants. Discharges with a design flow of 100,000 gpd or more will also complete Part B. Those TWTDS that accept process wastewater from Significant Industrial Users or that receive RCRA or CERCLA waste must complete Section 4. If the system has combined sewer overflows (CSOs), the applicant must also complete Section5. Table A is required for all applicants. Table B is required for all

POTWs and other TWDS with a design flow equal to or greater than 0.1 MGD. If the design flow is greater than or equal to 1 MGD (municipal majors), or if the applicant is required to have a pretreatment program, then they will complete Tables C, D, E as applicable. Detailed instructions are provided with Form 2A. Note that federal facilities that receive 50 percent or more industrial waste use Form 2C.

Domestic Sewage Discharges ≤ 1000 gpd General Permit Registration Statement

Domestic sewage discharges of ≤ 1000 gpd may be eligible for coverage under a general permit. In this case, the applicant would file a registration statement requesting coverage under the general permit in lieu of an application. For more information, please see the Guidance Memo for this general permit.

(1) Form 2A Testing Requirements

All applicable questions on Form 2A should be answered. If a question does not apply, the applicant should enter an NA (Not Applicable) to show that the question was considered but does not apply. Applicants who do not have information for the answers to Question 3.7, which ask for critical flows and receiving stream hardness, may indicate "NA" or "unknown". DEQ will generate this information from our own sources if it is needed. Form 2A has specific testing and data submission requirements, especially for facilities with discharges equal to or greater than 1.0 MGD or that have pretreatment programs.

c. Form 2F

TWTDS with a design flow ≥ 1.0 MGD or required to have an approved pretreatment program are considered by the VPDES Permit Regulation (9VAC25-31-10) to generate "stormwater associated with industrial activity" if they have a point source stormwater discharge from the treatment plant site. These treatment plants are required to either submit Form 2F for stormwater characterization as part of the individual permit application process, apply for an Industrial Stormwater general permit (9VAC25-151), or apply for a No Exposure Certification (NEC). See Section III for more information on stormwater permitting requirements for TWTDS.

The testing required on Form 2F is considered the "minimum testing requirements" as recommended by DEQ. **Note:** Advise the applicant that the monitoring for metals on the Form 2F should be for the dissolved form. Existing data may be used, if available, in lieu of sampling conducted solely for the purposes of this application, provided it is representative of the present discharge and was collected within 3 years of the application due date. Among the factors that would cause the data to be unrepresentative are significant changes in production level; changes in raw materials, processes, or final products; and changes in stormwater treatment.

Form 2F contains a provision allowing only one outfall to be analyzed if it is representative of other substantially similar, solely stormwater discharges at the facility. However, the applicant must request this in writing and obtain RO approval prior to submission of the data from one outfall as representative of others. The request should include the locations of the outfalls, why the outfalls are expected to discharge substantially identical effluents, including evaluation of monitoring data, where available, estimates of the size of the drainage area (in square feet) for each of the outfalls and an estimate of the runoff coefficient of the drainage areas (low: under 40%; medium: 40% to 65%; high: above 65%).

d. VPDES Permit Application Addendum

This form requests information the permit writer will use in processing the permit, which is not included on the standard EPA application forms. It should be sent with all new permit application packages, although some of the information may be useful for reissuances as well. An example addendum form can be found on DEQnet. For reclamation and reuse projects the water reclamation and reuse application addendum is needed in addition to the VPDES permit application addendum in most issuances and reissuances. See.GM No.10-2001 for full guidance on implementation of water reclamation and reuse in conjunction with VPDES permitting.

e. Form 2S

This form is required to be completed by all TWTDS. The form is divided into two parts:

Part 1 requests a limited amount of information from ''sludge-only'' facilities (facilities without a currently effective VPDES permit) that were not directed by DEQ to submit a full permit application at this time. It is intended to allow DEQ to identify these facilities, track sewage sludge use and disposal, and establish priorities for permitting.

Part 2 is for any facility that is submitting a full VPDES permit application. Details on completing the form are provided in the instructions.

If the sludge management plan involves land application, send a copy to CO Office of Land Application (Neil Zahradka) for review.

f. Water Quality Criteria Monitoring Form (Attachment A)

This form may be required as part of an application submittal or as a permit requirement. The following table provides a decision matrix for Attachment A monitoring:

Action	Facility/ Discharge Type			Required Sampling *
Issuance	Municipal	Flow > 0.040 MGD		Full List
		Flow ≤ 0.040 MGD		None [4]
	Industrial	Major		Full List [5]
		Minor	WET Testing	Full List
			No WET Testing	1
Reissuance	Municipal	Flow ≥ 1.0 MGD		Full list with each reissuance
		1.0 MGD > Flow > 0.040 MGD		2
		Flow ≤ 0.040 MGD		None [4]
	Industrial	Major		Full list with each reissuance
		Minor	WET Testing	[3]
		Minor	No WET Testing	[3]

* For unbuilt facilities or expansions, sampling and analysis is required in the permit no later than 2 years following commencement of discharge.

1. WQC monitoring is not required at issuance; however, the permit writer (PW) may require WQC monitoring (full or customized list) based on influent characteristics, industrial processes, etc.
2. WQC monitoring is not required at reissuance; however, the PW may require WQC monitoring (full or customized list) if there have been significant changes affecting the facility. Significant changes may include changes to source water, treatment processes, industrial users, etc.

3. WQC monitoring is not required at reissuance; however, the PW may require WQC monitoring (full or customized list) based on variability in effluent quality and/or if there have been significant changes affecting the facility. Significant changes may include changes to source water, treatment processes, industrial processes, etc.
4. If there are industrial users that present a concern, a full or customized list may be required at the permit writer's discretion.
5. If the permit only authorizes stormwater discharges and there are no process wastewaters, WQC monitoring may not be required.

C. Industrial Permit Application Requirements

The following applications and forms are to be completed by persons applying for an industrial permit to discharge wastewater. Detailed instructions are provided with each individual form. All questions should be answered. If a question does not apply, an NA (Not Applicable) should be entered to show that the question was considered.

Check the State Corporation Commission (SCC) database to confirm the legal name of the applicant to ensure that the entity has legal recognition in the state of Virginia. This is necessary to ensure the permit is "enforceable" under a legal entity.

SCC information can be found here: https://www.scc.virginia.gov/pages/Businesses

1. Form 1

This is a general form used with all other VPDES permit applications. It provides general information needed to identify and locate the facility, determine the type of facility, the identity of the owner and the nature of the applicant's business.

2. Form 2B

This form is used for VPDES permits for animal feeding operations that have point source discharges, such as large puppy farms. For new aquatic animal production facilities (fish farms and hatcheries), this form has been superseded by the Fish Farm Questionnaire. Concentrated animal feeding operations that are restricted by federal effluent guidelines 40 CFR 412 are permitted under the VPA program, not the VPDES.

3. Fish Farm Questionnaire

This application is to be completed by applicants for new or unpermitted concentrated aquatic animal production facilities (fish farms and hatcheries). This application will be used as a substitute for EPA Forms 1 and 2B.

The information provided in this questionnaire will allow the RO to decide if a VPDES permit is required. If the facility qualifies for a VPDES permit, then Form 2C must also be filed for the permit to be issued. Aquatic animal production facility owners who are applying for reissuance of a VPDES permit should file EPA Forms 1 and 2C.

4. Form 2C

This form is to be completed by owners of existing industrial facilities who cannot use the other application forms. Federal facilities that receive 50% or more non-domestic waste shall complete Form 2C. All questions should be answered. If a question does not apply, an NA (Not Applicable) should be entered to show that the question was considered.

a. Form 2C Testing Waivers

Tables A, B, C and D of the form require the applicant to collect and report data on the pollutants discharged for each outfall. The owner may request in writing a waiver for one or more of the pollutants. **Do not** send testing waivers to EPA for approval.

Please note that previous sampling data may be utilized but only if the sampling was done no more than three years before submission, and all data are representative of the present discharge.

b. Form 2C Testing Requirements

Table	Pollutants/Parameters	Who Completes?
A	Conventional and non-conventional pollutants	All applicants from all outfalls unless a waiver is obtained.
B	Toxic metals, cyanide, total phenols, and organic toxic pollutants	Applicants in the primary industry categories listed in Exhibit 2C-3 at the end of these instructions.
C	Certain conventional and non-conventional pollutants	Applicants subject to ELGs that limit pollutants directly or indirectly and applicants who believe pollutants may be present in their facility's discharge.
D	Certain hazardous substances and asbestos	Applicants who believe pollutants may be present in their facility's discharge.
E	2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)	Applicants that use or manufacture the pollutant or believe the pollutant may be present in the facility's discharge.

(1) Table A – All applicants must sample and report data on all the pollutants/parameters listed for all process water outfalls including noncontact cooling water outfalls and outfalls with commingled process water and stormwater (the Form 2C sampling must be performed during dry weather [i.e. no or minimal stormwater impacts]). The applicant may request, in writing, a waiver of the requirement to test for one or more of these pollutants. These pollutants include:

- BOD
- COD
- TOC
- TSS
- Ammonia
- Flow
- Temperature (winter and summer); and
- pH (minimum and maximum)

(2) Table B – This part must also be completed by all applicants for all process water outfalls, including noncontact cooling water outfalls and outfalls with commingled process water and storm water (the Form 2C sampling must be performed during dry weather conditions). If the permittee indicates in Item 7.4 of EPA Form 2C that the facility's processes contribute wastewater that falls into one or more of the primary industry categories, they must check "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B. If the permittee qualifies as a "small business" they are exempt from submitting quantitative data for the organic toxic pollutants on Table B (Sections 2 through 5). They must indicate, though, whether they believe any of the

pollutants listed in Sections 1 through 5 are present in their discharge. For Section 1 of Table B, for each pollutant that is known or believed present in their discharge from each applicable outfall in concentrations of 10 parts per billion (ppb) or greater, the applicant must report quantitative data. For every pollutant expected to be discharged in concentrations less than 10 ppb, they must submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged. Based on previous data on a particular outfall or data on similar outfalls, a permit writer may challenge an applicant's declaration of "Believed Absent".

(3) Table C – The applicant must indicate whether the pollutant is "believed present" or "believed absent". If the "believed present" column has been checked, the applicant must provide quantitative data if the pollutant is limited in an effluent limitations guideline. If the pollutant is not so regulated, the permittee may either provide quantitative data or explain the presence of the pollutant in the discharge.

(4) Table D – For each outfall, the applicant must indicate whether any pollutant listed in Table D is "believed present" or "believed absent". For every pollutant believed present, the applicant must describe the reasons the pollutant is expected to be discharged and report any available quantitative data for that pollutant. **Note:** Applicants are not required to perform analytical tests for any of the Table D pollutants; however, if they have prior tests, they must report them.

(5) Table E – If the applicant indicates in Item 7.17 of Form 2 C that they have reason to believe that 2.3.7,8-tetrachlorodibenzo-p-dioxin (TCDD) is or may be present in an effluent, they must report *qualitative* data using a screening procedure not calibrated with analytical standards for TCDD.

5. Form 2D

This form is to be completed by new manufacturing, commercial, mining, or silvicultural facilities that has yet to commence discharge of process wastewater. In most cases involving an existing indirect discharger going direct, a better characterization of the effluent may be obtained by requiring the collection of analytical data on the existing discharge and filing of Form 2C. Form 2D is not for use by municipal facilities or for industrial discharges of stormwater runoff.

6. Form 2E

This form is to be completed by new or existing (including manufacturing, commercial, mining, and silvicultural activities) that discharge only nonprocess wastewater. It is not for use by dischargers of stormwater runoff or by existing educational, medical, or commercial chemical laboratories. These facilities must use Form 2C or 2F.

The applicant must test for and report all the required pollutants/parameters listed unless a waiver has been granted. Do not send testing waivers to EPA for approval. Applications that do not provide testing results for required parameters will be deemed incomplete and returned to the applicant. Section 4 of the Form 2E application requires the applicant to report data for the following pollutants and/or parameters:

- BOD
- TSS
- Fecal Coliform, *E. coli*, Enterococci (if believed present or if sanitary waste is discharged)
- Total Residual Chlorine (if used)
- Oil & Grease
- COD (for discharges of non-contact cooling water)
- TOC (for discharges of non-contact cooling water)

- Ammonia
- Discharge Flow
- pH (provide range)
- Temperature (winter and summer)

Note: The applicant may request a waiver from testing and reporting one or more of the parameters. Such requests must be in writing, must specify the parameters which are to be waived, and must specify the reasons for requesting the waiver.

7. Form 2F

This form is to be used by applicants in certain industrial categories who are applying for an individual permit for **point** source discharges of stormwater associated with industrial activity (including commingled stormwater and non-stormwater discharge as described below). (See 9VAC25-31-10 for the definition of stormwater associated with industrial activity.) Form 2F can also be used for permitting discharges of stormwater that are not included in the definition as long as the discharge is composed exclusively of stormwater. **Note:** Stormwater runoff which occurs as sheet flow and does not discharge through a distinct outfall does not require completion of Form 2F or a permit.

a. Form 2F Stormwater and Other Discharges

Stormwater point source discharges can be covered by a permit that also addresses other types of wastewater discharges. Form 2F should be submitted along with Form 1, 2C, 2D or 2E if the industry has both stormwater and other types of discharges as follows:

(1) Discharges consisting **solely** of stormwater associated with industrial activity require submission of Form 2F and Form 1.

> Note that dischargers may qualify for coverage under one of the industrial general permits. They may find this advantageous in lieu of obtaining an individual permit.

(2) Existing discharges consisting of stormwater associated with industrial activity and process water require submission of Form 2F, Form 2C, and Form 1.

(3) Existing outfalls consisting of commingled stormwater associated with industrial activity and process water require that Form 2C be used to characterize the process water with dry weather sampling and Form 2F be used to characterize the stormwater with sampling during a representative storm event.

(4) Existing discharges consisting of stormwater associated with industrial activity and nonprocess water require submission of Form 2F, Form 2E, and Form 1.

(5) Existing outfalls with commingled stormwater associated with industrial activity and non-process water require that Form 2E be used to characterize the nonprocess water with dry weather sampling and Form 2F be used to characterize the stormwater with sampling during a representative storm event.

(6) New or proposed discharges consisting of stormwater associated with industrial activity and other industrial wastewater require submission of Form 2F, Form 2D, and Form 1. These discharges can be commingled or separate.

b. Form 2F Testing Requirements

The testing required on Form 2F is considered the "minimum testing requirements" as recommended by DEQ.

Advise the applicant that the monitoring for metals on the Form 2F should be for the dissolved form.

Form 2F contains a provision allowing only one outfall to be analyzed if it is representative of other substantially similar, solely stormwater discharges at the facility. However, the applicant must request this in writing and obtain RO approval prior to submission of the data from one outfall as representative of others. The request should include a description of the outfall locations and explain in detail why the outfalls are expected to discharge substantially identical effluents.

8. Water Quality Criteria Monitoring Form (Attachment A)

This form may be required as part of an application submittal or as a permit requirement. The following table provides a decision matrix for Attachment A monitoring:

Action	Facility/ Discharge Type			Required Sampling *
Issuance	Municipal	Flow > 0.040 MGD		Full list
		Flow ≤ 0.040 MGD		None [4]
	Industrial	Major		Full list [5]
		Minor	WET Testing	Full list
			No WET Testing	1
Reissuance	Municipal	Flow ≥ 1.0 MGD		Full list with each reissuance
		1.0 MGD > Flow > 0.040		2
		Flow ≤ 0.040 MGD		None [4]
	Industrial	Major		Full list with each reissuance
		Minor	WET Testing	[3]
		Minor	No WET Testing	[3]

* For unbuilt facilities or expansions, sampling and analysis is required in the permit no later than 2 years following commencement of discharge.

1. WQC monitoring is not required at issuance; however, the permit writer (PW) may require WQC monitoring (full or customized list) based on influent characteristics, industrial processes, etc.
2. WQC monitoring is not required at reissuance; however, the PW may require WQC monitoring (full or customized list) if there have been significant changes affecting the facility. Significant changes may include changes to source water, treatment processes, industrial users, etc.
3. WQC monitoring is not required at reissuance; however, the PW may require WQC monitoring (full or customized list) based on variability in effluent quality and/or if there have been significant changes affecting the facility. Significant changes may include changes to source water, treatment processes, industrial processes, etc.
4. If there are industrial users that present a concern, a full or customized list may be required at the permit writer's discretion.
5. If the permit only authorizes stormwater discharges and there are no process wastewaters, WQC monitoring may not be required.

D. Application Review

1. Receipt of Application and Fee

a. New issuances

Date stamp the permit application upon receipt if not received through myDEQ Portal (nForm). Original fee forms and check payments (with federal tax identification numbers and/or social security numbers) for new issuance should have been sent by the applicant directly to Receipts Control. If the original forms are incorrectly sent to the RO with the application, forward them to Receipts Control (Office of Financial Management). This will eliminate the need for redaction of sensitive personal identification information found in the other fee payment forms and attachments. Copies of completed permit fee forms (with federal tax identification numbers/social security numbers) and check payments (showing bank account numbers) ***should be destroyed*** once it is verified that the fee payment is matched to a specific permit number to support a complete application determination.

> The appropriate fee must be paid prior to deeming a new application for an issuance or modification request complete. See the permit fee form for the fee schedule for classes of VPDES permits or 9VAC25-20-110 and 9VAC25-20-120. **Fees should correspond to the largest flow tier a facility uses, including any expansion planned during the permit term.**

Agency to Agency account transfers (ATAs) can be used for other state agencies to pay fees (VDOT, VDOC, etc). For ATAs, the RO must verify that the fee form and fee have been submitted by requesting notice of payment from the CO Accounts Receivable Accounting Manager.

For reissuances, permit writers should check the Finance Tab in CEDS

b. Reissuance

The annual maintenance fee must be paid prior to deeming a new application complete. Check the Finance tab in CEDS to make sure the permittee is up to date on **all** of its maintenance fees (see below).

Email the permittee and provide the invoice provided by the Office of Financial Management and let the permittee know that the permit cannot be reissued or administratively continued unless **all maintenance fee payments** are up to date. If the fee is not paid before the expiration date, allow the permit to expire.

The appropriate annual maintenance fee is specified in 9VAC25-20-142.

c. Fee Refunds

A refund of a permit fee must be initiated via a form (Attachment B of the most recent Water Program Fee Program Procedures Guidance). This form must be completed and signed by a person in a position with delegated permit issuance and approval authority, and addressed to the DEQ Accounts Receivable Accounting Manager. A copy of the fee form, which identifies the payment and date of deposit, must be attached to the refund memo.

2. Application Review

a. Determine whether or not an application is complete within 14 days of receipt of the application (PEEP provides 30 days for application review). An application is considered complete when all necessary blanks on the form are accurately filled in, the proper signature applied, all necessary documents are attached, and the permit fee is paid. Additionally, the RO has the authority to ask the permittee for additional information, including data not specifically required in the application forms, such as concept engineering reports, water quality models, or preliminary engineering reports (9VAC 25-31-100). The application should provide the permit writer with all facility information necessary for development of the Fact Sheet. If the application review reveals deficiencies and documents cannot be developed from the information provided, the application may be deemed incomplete.

b. The RO has the authority, by 9VAC25-31-100, to request additional information not identified on the application. The Public Notice Billing Authorization Form is part of the additional information DEQ is requesting. If it is not included with the application, the application is considered incomplete and the permit writer shall not send an Application Complete Letter.

c. If the application form has not been filled out correctly, return it to the permittee noting the deficiencies. If the application deficiencies are minor in nature and will not affect the permit development, the permit writer may telephone the applicant and request that the deficiencies be corrected in writing (document all phone conversations). This written submittal then becomes an attachment to the application. Under no circumstances should the permit writer consider the application amended without a written submittal from the applicant.

d. Examine the technical details of the application for accuracy and completeness. Some questions to ask during a technical review include:

- Is the treatment described in the application adequate for the waste discharged?
- Are the parameters tested adequate to characterize the effluent?
- Do the testing values indicate proper operation of the treatment system?
- Have there been any changes to the facility since the last permit was issued which may change the permit limits or conditions?

e. The RO is responsible for consistent review of applications and correct determinations regarding incomplete applications. Comprehensive RO application review should ensure that all deficiencies are covered in one application deficiency letter.

If the sludge management plan involves land application for municipals, send a copy to CO Office of Land Application (Neil Zahradka) for review.

3. Application Signatures

Ensure that all permit application signatures are in accordance with 9VAC25-31-110 of the VPDES Permit Regulation:

a. For a corporation, by a responsible corporate official. For purposes of this section, a responsible corporate official 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 initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. For a Municipality, State, Federal or other public agency by either a principal executive officer or ranking elected official. (A principal executive officer of a Federal, municipal or State agency includes the chief executive officer of the agency or head executive officer having responsibility for the overall operation of a principal geographic unit of the agency).

c. For a partnership or sole proprietorship by a general partner or proprietor respectively.

4. Late or Deficient Applications

If no response is received from the applicant to a written request for information (i.e. application submittal, application deficiencies, draft comments, modification information, public notice billing authorization forms, public notice verification, etc.), contact the permittee at least one more time to try to resolve the problem. Record the contact and its details in the RO permit file. Return the application if no resolution is achieved.

If a permittee fails or refuses to comply with the **180-day** requirement for filing an application for reissuance, advise the regional compliance auditor.

5. Facility Site Visit

A site visit of the facility is highly recommended to be conducted by the permit writer prior to permit drafting. Ensure that a site visit to a proposed or existing discharge site has been made prior to the issuance/reissuance of a permit and documented in the Fact sheet. The permit writer should perform this site visit prior to permit drafting and incorporate the results into the Fact Sheet. However, a technical inspection conducted within the past two years satisfies this requirement. A compliance, reconnaissance, or laboratory inspection **does not** fulfill the inspection requirement.

The results of the site inspection for a permit issuance should include the following:

- Location of the proposed or existing discharge for which an application has been filed;
- Location and suitability of any identified land application sites for sludge;
- Location of nearby existing or proposed discharge(s);
- Description of the receiving waters at the discharge site (e.g. stream characterization for the stream model);

- Determination of stream uses or nearby land uses in the case of sludge application sites; and
- Familiarization with plant operations.

6. Permit Numbers

Once the application for a new or proposed discharge is determined to be complete, a VPDES permit number should be generated in CEDS (CEDS > VPDES Program > Create New Issuance Application).

7. Application Complete

Applications may be considered complete following the review process and receipt of all required information from the applicant. Application completeness is not dependent on the receipt of information from VDH. Once the application has been deemed complete, send the applicant an application complete letter. See DEQnet for an example. As a reminder, permits cannot be issued/reissued unless all fees are paid.

There are special considerations needed for applications for Eastern Shore shellfish waters (see 9VAC25-260-275 and GM09-2011) that are not disapproved under 9VAC25-260-270. When such application proposes a new or expanded discharge that would not be denied pursuant to 9VAC25-260-270 but would result in shellfish water condemnation, then the application shall be amended to contain an analysis of wastewater management alternatives to the proposed discharge. **An application shall be deemed incomplete until this analysis is provided to the department.**

E. Application Review by Other Agencies

In circumstances as detailed below, the RO is required to send the permit application to other state agencies for their review. Review by these agencies should be concurrent. This should be done electronically. See Section VII for contacts. Sample letters can be found on DEQnet.

1. Virginia Department of Health (VDH)

(a) Office of Drinking Water

The VDH Office of Drinking Water Field Offices have **30 days** to comment on the applications that DEQ forwards to them. Resolve VDH comments affecting public health and obtain VDH input regarding reliability class (where necessary) relative to public health impacts.

(b) Division of Shellfish Sanitation (VDH-DSS)

In accordance with GM07-2009, for proposed sewage discharges to, or in near proximity to, shellfish growing areas, provide a copy of the VPDES permit application or registration statement containing information on the location and nature of the proposed discharge to DSS and VMRC for review and comment. **Proposed discharges are considered to be new individual VPDES permit applications, new general permit registration statements, or modification requests or reissuance applications that propose an increase in discharge flow.** Additionally, sewage discharges will be considered to include all municipal discharges, industrial discharges containing 10% or more sewage, and discharges for which general permit coverage is being sought under the "Domestic Sewage Discharges of Less Than or Equal To 1,000 Gallons Per Day" general permit. Please note that DEQ must provide notification to DSS and VMRC of the public comment period, and should provide a copy of the final permit, if issued, to DSS.

Send the application for proposed discharges to waters below the fall zone (except the Chowan Basin). DSS has provided the following to define the areas of the major river basins below which they would like to see applications:

- Potomac River tributaries – Mathias Point upstream of the US 301 bridge
- Rappahannock River – Tappahannock Bridge (US 360)
- York River – upstream border of the Town of West Point
- James River – line connecting Swanns Point on the south bank to Glass House Point on the north bank (upper end of Jamestown Island).

If DSS indicates that the proposed discharge will result in condemnation of shellfish beds, a public hearing on the issuance of the permit is required by SWCB Water Quality Standards Regulations (9VAC25-260-270), unless the applicant voluntarily withdraws the application. If DSS comments that a proposed new or modified discharge will require a

> There are special considerations needed for applications for Eastern Shore shellfish waters (see 9VAC25-260-275 and GM09-2011) that are not disapproved under 9VAC25-260-270. When such application proposes a new or expanded discharge that would not be denied pursuant to 9VAC25-260-270 but would result in shellfish water condemnation, then the application shall be amended to contain an analysis of wastewater management alternatives to the proposed discharge. An application shall be deemed incomplete until this analysis is provided to the department.

change in a shellfish closure they would like to see a copy of the final permit (cover page and Part I is sufficient) before making their final determination on making the change.

2. Virginia Marine Resources Commission (VMRC)

VMRC review is necessary for proposed sewage discharges (municipal and industrial with ≥ 10% sewage, based upon the long-term average flow), into shellfish waters.

If DSS intends to condemn shellfish beds and VMRC says that the condemned area contains an actual or potential shellfish resource, then the permit application must be denied, in accordance with 9 VAC 25-260-270. This same regulation requires a public hearing in these situations.

3. Notification of Local Governments and Riparian Landowners

Section 62.1-44.15:4 D of the State Water Control Law reads as follows:

"Upon receipt of an application for the issuance of a new or modified permit other than those for agricultural production or aquacultural production activities, the Board shall notify, in writing, the locality wherein the discharge does or is proposed to take place of, at a minimum: (i) the name of the applicant; (ii) the nature of the application and proposed discharge; (iii) the availability and timing of any comment period; and (iv) upon request, any other information known to, or in the possession of, the Board or the Department regarding the applicant not required to be held confidential by this chapter. The Board shall make a good faith effort to provide this same notice and information to (i) each locality and riparian property owner to a distance one quarter mile downstream and one quarter mile upstream or to the fall line whichever is closer on tidal waters, and (ii) each locality and riparian property owner to a distance one half mile downstream on nontidal waters. Distances shall be measured from the point, or proposed point, of discharge. If the receiving river, at the point or proposed point of discharge, is two miles wide or greater, the riparian property owners on the opposite shore need not be notified. Notice to property owners shall be based on names and addresses taken from local tax rolls. Such names and addresses shall be provided by the Commissioners of the Revenue or the tax assessor's office of the affected jurisdictions upon request by the Board."

If the discharge in the permit application is to a municipal separate storm sewer system (MS4), the point of discharge for the purpose of determining the localities and riparian property to be notified is the discharge point of the MS4.

These notifications apply to new permits and cases where the permittee submits an application for major modifications only. It does not apply to permit reissuances (except when expansions or substantial facility modifications have occurred or are planned), or minor modifications.

Note that for issuance or modification of a permit that includes non-point source pollutant management activities (VPA-related activities like land application or storage prior to land application or reuse), there may be additional locality and riparian owner notification even though it may be unrelated to the discharge. Consult the VPA permit manual or OLAP staff for guidance.

a. Notifying localities

Notification to localities should be to the chief administrative officer of the locality (e.g. County Administrator or Town Manager). This notification should be done as soon as possible after receipt of the application. Failure to make this notification is a violation of

the law and it could jeopardize the validity of the permit issued to the applicant. An example notification letter can be found on DEQnet.

b. Notifying riparian owners

Obtain the names and addresses of riparian landowners from the Commissioner of the Revenue or tax assessor's office in the affected jurisdiction by sending a request along with a copy of the topographic map from the application that identifies the discharge location. Alternately, it may be possible to obtain riparian landowner information from a county website. Note that the strict interpretation of riparian means owners whose property borders the waterbody, and not those with access rights only, although it is acceptable to expand this interpretation in cases where there is significant public interest. Identifying the tax map parcel where the discharge is located will assist the Commissioner. This information may be obtained from the permittee. Mark the boundaries of the notification area on the map. If the receiving stream is the boundary between two localities, contact the Commissioners for both localities. An example request letter is available on DEQnet. Notification to the riparian owners should be via regular mail primarily because emails are not available to the tax commissioner.

If the information is not received within two weeks of the first letter, send a letter to the Commissioner by certified mail with a copy to the permittee. If the information is still not received, document the second contact in the file and return the application to the permittee with an explanation that it cannot be processed without the list of riparian owners. Alternately, in cases where the Commissioner refuses to compile the list, it is acceptable to suggest to the permittee that he compile the list and ask the Commissioner to certify it as complete and accurate.

5. Threatened and Endangered Species Coordination

Permit Issuances

Screen the receiving stream for threatened and endangered species using the DWR and DCR databases. If threatened and endangered aquatic species (do not send information from the database on terrestrial species) are present within a 2 mile radius (for DWR) or near lat/long coordinates and mixing zone (for DCR), begin coordination with DWR, DCR and USFWS as appropriate (see coordination form on DEQnet). See GM No. 07-2007 for additional details.

All coordination for issuances should go directly to all the agencies, including NOAA and NMFS (for tidal). Permit writers should send the coordination request concurrently with other T&E coordination requests.

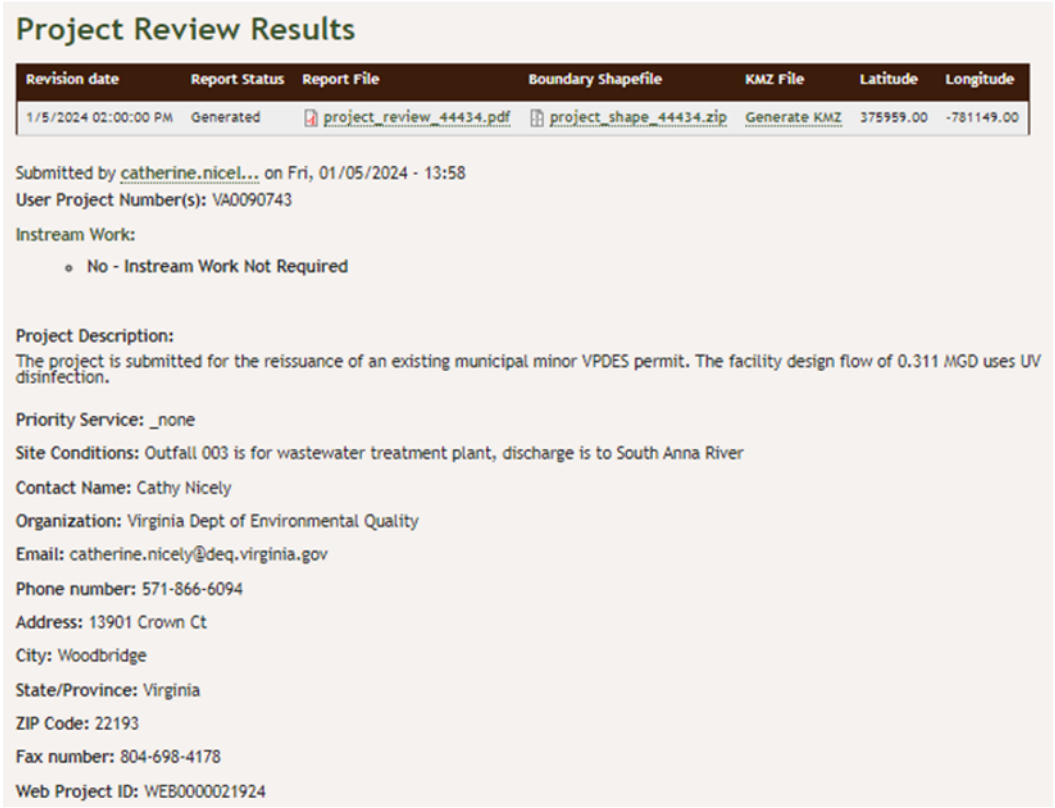
Permit Reissuances

DCR, DWR, and USFWS will provide an initial list of facilities to be considered for T&E coordination. This list will be posted on DEQnet.

The permit writer should include the following with each coordination request:

- T&E coordination form
- DMR data for the current permit cycle
- WET testing results for the current permit cycle (either WET reports or a summary of WET data)
- Current Fact Sheet

- Permit application
  USFWS only: If coordination with DCR is required, send a copy of the mixing zone shapefile to USFWS submitted through DCR's website (after a project is submitted to DCR for review, the website allows the discharge area and mixing zone when applicable to be downloaded). This is not necessary if coordination with DCR is not required.
  A shapefile is created when a project is submitted through DCR-NHDE's website as shown below.



Project Review Results

Revision date	Report Status	Report File	Boundary Shapefile	KMZ File	Latitude	Longitude
1/5/2024 02:00:00 PM	Generated	project_review_44434.pdf	project_shape_44434.zip	Generate KMZ	375959.00	-781149.00

Submitted by catherine.nicel... on Fri, 01/05/2024 - 13:58
User Project Number(s): VA0090743

Instream Work:

- **No - Instream Work Not Required**

Project Description:
The project is submitted for the reissuance of an existing municipal minor VPDES permit. The facility design flow of 0.311 MGD uses UV disinfection.

Priority Service: _none
Site Conditions: Outfall 003 is for wastewater treatment plant, discharge is to South Anna River
Contact Name: Cathy Nicely
Organization: Virginia Dept of Environmental Quality
Email: catherine.nicely@deq.virginia.gov
Phone number: 571-866-6094
Address: 13901 Crown Ct
City: Woodbridge
State/Province: Virginia
ZIP Code: 22193
Fax number: 804-698-4178
Web Project ID: WEB0000021924

- DWR only: Permit writers should perform geographic search on the Virginia Fish and Wildlife Info Service website (https://services.dwr.virginia.gov/fwis/) using 2.0 mile radius, select aquatic species only, and print report to PDF to attach to the T&E coordination form.

DWR: Permit writers should only coordinate on permits listed in the spreadsheet provided by DWR *if* one or more criteria are met.

DCR: DCR requires coordination on *all* permits (whether included in the spreadsheet or not), *if* one or more criteria are met.

USFWS: Coordinate on all permits listed in the spreadsheet provided by USFWS. Coordinate on minor municipal permits *only if* one or more criteria are met.

DWR

T&E Coordination Requests for VPDES permit reissuances related to the facilities identified in the initial list provided by DWR should only be forwarded to these agencies if they satisfy one or more of the criteria outlined below:

- The location of the discharge is proposed to change;
- The discharging infrastructure needs maintenance or repair resulting in instream work;
- The composition of the discharge effluents is proposed to change; and/or
- A 316(a) or 316 (b) assessment has been performed for the facility.

If the project meets any of the aforementioned triggers, it should be sent to DWR's Environmental Services ESSProjects@dwr.virginia.gov and ProjectReview@dwr.virginia.gov. Please indicate in your email that one of the criteria were met and which one.

PEEP Tracking:

- If a permit is *not* identified by DWR on the review list, and *none* of the four triggers specified are met, further coordination is not required.
    - PEEP tracking: The permit writer selects "**Addtl Agency Coordination Not Required**"
- If a permit is *not* identified by DWR on the review list, and *one or more* of the listed triggers are met, further coordination is required.
    - PEEP tracking: The permit writer selects "**Comments Received from DWR**" or "**No comment received from DWR**" as appropriate.
- If a permit *is* identified by DWR on the review list, but *none* of the four triggers are met, further coordination is not required.
    - PEEP tracking: The permit writer selects "**Addtl Agency Coordination Not Required**"
- If a permit *is* identified by DWR on the review list and *one or more* of the listed triggers are met, further coordination is required.
    - PEEP tracking: The permit writer selects "**Comments Received from DWR**" or "**No comment received from DWR**" as appropriate.

DCR

DCR requires coordination on all permits (whether included in the spreadsheet or not), if one or more criteria outlined below are met:
The location of the discharge is proposed to change;

- The discharging infrastructure needs maintenance or repair resulting in instream work;
- The composition of the discharge effluents is proposed to change; and/or
- A 316(a) or 316 (b) assessment has been performed for the facility.

If the project meets any of the aforementioned triggers, it should be submitted to DCR through Virginia Natural Heritage Explorer website (https://vanhde.org/home). Please indicate in your submittal that one of the criteria were met and which one

PEEP Tracking:

- If the permit writer determines that *one or more* of the listed criteria are met, further coordination is required.

- PEEP tracking: The permit writer selects "**Comments Received from DCR**" or "**No comment received from DCR**" as appropriate.

NOAA NMFS

NOAA Fisheries has jurisdiction over the following listed T&E species that may be present in the state waters of Virginia:

- Atlantic sturgeon, Acipenser oxyrinchus oxyrinchus
- Shortnose sturgeon, Acipenser bevirostum
- Green sea turtle, Chelonia mydos
- Kemp's ridley sea turtle, Lepidochelys kempii
- Leatherback sea turtle, Dermochelys coriacea
- Loggerhead sea turtle, Caretta caretta
- North Atlantic right whale, Eubalaena glacialis
- Fin whale, Balaenoptera physalus

If any of these species are identified during the T&E screening, coordination with NOAA is required (meagan.riley@noaa.gov, cc: Nmfs.gar.esa.section7@noaa.gov). If they are not listed, additional coordination with NOAA is not required.

Note: If coordination with other agencies isn't required, please perform screening using Mapper. To determine whether or not ESA-listed species under NOAA Fisheries jurisdiction are present where an action will occur, please use ESA Section 7 Mapper: https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=a85c0313b68b44e0927b51928271422a. You can input the address for any facility outfall/intake location into the Mapper to see a list of the species that may overlap with the action. NOAA stated that they will review your submission and respond only when they have comments and/or additional information to provide.

The permit writer should include the following with each coordination request:

- T&E coordination form
- Permit application

PEEP Tracking:

- If the aforementioned species are not identified during the screening, additional coordination with NOAA is not required.
  - PEEP tracking: The permit writer selects "**Addtl Agency Coordination Not Required.**"

- If any of these species are identified during the screening, further coordination with NOAA is required.
  - PEEP tracking: The permit writer selects "**Comments Received from other Agencies**" or "**No comment received from other Agencies**" as appropriate.

6. New municipal solid waste landfills

Chapter 478 of the 2006 Act of Assembly (Senate Bill 106) requires that an "application for a new or modified individual VPDES permit or new or modified coverage under a general VPDES permit, authorizing direct or indirect discharge of stormwater runoff from a new municipal solid waste landfill into a local watershed protection district established and designated as such by city ordinance prior to January 1, 2006, must contain a certification from the local governing body of the city in which the discharge is to take place, that the discharge is consistent with the city's ordinance establishing and designating the local watershed protection district in order to be considered complete. The bill does not apply to any municipal solid waste landfill in operation on or before January 1, 2006." Note that this requirement pertains to this type of permit regardless of its status as a major or a minor. This is a rare and infrequently used requirement so no forms are included in this manual. See GM06-2008 for letters and forms for this requirement.

7. VDOT Notification for New Issuances

Notify VDOT on new individual VPDES applications that discharge to VDOT right of ways on a case by case basis. See http://www.virginiadot.org/info/contactus.asp#local (click on Local Contacts for residency offices). Use best professional judgment in determining whether it is necessary to copy VDOT because of distance traveled to right of way, type, or volume of discharge, etc. Contact the Office of VPDES Permits if there are questions.

F. Continuation of Expiring Permits

Permits expire at the end of their term. However, expiring permits may be administratively continued (see 9VAC25-31-70) pending issuance of a new permit if:

- The permittee has submitted a timely and complete application; and,
- The department is unable, through no fault of the permittee, to issue a new permit before the expiration date of the previous permit.

Some flexibility is needed in implementing this requirement as there can be different views of "complete". CEDS has codes for ROAPCP (application administratively complete) and APCP (application totally technically complete). If the application is in on time with some things missing, but the applicant is cooperative and trying to get the information we need, administrative continuation should still be considered an option.

> Coordinate with Central Office on administratively continued permits that are controversial.

G. Application Denial

It is very important these exact procedures are followed as deviating from the procedures could result in litigation, particularly with regards to public notice and hearing procedures. Details of public hearing procedures can be found in Section VI of this manual. Any questions about procedures should be directed to the Office of Regulatory Affairs.

1. Reasons for new permit denial

According to 9VAC25-31-50 C, no permit may be issued:

a. When the conditions of the permit do not provide for compliance with the applicable requirements of CWA or the SWCL, or regulations promulgated under CWA or the SWCL;

b. When the applicant is required to obtain a state or other appropriate certification under Section 401 of CWA and that certification has not been obtained or waived (not applicable unless EPA is issuing an NPDES permit);

c. When the EPA Regional Administrator has objected to issuance of the permit;

d. When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected states;

e. When, in the judgment of the Secretary of the Army (Corps of Engineers), anchorage and navigation in or on any of the waters of the United States would be substantially impaired by the discharge;

f. For the discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste;

g. For any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of CWA;

h. For any discharge to the territorial sea, the waters of the contiguous zone, or the oceans in the following circumstances:

(1) Before the promulgation of guidelines under Section 403(c) of CWA (for determining degradation of the waters of the territorial seas, the contiguous zone, and the oceans) unless the board or department determines permit issuance to be in the public interest; or

(2) After promulgation of guidelines under Section 403(c) of CWA, when insufficient information exists to make a reasonable judgment whether the discharge complies with them.

i. To a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards even after the application of the effluent limitations required by the Law and Sections 301(b)(1)(A) and 301(b)(1)(B) of CWA, and for which the department has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

(1) There are sufficient remaining pollutant load allocations to allow for the discharge; and

(2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards. The department may waive the submission of information by the new source or new

discharger required by this subdivision if the department determines that it already has adequate information to evaluate the request. An explanation of the development of limitations to meet the criteria of this paragraph is to be included in the fact sheet to the permit.

2. Review Application/Notification of Applicant

If the RO identifies a cause for denying the application during the review process, advise the applicant of the tentative decision to deny and list the requirements necessary to obtain approval. This notification may be done along with a routine deficiency notification, but the issues associated with the cause for denial must be clearly stated and separated from the deficiencies not associated with the tentative decision to deny. An example letter of the Notice of Intent to Deny is available on DEQnet.

At this point, the applicant may either withdraw or modify his application.

a. The applicant should notify the RO of his intent to modify or withdraw the application within **14 days** of receipt of the letter Notice of Intent to Deny.

b. If the applicant withdraws the application, stop permit processing. The owner must request in writing that the application be withdrawn or sign and return the Application Withdrawal form available on DEQnet.

c. If the applicant modifies the application so that the causes for the tentative decision to deny no longer exist, then the application should be processed according to the procedures outlined in Sections II and III.

d. If the application is not withdrawn or modified to obtain the tentative approval to issue, the RO shall provide public notice and opportunity for a public hearing prior to final action on denying the application in accordance with 9VAC25-31-260 B. The Regional Director should concur on the tentative decision to deny prior to the publishing of the public notice. Please note that permit fees are not refunded when applications are denied.

3. Public Notice of the Intent to Deny

a. If the owner refuses to withdraw or modify the application, publish the public notice of the Intent to Deny. The Department will pay the cost of publishing the notice. Follow the format for a public notice for a permit issuance, except that the PN states that the department does not intend to issue the permit to the applicant. The reasons for denial should be clearly listed in the notice. Public notice for intent to deny should not be combined with a public hearing notice**.**

b. The RO should prepare a memorandum documenting the rationale for the application denial. This functions as the Fact Sheet for the denial. This memorandum should be kept on file and made available to the public during the public notice period. The memorandum should contain, at a minimum, the following information:

- The location and nature of the proposed discharge;
- An explanation of the reason for the proposed denial, including regulation citation; and
- A summary/chronology of DEQ or applicant actions related to the denial.

c. If a significant response to the proposed denial is received during the 30-day comment period, the Regional Director can recommend a public hearing to the Director. See public

hearing procedures in Section VI.B to determine what constitutes significant response and the public hearing procedures.

d. If a public hearing is not held and comments received during public notice do not change the denial recommendation, prepare the Denial Package at the end of the public notice period.

4. Public Hearing

If a public hearing is approved, the RO will advertise the public hearing and receive comments on the proposed denial. The RO will notify all people who commented during public notice. For an explanation and description of the Hearing Procedures, see Section VI.

5. Prepare the Denial Package

If the owner neither modifies nor withdraws his application following public notice (and the public hearing if one was held), prepare a denial package containing the following:

a. A memorandum to the Director recommending denial of the permit. The memorandum should include the information regarding the rationale for the denial, and a staff recommendation for denial. The Regional Director should indicate his approval of the staff recommendation on this memorandum;

b. A summary of public comments received during the notice period and staff responses; and

c. A copy of the application (and the draft permit and fact sheet if the denial follows a public notice of intent to issue).

6. Process the Denial Package

Processing of the Denial Package differs based on whether or not a public hearing was held on the Intent to Deny.

For denials which did not receive a public hearing:

a. Send the Denial Package to the Regional Director.

b. If the Regional Director agrees to deny the application/permit, return the package to the applicant. Include Appeal option information in the transmittal letter. As required by the State Water Control Law, this letter and the accompanying package must be sent by certified mail (§62.1-44.15(9)).

c. The RO also copies the Memorandum for Denial to:

(1) EPA (for Major Facilities, if denial was after public notice of a draft permit)

(2) VDH-RO (for municipals only)

For denials that received a public hearing per the hearing procedures in Section VI.

a. Return the denial package to the applicant with a copy of the minutes from the hearing relating to the denial. Include Appeal option information in the transmittal letter. As required by the State Water Control Law, this letter and the accompanying package must be sent by certified mail (§62.1-44.15(9)).

b. The RO also copies the minute to:

(1) EPA (for Major Facilities, if the hearing followed public notice of a draft permit)

(2) VDH-RO (for municipals only)

7. Applicant Petition Procedures

If an applicant wants to appeal the department's decision, he may petition for a separate formal hearing. The petition must be filed within **30 days** following the denial decision, and according to the requirements of Procedural Rule 1 - Public and Formal Hearing Procedures (9VAC25-230).

8. Denial of a permit reissuance

Denial of permit applications may occur at the time of reissuance as well as when new permits are requested. (§62.1-44.16, §62.1-44.17, §62.1-44.19, 9VAC25-31-70 C and 9VAC25-31-260 B).

Send the Notice of Intent to Deny letter under the authority in 9VAC25-31-70 C. If the applicant signs and returns the application withdrawal form, let the existing permit expire. This ends the process without Department's action or public notice.

If the permittee does not return the signed form, contact the Division of Policy as this may require a more formal process than a new application denial.

SECTION III

ISSUANCE AND REISSUANCE PROCEDURES

Table of Contents

A. Permit Drafting

The issuance/reissuance of VPDES permits is an action that is normally performed at the Regional Office. To assist with increasing workloads, the permit writer from the Office of VPDES permits may assist with permit reissuances. Headquarters support groups such as the Office of VPDES Permits are available for consultation on permitting technical and procedural issues, but their concurrence on permit actions is neither expected nor required for the permits issued/reissued by RO. However, several areas of permit processing may have headquarters involvement. These include involvement of the Office of VPDES Permits as EPA liaison and mailing list coordination, Office of Water Quality Standards assistance on water quality variances, and Division of Policy and Legislation assistance in the public hearing process.

Permit writers should check on the applicability of VPDES general permits before drafting an individual permit for a facility. General permits currently in effect are for:

- Stormwater from Industrial Activity; Regulation: 9VAC25-151
- Cooling Water Discharges; Regulation: 9VAC25-196
- Vehicle Wash and Laundry; Regulation: 9VAC25-194
- Seafood Processors; Regulation: 9VAC25-115
- Single Family Homes (sewage discharges less than 1000 gpd); Regulation: 9VAC25-110
- Nonmetallic mineral mining; Regulation: 9VAC25-190
- Concrete Products Facilities; Regulation: 9VAC25-193
- Petroleum Contaminated Sites; Regulation: 9VAC 25-120
- Potable Water Treatment Plants; Regulation 9VAC25-860
- Pesticide Application to Surface Waters; Regulation 9VAC25-800
- Nutrient Discharges to the Chesapeake Bay; Regulation 9VAC25-820
- Stormwater from Construction Activity 9VAC25-880
- Stormwater from Small Municipal Separate Storm Sewer Systems 9VAC25-890

If any of these general permits could apply consult the associated general permit regulation listed above and its implementation guidance for exact qualification requirements and the procedure for providing coverage under the general permit.

1. Permit Processing Times (§62.1-44.16, §62.1-44.17, and §62.1-44.19)

a. In order to maintain consistency among permit processes, the department has set **4 months** as the standard for completion of permit processing for new discharges of industrial waste, sewage and other wastes (see PEEP IP Workflow Date Guide). The **4-month** period that the department has to issue or deny a new permit begins upon determination that the application is complete. Document in the staff comments section of the Fact Sheet any explanations if the permit was not issued in 120 days.

b. Reissuances of existing permits should be completed before expiration of the existing permit. Document in the Fact Sheet any explanations if the permit was not reissued prior to expiration.

c. Permit processing should allow time for internal reviews (e.g. peer review and water permit manager review) of the final permit package prior to the issuance or reissuance deadline.

d. Inform the applicant of the application complete status by sending an Application Complete Letter (refer to DEQnet for an example).

e. Problems noted anytime during the permitting process that seriously contradict the application may be the cause to return the application to the owner.

2. Identify Major Permits

In order to process the permit correctly, the RO must determine if the facility will be permitted as a minor or a major facility. In compliance with the Memorandum of Agreement between DEQ and EPA regarding permit programs, EPA receives major facility draft permits and minor facility draft permits that have a TMDL (excludes minor facility draft permits with bacteria TMDLs), Fact Sheets, and applications for review and concurrence. Additionally, on February 2, 2023, EPA withdrew its waiver of permit review for the NPDES minor industrial categories in 40 CFR Part 122 Appendix A that was originally allowed by the 1975 Memorandum of Understanding Regarding Permit and Enforcement Programs between the State Water Control Board and the Regional Administrator, Region III Environmental Protection Agency (MOU). Per the amended MOU, minor industrial permits that fall under industrial categories specified in 40 CFR Part 122 Appendix A are also required to be sent to EPA for review.

a. **Municipal facilities:** Any facility having a design flow of 1.0 MGD or greater is considered a major facility. Permits which include future limits for expansion flows of ≥ 1.0 MGD are also considered major permits. The "major" designation is based on the highest expansion flow tier versus the current CTO authorized flows.

b. **Industrial facilities:** Any facility that scores 80 or more points on the NPDES Permit Rating Worksheet is considered a major. The Rating Worksheet was developed by EPA and is used to classify permits as minor or major based on the discharge and receiving water characteristics. Complete the NPDES Permit Rating Worksheet for all industrial facilities. See Section IN-1 for additional information on the Rating Worksheet

c. Treat changes to the permit status as follows:

(1) **Municipal**

For previous majors being downgraded to minors: If the permit has a TMDL (excludes minor facility draft permits with bacteria TMDLs) submit the application, draft permit and Fact Sheet to the EPA Region 3 contact, Ruan Shuart, and indicate the change in status and flow in the transmittal letter. EPA does not need to see the draft minor permit or be notified of the status change if it has no TMDL or a bacteria TMDL. However, when the (now) minor permit is **final** send a transmittal explaining the change in status and flow to Ryan Shuart so he can notify EPA headquarters to reclassify the permit as minor.

For previous minors being upgraded to majors: Process the permit as major from that point forward. This includes submission of the application, draft permit, and Fact Sheet (including attachments) to EPA. Indicate the change in status and flow to EPA in the draft permit transmittal letter. When the **final** major permit package is sent to Ryan Shuart make sure the transmittal letter indicates the change in status and flow so he can notify EPA headquarters to reclassify the permit as a major.

(2) **Industrial**

For previous majors which the worksheet now indicates as minors (<80 points): If the permit has a TMDL (excludes minor facility draft permits with bacteria TMDLs) or if falls under industrial categories listed in 40 CFR Part 122 Appendix A, submit the application, draft permit, and Fact Sheet (including attachments) to the EPA Region 3 contact in Section L. Include a copy of the rating worksheet in the draft permit package. Indicate the status change in the draft permit transmittal letter. EPA does not need to see the draft minor permit or be notified of the status change if it has no TMDL or a

bacteria TMDL. However, when the (now) minor permit is **final,** send a transmittal explaining the change in status and permit rating worksheet to Ryan Shuart so he can notify EPA headquarters to reclassify the permit as minor. *This must be done for all majors to minor status changes (regardless of the presence or type of TMDL).*

For previous minors which the worksheet now indicates as majors (≥80 points): Process the permit as major from that point forward. This includes submission of the application, draft permit, and Fact Sheet to EPA. Indicate the change in status to EPA in the draft permit transmittal letter and include a copy of the rating worksheet and copies of the last 3 months of DMRs and the last inspection report in the draft permit package. When the **final** major permit package is sent to Ryan Shuart make sure the transmittal letter indicates the change and include the rating worksheet so she can notify EPA headquarters to reclassify the permit as a major.

(3) **All**

Copy the Office of VPDES Permits and the CO PCS Coordinator with *any new* major classifications or with any reclassification of major/minor status. See the latest agency guidance on permit fees for procedures to follow when facilities change from major to minor after application receipt. **No facility that appears on the current Quarterly Non-Compliance Report may be downgraded from a major to a minor until the non-compliance status is resolved.**

3. Fact Sheet Preparation (9VAC25-31-280)

Prepare a Fact Sheet (FS) for all permits, providing the rationale for all effluent limits and special conditions. Provide in the FS the documentation of and justification for any regional deviations from this manual. These may include but are not limited to changes in procedures, permit language, and effluent testing requirements. For FS format and language see the OneDEQ templates that can be found on DEQnet. These examples follow the FS content requirements of 9VAC25-31-280 B.

4. Permit Special Conditions

a. Standard Special Conditions

9VAC25-31-190, 200, and 220 require all permits to contain some standard special conditions. Include in a special condition any specific reporting which may be required. See the OneDEQ templates for municipal and industrial special conditions. Additionally, Section IN-3 contains additional special conditions for standard industrial permits. Part II of every permit is a "boilerplate" compilation of regulatory requirements applicable to all VPDES permits. The language of Part II should not be modified for individual permits without careful consideration of the regulatory implications. Consult the Office of VPDES Permits before modifying the language of Part II.

b. Whole Effluent Toxicity Testing (WET)

If a permit requires WET testing, develop the special condition according to the latest guidance and with the assistance of the regional WET coordinator. (See Guidance Memo 00-2012, Toxics Management Program Implementation Guidance)

c. POTW Pretreatment Requirements

The DEQ Regional Office is responsible for determining which POTW(s) need to develop a pretreatment program and inserting special conditions into the VPDES permit to initiate the process.

In general, POTWs are required to develop pretreatment programs when the following

conditions apply (9VAC25-31-800.A):

(1) A POTW (or combination of POTWs operated by the same authority) has a total design flow greater than 5 million gallons per day (MGD) **and** receives from Industrial Users pollutants which:

- Pass through or interfere with the operation of the POTW **or**
- Are otherwise subject to Pretreatment Standards unless the Director exercises his or her option to assume local responsibilities.

The Director (DEQ) may require that a POTW with a *design flow of 5 MGD or less* develop a POTW Pretreatment Program if it is found that the nature or volume of the industrial influent, treatment process upsets, violations of POTW effluent limitations, contamination of municipal sludge, violations of water quality standards, or other circumstances warrant in order to prevent interference with the POTW or pass through.

It is recommended that POTWs with design flows greater than or equal to 40,000 gpd conduct an Industrial User survey and be evaluated for Pretreatment programs. The 40,000 gpd flow figure has been a standard in Agency practice to be consistent with the increased oversight provided by VDH at this flow, as established in the Sewage Collection and Treatment Regulations (SCAT Regulations 9VAC25-790).

The program is initiated by including appropriate Special Conditions into the VPDES permit. Provide a rationale for these conditions in the Fact Sheet. See the Pretreatment Program Implementation Guidance in Guidance Memo 01-2026 and updates.

d. Instream Monitoring

Instream monitoring is a means of providing support for reopening the permit for reevaluation at a later date, when current information is insufficient to validate the basis of new effluent limits or permit conditions. Monitoring of the receiving stream may be considered for any facility if conditions such as the following exist:

(1) insufficient receiving stream water quality data

(2) site inspections/test results provoke suspicion of a water quality violation

(3) significant change in stream flow frequency data (i.e. 7Q10 value)

(4) modeling controversy regarding relationship and/or effects of TKN and NH_3-N

e. Groundwater

The purpose of this condition is to protect state waters in accordance with the groundwater standards in 9VAC25-280. Groundwater monitoring may be necessary at industrial or municipal facilities and is dependent on-site specific characteristics. Sites with lagoons that are unlined, that show evidence of animal burrows or that were not specifically included in the facility's plans and specifications approval are examples of potential candidates for ground water monitoring. Sites that have industrial activities that over time may have contaminated soils and thus contributed pollutants to the ground water should also be considered. Where potential groundwater impacts are suspected, the permit writer should require the permittee to submit a groundwater quality monitoring plan through a permit special condition. This condition is incorporated into Part I of the permit. Decisions on the need for remedial action can be made after the groundwater monitoring data are submitted. See the VPDES Permits with Groundwater Monitoring Requirements Guidance in Guidance Memo 18-2013 for additional information.

f. Sludge

The purpose of this condition is to meet the requirements of Part VI of the VPDES Permit Regulation, 9 VAC 25-31-420 et seq. This condition only applies to POTWs and other treatment works treating domestic sewage. If the facility manages its own sewage sludge and disposes of the sludge or land applies the sludge, specific requirements under Part VI of the VPDES Permit Regulation will apply. The degree of complexity of the permit conditions depends on the type of sludge disposal. Incineration of sludge is not included in this section because it is governed by regulations of the Air Pollution Control Board.

g. Water Quality Criteria Monitoring

The purpose of this condition is to assess compliance with the pollutant specific parameters listed in the Water Quality Standards in 9VAC25-260. The monitoring data is used in developing water quality-based limitations or monitoring requirements. Monitoring data that is submitted as part of an application may be used to satisfy this monitoring requirement.

A reporting form that goes with the special condition is available in OneDEQ permit templates. The permit writer, as an option, may require submittal of the monitoring data on this reporting form with application submittal. In this case, include the form in the list of required forms in the reissuance reminder letter.

h. Stormwater

The EPA Stormwater Regulations (Phase 1 - 11/90, Phase 2 - 12/99) established permitting requirements for stormwater discharges associated with industrial activity and for stormwater discharges from municipal separate storm sewer systems (MS4s).

1) **Under Phase 1, five types** of stormwater discharges are required to be permitted.

   a) Discharges which were issued a permit associated entirely with stormwater prior to February 4, 1987;

   b) Discharges associated with industrial activity;

   c) Discharges from municipal separate storm sewer systems serving a population of 250,000 or more;

   d) Discharges from municipal separate storm sewer systems serving a population of 100,000, but less than 250,000; and

   e) Discharges that contribute to a violation of water quality standards.

2) **Under Phase 2**: EPA added the requirement to permit small MS4s located in urbanized areas, and small construction sites (sites disturbing 1 to 5 acres). Phase 2 also authorized industrial facilities to be exempted from stormwater permitting requirements by way of a "No Exposure" certification.

   DEQ first incorporated EPA's stormwater regulations into the VPDES Permit Regulation (9 VAC 25-31) in the mid-'90s. DEQ has been issuing industrial activity stormwater permits (including construction site permits) since 1993, and MS4 permits since 1996.

   The primary SIC code of a facility, or the specific industrial activities occurring at a facility determine whether or not a facility is required to be permitted under the Industrial Stormwater General Permit regulation. If an industrial facility has a landfill (open or closed) or a steam electric power generating facility, it must obtain a permit for these activities regardless of the facility's SIC code.

   All permits that authorize the discharge of stormwater associated with industrial activity must contain the requirement for the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). On an industry sector-specific basis, these

permits may also be required to contain technology-based effluent limitations and/or stormwater monitoring for pollutants of concern. **Detailed guidance on developing stormwater management conditions for municipal and industrial permits can be found in Sections IN-2 and MN-1.** Permit writers may wish to review the regulation and fact sheet for the General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity (9 VAC 25-151). The requirements for individual industrial activity stormwater discharges should be similar to those applicable under the general permit.

3) Selected Definitions - The VPDES Permit Regulation at 9VAC25-31-10, defines "stormwater", and "stormwater discharge associated with industrial activity" and "industrial activity" as follows:

"Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater discharge associated with industrial activity" means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the VPDES program under 9VAC25-31. For the categories of industries identified in the "industrial activity" definition, the term includes stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters; sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and final products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this definition, material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots, as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas. Industrial facilities include those that are federally, state, or municipally owned or operated that meet the description of the facilities listed in the "industrial activity" definition. The term also includes those facilities designated under the provisions of 9VAC25-31-120 A 1 c, or under 9VAC25-31-120 A 7 a (1) or (2) of the VPDES Permit Regulation.

"Industrial activity" - the following categories of facilities are considered to be engaging in "industrial activity":

a) Facilities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category 10 of this definition);

b) Facilities classified as Standard Industrial Classification (SIC) 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, and 373 (Office of Management and Budget (OMB) SIC Manual, 1987);

c) Facilities classified as SIC 10 through 14 (mineral industry) (OMB SIC Manual, 1987) including active or inactive mining operations (except for areas of coal mining

operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act of 1977 (SMCRA) (30 USC § 1201 et seq.) authority has been released, or except for areas of noncoal mining operations which have been released from applicable state or federal reclamation requirements after December 17, 1990) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge stormwater contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner or operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

d) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (42 USC § 6901 et seq.);

e) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this definition, and debris or wastes from VPDES regulated construction activities or sites) including those that are subject to regulation under Subtitle D of RCRA;

f) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification Codes 5015 and 5093 (OMB SIC Manual, 1987);

g) Steam electric power generating facilities, including coal handling sites;

h) Transportation facilities classified as SIC Codes 40, 41, 42 (except 4221-4225), 43, 44, 45, and 5171 (OMB SIC Manual, 1987) which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operation, airport deicing operation, or which are otherwise identified under categories 1 through 7 or 9 and 10 of this definition are associated with industrial activity;

i) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that is located within the confines of the facility, with a design flow of 1.0 MGD or more, or required to have an approved publicly owned treatment works (POTW) pretreatment program under 9VAC25-31. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 9VAC25-31-420 through 9VAC25-31- 720; and

j) Facilities under SIC Codes 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-4225 (OMB SIC Manual, 1987).

Exceptions and Clarifications - There are several exceptions and clarifications to discuss relative to the above definitions:

a) The stormwater discharged from any industrial facility in the definition above must be through a point source to surface waters, through a municipal separate storm sewer system, or through a non-municipal separate storm sewer system. Discharges of "sheet flow" from an industrial facility (i.e., runoff which is not collected in any pipe, ditch, swale, channel, etc.) are exempt from the permitting requirements.

b) Discharges from employee parking lots, administrative buildings, and areas at a facility that are not involved with the industrial activity are exempt from the permitting requirements if these discharges are segregated from the industrial activity stormwater discharges.

c) Flows which are channeled into basins and have no discharge into State waters are exempt.

d) Discharges to a publicly owned treatment works (POTW) or a combined sanitary/storm sewer system are exempt.

e) Stormwater discharges to groundwater are exempt from the permitting requirements, unless there is a hydrological connection between the groundwater and a nearby surface waterbody.

4) Permitting Options - There are three options for satisfying the VPDES permitting requirements for facilities discharging stormwater associated with industrial activity:

a) **General Permit.** A facility may be covered under a general permit if it qualifies based on the primary SIC code or industrial activity at the facility. Facilities may be covered by a general permit for their stormwater discharges even if they have an individual permit for their non-stormwater discharges. The current industrial general permit, VAR05, became effective on July 1, 2019. To obtain general permit coverage, facilities must file a complete Registration Statement with DEQ, and pay the appropriate application fee. Facilities may use the DEQ registration form developed for this process, or they may submit the information to DEQ in a letter (as long as they include all the information required by the industrial general permit regulation.)

b) **Individual Permit.** If a facility does not qualify for a general permit, an individual permit should be issued. If a facility has an existing VPDES permit for their non-storm water discharges, the stormwater requirements should be incorporated into that permit. To obtain coverage, facilities must submit ***EPA Forms 1 and 2F***. Form 2F (the stormwater form) requires the facility to sample at least one representative storm event and submit the results with the application (NOTE - the region can waive the Form 2F sampling requirement).

c) **"No Exposure" Certification.** A discharger may submit a "No Exposure" Certification and forego permitting altogether. Under this option, industrial facilities that would otherwise be required to have a stormwater permit can be exempted from VPDES permitting if they certify that all their stormwater discharges meet the definition of "no exposure". Facilities should use the No Exposure Certification Form for this certification, and there is no fee associated with the filing. "No exposure" certifications may be filed at any time by a facility, and must be re-filed every five years with DEQ. If conditions change at the facility and materials or activities become exposed, the discharger must immediately file for a VPDES storm water permit. The only facilities that are not eligible for this exemption are facilities that DEQ decides (on a case-by-case basis) are unacceptable for the exemption.

5) Permit Requirements

Industrial Stormwater - All permits that authorize discharges of stormwater associated with industrial activity must include stormwater management provisions. The various components of these provisions are described briefly below and in more detail in **Section IN-2**. The permit conditions and requirements in in OneDEQ template are minimum recommendations. Regional offices have the discretion to include additional requirements based on site specific situations, but the Section IN-2 minimum requirements should always be incorporated.

There are eight types of facilities that are subject to stormwater effluent limitations based on federal effluent limitation guidelines (see the list in the IN section). These limits must be included in the permit, and should be placed on the Part I A page for the outfall.

Facilities in certain industrial sectors require effluent monitoring for their stormwater discharges due to the nature of the industrial activity or materials stored or used on site. Facilities in these sectors have significant potential for contributing pollutants to surface waters from their stormwater discharges. This monitoring is called "analytical monitoring" or "benchmark monitoring" and it also is placed on the Part I A page for the stormwater outfall. If Form 2F data indicate that parameters recommended for analytical monitoring are not present in the discharge at or above the monitoring cutoff levels in the industrial stormwater general permit, VAR05, they can be dropped from the individual permit for this facility.

The applicable stormwater limits and monitoring requirements are to be applied at outfalls that are comprised solely of stormwater or that have stormwater combined with other wastewaters. These requirements are referred to as "storm event" monitoring, to distinguish them from the monitoring requirements for other wastewaters, and will apply only during a measurable storm event. If water quality-based or technology-based limits have already been developed for an outfall, they are effective at all times and must be included on the storm event monitoring page. A separate Discharge Monitoring Report should be developed for the storm event monitoring.

All facilities that have discharges of stormwater associated with industrial activity must develop and implement a stormwater pollution prevention plan (SWPPP). To accomplish this, the permit writer should include a permit special condition section entitled "Stormwater Management". There is generic SWPPP language that applies to all industrial stormwater discharges. In addition, there are some industrial sectors which have specific requirements that are added to the generic SWPPP language. Permit writers must determine if the permitted facility will require sector-specific as well as generic SWPPP language. The text of the generic and sector-specific SWPPP requirements is found in the Industrial Stormwater General Permit Regulation.

Municipal Stormwater - Municipally Owned Facilities having Stormwater Associated with Industrial Activity. Municipally owned industrial facilities may be subject to the stormwater management special condition due to their classification as generating "stormwater associated with industrial activity".

A category of the "industrial activity" definition covers municipally owned sewage treatment plants with a design flow of 1.0 MGD or more, or required to have an approved (i.e., fully approved, not conditional) pretreatment program. Stormwater permit special conditions for these facilities are detailed in **Section MN-1**.

All other municipally owned industrial facilities should be permitted as described in **Section IN-2.**

5. Draft Permit Preparation

Upon completion of the Fact Sheet, develop the draft permit using the VPDES permit templates that can be found on DEQnet (9 VAC 25-31-260). **If all activities are controlled by BMPs and there are no discharges, consider issuing a VPA permit instead of a VPDES permit.** All permits will be organized into Part I and Part II. Part II is always the "boilerplate" Conditions Applicable to All VPDES Permits.

a. **Part I.A**: Label all effluent limitations pages "A. Limitations and Monitoring Requirements". Each Part I A page begins with a narrative paragraph that authorizes discharge from a specific outfall or outfalls from some starting date to an ending date. If there is more than one outfall, label each outfall's effluent limitations page "A". If multiple outfalls have identical requirements, they can be listed together on one Part I.A page. The first page of Part I.A will begin with paragraph number 1. The next Part I.A page will begin with paragraph 2 and so on. All other notations or footnotes on the Part I.A pages should use alphabetic characters or asterisks. See the VPDES permit template located here.

   Place all parameters to be monitored for the life of the permit on the Part I.A page(s). Each Part I.A page contains rows of pollutant parameters and columns for different types of limits to be expressed as numeric values for each parameter. If a particular limit column is not applicable to the parameter on that row, insert NA into the space. In some cases, the permit may require monitoring for a parameter without setting a limit. In these cases, use NL instead of a numeric value to indicate that monitoring is still required even though there is no limit on the parameter.

B. Draft Permit Review

Unless otherwise specified or the recipient objects, all information forwarding for draft permit review will be done via placing items in the appropriate regional directory or as attachments to emails**. Please use the permit number and name or abbreviated name of the facility for the file folder containing the permits (e.g. VA0081256HRSDBoatHarbor**). Suggested transmittal letters in Section L may be used in the email sending the information to the individual. Documents with original signatures, handwriting or drawings should be scanned.

1. Regional Review

Each Regional Office shall implement an internal review process for draft permits. The review shall include the application, fact sheet, permit, and public notice. The review should occur before the draft permit is sent to outside organizations and to the applicant for review. The below methods should be used as appropriate.

a. **Peer Review**. Another permit writer or technical reviewer in the regional office should evaluate the permit package to ensure that the permit limits, conditions, and other requirements are applicable to the discharge, that the limits are technically accurate, that the permit is consistent with current technical and procedural guidance, and that there is continuity between the draft permit and any previous permits issued for this discharge. Regional inspection staff may also be useful in identifying potential problems with implementing the permit.

b. **Regional Planning Review**. Regional planning staff should provide a statement for the file indicating that the pollutant management activity either conforms or is consistent with applicable Total Maximum Daily Loads, the Water Quality Management Plan Regulation, applicable area or basin-wide water quality control and waste management plans or policies or will be consistent with the applicable planning document during its next revision. Do not issue/reissue any permits which conflict with any Total Maximum Daily Loads, the Water Quality Management Plan Regulation, or area-wide or basin-wide water quality control and waste management plan or policy.

c. **Water Permit Manager Review**. Water permit management should review the draft permit package for consistency with regional policies and procedures. They should also be the final check for readability and typographical errors.

2. Office of VPDES Permits Review

The staff of the Office of VPDES Permits is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to the Office of VPDES Permits for review and indicate which program areas (technical, WET, 316b, 316a, pretreatment, stormwater, groundwater, etc.) need review.

3. VDH Review

VDH review of draft permits is not required unless the Office of Drinking Water Field Office specifically requests it.

4. EPA Review

a. In accordance with the Memorandum of Agreement (MOU) and pursuant to 40 CFR § 123.24(a), using EPA's PRMTS portal, submit to EPA a copy of the application, draft permit, Fact Sheet and Fact Sheet Attachments for all:

1) Major facilities;
2) Minors discharging to waters with an EPA approved TMDL if the permit contains an effluent limit based on the TMDL (except for bacteria TMDLs);
3) Industrial facilities included in 40 CFR Part 122 Appendix A;
4) Facilities with 316(b) requirements regardless of major, minor or TMDL status;
5) Facilities with discharges that may affect the waters of another State;
6) Facilities with daily average discharges exceeding 0.5 MGD, except discharges of non-process wastewater;
7) Facilities with discharges to the territorial sea or contiguous zone; and
8) Facilities that are listed on the Chesapeake Bay Significant Dischargers List (SDL).

This may be concurrent with the submittal of this information to VDH. The Office of VPDES Permits will still be the main point of contact for EPA, but it is not necessary to send a copy of the EPA draft transmittal package to Office of VPDES Permits. The region will submit the final permit to EPA (see Section III.D.3). EPA will review the permit to ensure that the effluent limits comply with the CWA requirements and that proper procedures were followed in drafting the permit. For the TMDL minors, EPA will only review the TMDL issues.

In order to maintain statewide consistency, aside from routine draft permit review final permit submittals, contact with EPA should be coordinated between the Office of VPDES Permits and the Regional Office. The liaison role for the Office of VPDES Permits is intended to ensure that the agency speaks consistently about our regulations and procedures. In cases involving EPA, it is appropriate for the Office of VPDES Permits to be directly engaged in discussions with EPA. However, in a few circumstances (e.g. a specific permit) it may be more effective for regional staff to talk directly with EPA. Appropriate Office of VPDES Permits staff should be notified in advance and either participate in the discussion or be kept apprised of the discussion. The Office of VPDES Permits will process requests for EPA assistance quickly and they will communicate information from EPA to the regional offices in a full and timely way.

b. EPA can either comment upon and/or object to any of the documents in writing within **30 days**. EPA **comments** must be responded to but may not necessitate permit changes. EPA **objections** must be resolved prior to permit issuance. A permit cannot be issued/reissued with unresolved EPA objections. If EPA fails to comment or object within the comment period, or fails to request an extension of time in which to comment, the RO may email a reminder to the EPA Region 3 contact in Section L (copy CO).

c. Any responses to EPA's suggested changes or objections should be coordinated with CO. The RO compiles any additional information requested by EPA and changes to draft permits and fact sheets.

d. If EPA has further objections, the Office of VPDES Permits will coordinate efforts with the RO to reach agreement with EPA. Upon notification from the Office of VPDES Permits of any additional comments or objections by EPA, the RO redrafts the permit as necessary to satisfy EPA.

e. All EPA comments and DEQ responses should be in the Fact Sheet.

5. Owner Review

a. Forward a complete copy of the entire draft permit and Fact Sheet to the owner. The RO may elect to send the draft permit package to EPA prior to owner review. If the draft permit package is provided to the owner prior to EPA's review, the permittee should be informed that EPA comments may result in changes to the draft permit.

b. Transmit the draft permit package, including the fact sheet and the public notice requirements, to the owner (this may be done electronically). The owner is responsible for the payment of the public notice publishing cost and acknowledges that they must pay the cost by completing the Public Notice Billing Authorization Form. Receipt of the form is required with the submittal of the application/modification package. See the procedure in 5.c below if the owner did not submit the Public Notice Billing Authorization Form. There is also an optional procedure for owners that do the newspaper publication (see C.2 below) and no Public Notice Billing Authorization Form is needed. The sample transmittal letters are available on DEQnet for all the situations described (Public Notice Billing Authorization Form submitted, Form not submitted, and the optional procedure).

c. The owner has **14 days** after receipt of a copy of the draft permit to comment and/or object to its provisions. During this period, the owner may request a meeting to discuss the proposed permit conditions or may elect to withdraw the application and thereby discontinue permit processing. If the owner did not submit the Billing Authorization Form with the application, send it with the draft. A sample transmittal letter is available on DEQnet. The owner should be made aware that in the case of a reissuance, the new permit must be issued prior to the expiration of the current permit and that the current permit cannot be administratively continued if the owner is the cause of the delay.

The regional office should make every effort to resolve the issues raised by the owner within the constraints of applicable laws and regulations. If the owner's delay in submitting the Billing Authorization Form for the public notice of a permit reissuance jeopardizes reissuance prior to expiration of the current permit, refer the matter to enforcement or regional management for a decision. At this point, assuming this is a permit reissuance, there are several options to choose from. The region may continue to negotiate with the owner and consider the current permit to be administratively continued until the issues are resolved and the new permit is issued. Coordinate with the Office of VPDES Permits on administratively continued permits that are controversial. The region may decide to stop negotiations since the application is recorded as incomplete without the Billing Authorization Form and return it to the applicant. In this case, the old permit would be allowed to expire, and the owner would face penalties for discharging without a permit. The region may decide to go to public notice on its own initiative and settle the issues at a public hearing or before the Board.

Any changes to a draft major permit due to owner comments require review by EPA. Any significant changes to any draft permit (those not fitting the definition of a minor modification) due to owner comments may require review by other appropriate agencies (as requested).

Once owner concurrence is received, the permit can proceed to public notice. See Section VI for public participation procedures.

C. Final Permit Processing

Unless otherwise specified or if the recipient objects, all information forwarding for final permit processing will be done via placing items in the appropriate regional directory.

1. Final Permit Package

Compile and forward the Final Permit Package for review and Water Permit Manager's or Deputy Regional Director's/Regional Director's (for majors) signature upon completion of the public notice period or upon completion of the public hearing (if one occurred). For reissuances, the completed final permit may be signed and distributed at any time prior to expiration. **If the permit is for a privately owned sewerage systems that treat sewage generated by private residences and discharge more than 1,000 gpd and less than 40,000 gpd, the permit should not be issued/reissued unless the closure plan, cost estimate and draft financial assurance mechanism have been approved. For reissuance of a permit to an existing facility, the final, approved financial assurance mechanism must be in place.**

a. Prepare the final permit package (final permit, Fact Sheet, and response to comments) including all changes made as a result of the public notice and comments received. Make any necessary changes to the Fact Sheet to reflect these permit changes. The permit cover page should be on agency letterhead.

b. Prepare the letter transmitting the final permit to the owner, for signature. This letter should be on DEQ letterhead. Ensure that the first DMR due date referenced in the transmittal letter is the 10th day of the month immediately following the first full month in which the new permit is effective. As required by the State Water Control Law, this letter and the accompanying package must be sent to the permittee via certified mail. See Section L for an example Permit Transmittal Letter.

c. Route the final permit package through the appropriate regional office staff. All permits should be approved by the appropriate regional personnel including the Planning representative and Water Permit Manager.

d. The permit's signature line title should be for the position of the person with delegated authority to sign the permit. It is normally signed by the Water Permit Manager. For major permits, the Regional Director or Deputy Regional Director signs the permit. In cases where a public hearing has been held on a proposed permit, the permit is signed after the State Water Control Board has made a final decision to issue the permit.

2. Dating the Permit

a. For issuances, the effective date is the date the permit is signed.

b. For reissuances, if the signature date is prior to the expiration date of the previous permit, the effective date of the new permit will be the day after the expiration date of the expiring permit.

c. If the permit is reissued after the expiration date, the effective date is normally set on the first of the month following the date the permit is signed.

d. VPDES permits shall be in effect for a fixed term not to exceed five years (§62.1-44.15(5a)). Regions are free to negotiate shorter permit terms with permittees to manage workloads and increase regional efficiencies.

3. Final Package Distribution

Distribute the permit package as follows:

a. Owner by CERTIFIED MAIL (§62.1-44.15(9)) - either postal certified mail or electronic certified (read receipt request) when agreed to by the permittee (see agreement question in Application Addendum Section L). The permittee must agree to electronic certified final package distribution (use read and delivery receipt).

- Transmittal Letter
- Permit
- Response To Comments (this should be included in the Fact Sheet Attachments)
- Fact Sheet and Fact Sheet Attachments

b. EPA[1] (Use EPA's PRMTS Portal)

- Transmittal Letter
- Permit
- Fact Sheet and Fact Sheet Attachments

c. VDH-DSS - In accordance with GM07-2009, DEQ must provide notification to VDH-DSS and VMRC of the public comment period, and provide a copy of the final permit, if issued, to DSS if the proposed sewage discharge[2] will result in condemnation of shellfish beds.

d. ECM

- Transmittal Letter and Permit (combined as one document)
- Response To Comments (this should be included in the Fact Sheet Attachments)
- Fact Sheet and Fact Sheet Attachments
- Application
- Permit correspondence file

4. Update CEDS and PEEP Workflows

RO should complete data entry into CEDS to reflect the new issuance and expiration dates and check on the accuracy of other entries for this permit. Check DEQnet for most recent CEDS user manual.

[1] All final permit packages (permit and Fact Sheet) for majors are submitted to EPA via PRMTS Portal. In addition, all final major permits and minor permits that were approved by EPA (minors with applicable EPA approved TMDLs), and industrial minors that fall under 40 CFR Part 122 industries also go to EPA. This excludes minor permits with bacteria TMDLs which no longer go to EPA. If a permit changes from a major to a minor, inform Ryan Shuart at EPA Region 3 and Joanne Lam (ICIS Coordinator) at DEQ CO that it's not a major anymore. In order to have the facility downgraded to a minor in ICIS, you must include the EPA Rating Work Sheet in any correspondence to Ryan Shuart.

[2] Proposed discharges will be considered to be new individual VPDES permit applications, new general permit registration statements, or modification requests or reissuance applications that propose an increase in discharge flow. Sewage discharges will be considered to include all municipal discharges, industrial discharges containing 10% or more sewage, and discharges for which general permit coverage is being sought under the "Domestic Sewage Discharges of Less Than or Equal To 1,000 Gallons Per Day" general permit.

D. Revocation and Reissuance Procedures (9VAC25-31-370)

Permits may be revoked and reissued at the request of any interested person, the permittee, or upon staff initiative. A revocation and reissuance is a bilateral action, i.e. it cannot occur unless both the DEQ and the permittee agree to it.

1. Causes for Revocation and Reissuance (9VAC25-31-390)

a. A permit revocation and reissuance is justified for any of the reasons specified as "Causes for Modification" in 9VAC25-31-390.A.

b. The staff may initiate a permit revocation and reissuance when cause exists for termination but continued operation is acceptable until a new application can be processed and a new permit issued. See Section V for a list of the causes for termination.

> When a modification request falls within **15 months** of a permit expiration date, a Reissuance in Lieu of Modification letter may be sent (see DEQnet). Determination of the need for a revocation and reissuance versus a modification is generally done on a case specific basis. Contact Office of VPDES Permits for further assistance, if needed.

2. Permittee or Interested Party Requested Revocation

a. To begin the process, the permittee or interested party sends a letter to the RO containing the facts and reasons supporting the request.

b. When a third party requests a revocation and reissuance, the RO must notify the permittee and obtain the permittee's concurrence.

c. Document the permittee's agreement to the revocation by sending a Permit Revocation Agreement Form to the permittee to be signed and returned to the RO. See DEQnet, Permit Revocation Agreement Form for Revocation and Reissuance.

3. Staff Initiated Revocation and Reissuance

a. Notify the permittee by letter of the reasons for the staff proposal and the proposed changes to be included in the new permit and request a new application.

b. If the proposed revocation and reissuance cannot be mutually agreed upon by the RO and permittee and the staff still wants to change the permit, publish a public notice of the Department's intent to either modify or terminate the permit. A hearing will be scheduled, if required. The permittee receives at least thirty (30) days notice of the time, place, and purpose of the hearing.

4. Processing a Permit Revocation and Reissuance (9VAC25-31-370.C)

A permit revocation and reissuance is processed much the same as a reissuance. A new application is required, a draft permit is prepared, the fee must be paid (as if it were an issuance), the entire permit is open for review/revisions, the permit is reissued for a new five-year term, and the same permit number is used in the reissuance.

a. The full public notice for the reissuance must contain language that indicates that the new permit will be issued for a full term and that it will supersede any previous permit. Avoid using the term revoke or revocation in the public notice in order to reduce confusion between the revocation and reissuance process and the termination process.

b. The final permit transmittal letter contains the following language making it clear that the old permit is officially superseded as of the effective date of the new permit: "The attached VPDES permit supersedes the previous VPDES permit VA00XXXXX issued to this facility."

c. In a revocation and reissuance, the revocation agreement form does not go to the State Water Control Board for action on a letter ballot. Place the completed revocation agreement form in the permit file.

d. Update CEDS.

5. Denial of Revocation and Reissuance Requests

Denials of requests for permit revocation and reissuance require the RO to send a letter, explaining the reasons for the denial to the requesting party. Denials of requests for revocation and reissuance may be appealed to the Director by the requesting party. This appeal consists of a letter to the Director which sets forth the relevant facts.

Denials of requests for revocation and reissuance are **not** subject to public notice, public comment, or public hearing.

6. Permit Requirements

During the revocation and reissuance proceedings, the permittee must comply with all conditions of the existing permit until the new permit can be issued. If a new permit cannot be issued prior to expiration of the existing permit due to the permittee's actions, refer it to the regional enforcement manager.

SECTION IV

PREPARING PERMIT LIMITS

Table of Contents

A. Use Of Water Quality Standards in VPDES Permits

Questions often arise relative to such things as the definition of state waters, where do the standards apply, what are surface waters, what are intermittent streams, etc. The purpose of this section is to provide direction on the use of the water quality standards in the VPDES permit program.

The State Water Control Law (§ 62.1-44.3) includes the following definition:

> "State Waters" means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction.

The VPDES Permit Regulation (9VAC25-31-10) includes the following definitions:

> "Point Source" means any discernible, defined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture land.
>
> "Surface Water" means
>
> (i) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
>
> (ii) all interstate waters, including interstate wetlands;
>
> (iii) all other waters such as inter/intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
>
> (1) which are or could be used by interstate of foreign travelers for recreational or other purposes;
>
> (2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
>
> (3) which are used or could be used for industrial purposes by industries in interstate commerce;
>
> (iv) all impoundments of waters otherwise defined as surface waters under this definition;
>
> (v) tributaries of waters identified in paragraphs (i) to (vi) of this definition
>
> (vi) the territorial sea; and
>
> (vii) wetlands adjacent to waters other than waters that are themselves wetlands, identified in paragraphs (i) to (vi) of this definition

The permit regulation also includes the following provisions:

> Section 1.5 prohibitions and requirements for permits:
>
> A. Except in compliance with a VPDES or VPA permit issued by the Department, it shall be unlawful for any person to:
>
> 1. Discharge into state waters sewage, industrial wastes or any noxious or deleterious substances; or
>
> 2. Otherwise alter the physical, chemical, or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or the uses of such waters for domestic or industrial consumption, or for recreation, or for other uses.

B. Point source discharges of pollutants to surface waters may be authorized by a VPDES permit. The management of pollutants that are not point source discharges to surface water may be authorized by a VPA permit.

Section 2.5, establishing limitation, standards, and other permit conditions includes:

C. Water quality standards and state requirements

The permit shall include limitations to prevent violations of water quality standards, narrative and numeric, and to comply with any requirement of the Act or the law. These limitations shall control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants) which the Board determines are or may be discharged at a level which will cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard.

As indicated by the above section of the permit regulation a VPDES permit may be issued authorizing the point source discharge of pollutants to surface waters. Thus, for a VPDES permit to the applicable there must be:

1. A point source discharge.
2. The point source discharge must contain pollutants.
3. The discharge must be to surface waters.

If any one of these three conditions do not exist then a VPDES permit is not applicable.

As indicated above the VPDES permit shall include limitations to prevent violations of the water quality standards. Therefore, in the issuance of a VPDES permit we must ensure that the limitations therein will result in the water quality criteria being met outside any allowed mixing zones (9VAC25-260-20.B).

One of the decisions that the staff must make in the permitting process is to determine what are surface waters and what are state waters. The definitions are very broad but there are still some areas in the state where there may be a question as to the location where the water quality standards should apply. Probably the major area of question involves ephemeral or intermittent streams.

These directions will use the following definitions:

Permanent Stream (Relatively Permanent Waters): A waterway that contains water at all times and that has, or could have, a well-established aquatic community. Additionally, EPA defines these streams as relatively permanent waters which are waters that typically (e.g., except due to drought) flow year-round or waters that have a continuous flow at least seasonally (e.g., typically three months). Relatively permanent waters do not include tributaries whose flow is coming and going at intervals and therefore they do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continues flow at least seasonally.

Note: A spring fed stream should be considered to be a permanent stream unless flow data is available to demonstrate that the spring ceases flow for extended times during the average year.

For permanent streams, the water quality criteria apply at the point where the discharge enters the stream or at the edge of the mixing zone in cases where a mixing zone is allowed.

Intermittent Stream: a waterway that contains water for extended periods during a year, but does not contain water at all times. These streams are likely to have an active aquatic community for at least part of the average year.

For intermittent streams that begin on a permittee's property, the water quality standards apply in the stream at the point where the stream leaves the permittee's property boundary.

For intermittent streams that begin off the permittee's property but crosses the permittee's property, the water quality standards apply at the point where the discharge enters the stream.

Ephemeral Stream: a waterway such as a drainage way, ditch, hollow or swale that contain water only during or immediately following periods of rainfall or water supplied by the discharger.

> *Note:* the discharge of an effluent to an intermittent or ephemeral stream will probably result in the creation of a permanent stream.

For ephemeral streams, the water quality standards apply in the stream at the point where the stream leaves the permittee's property and/or easements.

> *Note:* Other case-by-case decisions may be made where the majority of the discharge conveyance is underground.

DEQ recognizes that there exist facilities that use a man-made open ditch as a conveyance to deliver a treated effluent to its receiving stream, and do not believe that it is reasonable to treat the effluent in such a conveyance as state waters nor to apply the standards to it. DEQ further recognizes that there is little or no difference in theory or fact between such a ditch and a naturally occurring ditch or channel that may be used for the same purpose. However, it is not the intent of these directions to suggest or recommend that owners may avoid the proper application of the water quality standards by purchasing the entire watershed of an ephemeral stream.

B. Effluent Limitations

1. Types of Effluent Limitations

Permit effluent limitations, standards, or conditions shall be in compliance with all applicable Effluent Limitations Guidelines, Water Quality Standards (9VAC25-250) and Best Professional Judgment (9VAC25-31-220 and 9VAC25-31-230).

Permits will often have limitations on individual parameters developed by different means, and occasionally, the limitations on a single parameter will be derived through a combination of methods. For example, an effluent may have total suspended solids limited by effluent guidelines, oil and grease limited by BPJ, ammonia by aquatic toxicity (water quality considerations), and BOD_5 by effluent guidelines for part of the year and by water quality considerations (dissolved oxygen) for the remainder of the year. Theoretically, limits could be established for each parameter by both water quality considerations and by technology-based factors. The permit writer must always apply the more stringent of the two values.

a. Technology-based Effluent Limitations

Effluent limitation guidelines (ELGs) are national standards for industrial wastewater discharges to surface waters and publicly owned treatment works (municipal sewage treatment works). The standards are technology-based (i.e. they are based on the performance of treatment and control technologies); they are not based on risk or impacts upon receiving waters and are used when they will not violate water quality standards. There is no consideration of water quality standards or other in-stream requirements as the basis for these limits. Included in this category are the secondary treatment requirements for POTWs and industrial BAT, BCT, BPT, etc. These limitations are called "technology-based" limitations. In some cases, particularly for toxic pollutants, technology-based limits may also be reached as a result of in-process controls during production.

Also included in this category are effluent limits promulgated as regulations by the state. **These limits are regulations and no alternatives can be accepted.** Examples include: Potomac Embayment standards, Chickahominy Standards, Dulles Watershed Policy, the Occoquan Policy, etc.).

(1) Industrial Effluent Guidelines and Standards

EPA is required to promulgate technology-based limitations and standards that reflect pollutant reductions that can be achieved by categories, or subcategories, of industrial point sources using specific technologies (including process changes) that EPA identifies as meeting the statutorily prescribed level of control under the authority of CWA sections 301, 304, 306, 307, 308, 402, and 501 (33 United States Code [U.S.C.] 1311, 1314, 1316, 1318, 1342, and 1361). For point sources that introduce pollutants directly into the waters of the United States (direct dischargers), the effluent guidelines promulgated by EPA are implemented through NPDES permits as authorized in CWA sections 301(a), 301(b), and 402. For sources that discharge to POTWs (indirect dischargers), EPA promulgates pretreatment standards that apply directly to those sources and are enforced by POTWs and state and federal authorities as authorized in CWA sections 307(b) and (c). The applicable parts of the federal regulations are listed in the VPDES permit regulation at 9VAC25-31-30 A Permit writers should refer to the latest EPA listings at 40 CFR Chapter I, Subchapter N: Effluent Guidelines and Standards (40 CFR Parts 400 - 471). The most up to date list should be on the EPA website at the following links:

Parts 400 - 424

Parts 425-471

(a) Whenever an effluent guideline applies, the level of control prescribed by the guideline represents the minimum level of control required in the permit.

(b) Effluent guidelines are not considered to apply if: An effluent guideline has been withdrawn by EPA or remanded by court. However, the Office of General Counsel of EPA may decide that certain determinations made by the Administrator in establishing a guideline were not disturbed by the Court's remand and must still be followed by permit issuers.

(c) Underlying determinations made by the EPA Administrator in establishing an effluent guideline may include, for example, achievable reductions in flow, achievable end-of-pipe concentrations, or limitations for certain pollutants.

(d) When developing effluent guidelines limits, use the maximum production rate reported on the application or the projected future production rate, whichever is greater. Multiple production tiers could be used to address future operating projections. If the guidelines require a flow for calculation of the limit, use the maximum 30-day flow value from the application.

There are several possible expressions for the limitations found in effluent guidelines:

(a) Mass- or Concentration-based Numeric Limitations - Limitations in effluent guidelines generally are expressed as numeric values, which are upper bounds of the amount of pollutant that may be discharged. For most pollutants, these limitations are mass-based or concentration-based values. They are, in effect, measures of how well the production, wastewater treatment, and pollution prevention processes must be operated. The limitations generally are expressed as maximum daily and average monthly limitations. EPA defines the maximum daily limitation as an estimate of the 99th percentile of the distribution of the daily measurements. The average monthly limitation is an estimate of the 95th percentile of the distribution of the monthly averages of the daily measurements.

(b) Numeric Limitations Established at Minimum Levels - EPA sometimes sets a requirement in the effluent guidelines that the concentration of a pollutant in the discharge must be below a minimum level (ML). The ML is the lowest level at which the entire analytical system must give a recognizable signal and an acceptable calibration point for the pollutant being analyzed. Where a limitation in the effluent guidelines is set at less than the ML, the value of the ML is specified in the Federal Effluent Guidelines regulation on the basis of the analytical methods that EPA used to chemically analyze wastewaters in developing the regulation. For example, in the Pulp, Paper, and Paperboard point source category (Part 430) the Daily Maximum BAT effluent guideline for the Tetrachlorodibenzofuran (TCDF) congener of dioxin is expressed as <ML for papergrade sulfite (Subpart E) mills, which means "less than the minimum level specified in part 430.01(i)" (i.e., 10 picograms/liter for TCDF). If, in the future, analytical methods become more sensitive with lower MLs, EPA would determine whether the technologies for reducing the amount of the pollutant in the discharge are capable of achieving more stringent limitations and, thus, whether it would be appropriate to modify the requirements of the effluent guideline. EPA has not established average monthly limitations in effluent guidelines when the maximum daily limitation is an ML limitation. The purpose of an average monthly limitation is to require continuous dischargers to provide better control, on a monthly basis, than required by the maximum daily limitation. However, for these pollutants, the data were determined by analytical methods that could not measure below the ML specified in the regulations. Thus, even if monitoring for pollutants is more frequently than once a month, average monthly limitations would still be expressed as less than the ML or < ML.

(c) Other Expressions for Numeric Limitations - EPA also promulgates effluent guidelines for pollutants that cannot be expressed in terms of mass or concentration (e.g., pH, temperature, radiation) or are better expressed through other means (e.g., unitless ratios). For example, pH is generally expressed as an acceptable range (e.g., 6.0–9.0 standard pH units).

(d) Nonnumeric Effluent Limitations - Nonnumeric effluent limitations might include specific BMPs or requirements to minimize or eliminate discharges. CWA sections 304(e), 308(a), 402(a), and 501(a) authorize the Administrator to prescribe BMPs as part of effluent guidelines and as part of an NPDES permit. CWA section 304(e) authorizes EPA to include supplemental BMPs in effluent guidelines for toxic or hazardous pollutants for the purpose of controlling "plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage."

> For additional information and procedures for applying federal effluent guidelines, see Chapter 5 of the NPDES Permit Writer's Manual.

(2) Technology-based Effluent Limitations for POTWs

EPA has promulgated regulations in 40 CFR Part 133 establishing secondary treatment standards, equivalent to secondary treatment standards, and a number of special considerations applied on a case-by-case basis. In addition, by state law, §62.1-44.15(14), no treatment can be less than secondary or its equivalent unless the discharger can demonstrate a lesser level of treatment will still meet the requirements of the law. See Section MN-2 for the incorporation of the secondary treatment standards in the VPDES permits.

(a) Secondary Treatment Standards

For municipal treatment facilities, 40 CFR Part 133 specifies technology-based limits for the minimum level of treatment that must be met through the application of secondary treatment. Exhibit IV-1 below summarizes the standards:

Exhibit IV-1 Secondary Treatment Standards

Parameter	30-day average	7-day average
BOD_5	30 mg/L (or 25 mg/L $CBOD_5$)	45 mg/L (or 40 mg/L $CBOD_5$)
TSS	30 mg/L	45 mg/L
BOD_5 and TSS removal (concentration)	85% (min)	--
pH	Within the limits of 6.0-9.0 S.U.	

Refer to Section MN-1 for further details on how to incorporate these limits into the VPDES permits.

(b) Equivalent to Secondary Treatment

Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD_5 and TSS but might not consistently achieve the secondary treatment standards for these parameters.

The equivalent to secondary treatment standards, as specified in § 133.105 are shown in Exhibit IV-2 below.

Exhibit IV-2 Equivalent to Secondary Treatment Standards

Parameter	30-day average	7-day average
BOD_5	Not to exceed 45 mg/L (or not to exceed 40 mg/L $CBOD_5$)	Not to exceed 65 mg/L (or not to exceed 60 mg/L $CBOD_5$)
TSS	Not to exceed 45 mg/L	Not to exceed 65 mg/L
BOD_5 and TSS removal (concentration)	Not less than 65% (min)	--
pH	Within the limits of 6.0-9.0 S.U.	

Refer to Section MN-1 for further details on how to incorporate these limits into the VPDES permits.

(c) Variances from Technology-based Limits

(1) Variance from BAT limits for "nonconventional" pollutants may be granted **only** as follows:

- CWA Section 301(c) economic variances from BAT limits for "nonconventional" pollutants
- CWA Section 301(g) water quality-based variance from BAT limits for "nonconventional" pollutants
- CWA Section 316(a) variances for the thermal component of wastewater discharges

(2) Fundamentally Different Factor (FDF) variances from BAT or BCT may be allowed by an applicable effluent guideline. The DEQ is not authorized to grant FDF variances; however, EPA may grant an FDF variance. Consult the Office of VPDES Permits for assistance on FDF variance requests.

(3) Monitoring waivers (9VAC25-31-220.A.2): An industrial discharger can request a waiver from monitoring a parameter that is limited by an effluent limitation guideline. The permittee must show to the Department's satisfaction, through monitoring data and other evidence, such as knowledge about the facility's process and infrastructure, that the pollutant in question is not present, or expected to be present, in the effluent. If the pollutant's presence is due to background concentrations in the intake water, the permittee cannot contribute to that concentration. The waiver is good only during a single permit term and is not available during the first five years of a new permit. The permittee must request the waiver with every reissuance application. DEQ is authorized to grant this type of waiver without EPA concurrence.

If the waiver is granted, the permit must still contain the limitation required by the ELG, but the monitoring frequency on the Part I.A page will be 0 and sample type will be NA. Any permit with this waiver must also contain the Limitation Monitoring Waiver special condition. The fact sheet must contain the rationale for the special condition and the documentation provided by the permittee that justified the waiver.

b. Water Quality-based Effluent Limitations

Many situations require the development of limitations according to water quality considerations. When drafting a VPDES permit, a permit writer must consider the impact of the proposed discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality standards. By analyzing the effect of a discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards. In such cases, the SWCL and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water.

These limits result:

- When the minimum effluent limit guidelines are not sufficiently stringent to maintain compliance with a water quality standard and a more stringent limit is required.
- When a water quality criteria exists and where the permit limit needed to attain compliance can be reasonably quantified, e.g. based on modeling studies.
- Where necessary to assure that effluent limitations in the permit are consistent with the assumptions and requirements of any applicable TMDL or waste load allocation resulting from the continuing planning process.

Water quality-based effluent limits, more stringent than ELG's, are developed to protect the quality of the receiving waters (called ambient conditions). Such bodies of water are called "water quality-limited." WQS are found in State Water Control Board's Water Quality Standards Regulation (9VAC25-260). Permit writers should determine what water quality standards apply to the receiving waters at the discharge point. If analytical results from effluent and receiving stream monitoring are available, review this information for water quality standards violations and antidegradation effects. It will be necessary in most cases for the region to determine critical stream flows in order to calculate water quality-based effluent limits.

The permit writer should evaluate mixing zones and calculate wasteload allocations/permit limits using the following standard DEQ protocols. Calculate limits for all pollutants having a reasonable potential to cause or contribute to a violation of water quality standards. Establish effluent limitations for wastewaters containing oxygen-demanding waste using the latest version of the Regional Water Quality Model for Free Flowing Streams or the Regional Tidal Modeling System. Establish effluent limitations for toxic compounds using the latest versions of the computer programs MIX (for flowing streams only) and STATs.

> For stormwater discharges and intermittent discharges (≤ 4 days duration), water quality-based effluent limitations can be established using standards for acute toxicity only. Because chronic and human health standards are based on longer term exposure, they are not applicable to these discharges. However, consider evaluating intermittent discharges into PWS for human health effects.

Attach the output from the model or computer program to the Fact Sheet to document the development of the limits. The models should be re-run, or a narrative explanation provided, whenever there is a change in the facility or the stream that would invalidate the assumptions used previously.

When a permit is reissued and there have been no changes to the facility or receiving waters that would invalidate the old model, there is no need to re-run the model. However, the original model results should be included in the Fact Sheet for the reissued permit to provide the basis for the limits in the new permit. If the same model used in the previous issuance is used for the reissuance, Office of VPDES Permits review is not required, unless the model is outdated. Contact the Office of VPDES Permits for more information on model applicability.

If a model other than one identified above is utilized, transmit the stream model to the Office of VPDES Permits for review. All stream analyses submitted for review will be reviewed within **14 days**.

Office of VPDES Permits review is not required if a consultant utilizes any of the models identified above. Review the consultant's modeling work to confirm the validity of the data and make sufficient computer runs to ensure that the models were applied properly.

Transmit all other models submitted by consultants to the Office of VPDES Permits for review.

Water quality-based requirements must be included in all reissued permits whenever such requirements are more stringent than technology-based requirements. Permit writers should consider the impact of production increases on the potential need for water quality-based limits or water quality standards violations.

1) Variances from Water Quality-based Limits

The permit public notice must contain language identifying DEQ's intent to grant the water quality standards variance or accept a new water effect ratio in (a) through (e) below. See the Generic Public Notice format in Section VI.

(a) **Changing or removing stream use designations (9 VAC 25-260-140 E):** Water quality criteria are established to protect the beneficial uses designated for state waters. Water quality-based limits are developed to ensure maintenance of the criteria. Where a site-specific study demonstrates that attaining the designated use is not feasible in the waterbody receiving the discharge, a **temporary (5 years)** variance to the standards is allowed. Variances result in changes to the water quality criteria. New effluent limits are then written to ensure compliance with the new criteria. Under no circumstances may a water quality variance result in a loss of existing stream uses or a worsening of stream quality. **These variances may not be applied to new discharges.** They also are not allowed to excuse a discharger from any applicable technology-based effluent limitations. Variances are only allowed under certain conditions.

The conditions for granting variances (i.e. removing stream use designations) are described in 9 VAC 25-260-10 G. In addition, variances to limits based on human health criteria can only be granted for the metals criteria designed to protect human health and for the criteria for taste, odor and aesthetic compounds which apply in public water supplies. Taste, odor, and aesthetic compounds include chloride, foaming agents, iron, manganese, nitrate, sulfate, total dissolved solids and zinc. Variances may not be granted for the human health criteria.

(b) **Halogen Ban Variances (socio-economic demonstrations):** Halogen ban variances are described in 9VAC25-260-110 and in Section MN-1.

Changes to stream use designations or halogen ban variances should follow these basic procedures:

- A completed use attainability study or halogen ban variance (socio-economic demonstration) study may be included with an application for permit reissuance or modification. If the study/demonstration report is acceptable to DEQ, the permit can be drafted with interim limits based on the variance study and final limits (with a compliance schedule) based on the water quality criteria. The final limits and compliance schedule only begin if EPA disapproves the variance. If EPA approves the variance, the interim limits remain effective throughout the permit term.
- Permittees may conduct these studies during the compliance schedule for new water quality-based limits. In these cases, the study report will be submitted with a request for permit modification and the modification will be processed as described above.
- Contact the Office of Water Quality Standards (OWQS) for guidance on the conduct of use attainability studies, socio-economic demonstrations and WER studies for details on what the study must contain.
- **Since the use designation change or halogen ban variance essentially changes the Water Quality Standards, EPA must approve all variances and they have to follow specific public participation rules.** OWQS will forward the variance study to EPA during the permit public notice period. Conditional approval of the variance will be sought at that time. Final approval from EPA cannot occur until the public notice period has closed and the permit has been issued and the Attorney General's Office has certified that the variance was processed according to state law. The Regional Office is responsible for certifying that all required procedures were followed in processing the variance request. See DEQnet for the Water Quality Standards Variance Certification Form. OWQS will be responsible for submitting the final paperwork to EPA.
- Use designation variances are only good for the term of the permit in which they are granted. When that permit expires, the permittee must demonstrate that the variance should be continued or modified. Otherwise, the variance ceases to exist on the permit expiration date. Continuation of use designation variances from one permit term to the next require EPA approval. Contact OWQS for guidance on the information required to grant a continuation.

The following site-specific considerations for the development of water quality-based effluent limits are not considered changes to the Water Quality Standards and do not require separate EPA approval. They are reviewed, if necessary, when EPA sees the draft, or final, permit.

(c) **Water Effect Ratio (WER)** (9VAC25-260-140.F): Water effect ratios measure the toxicity or bioavailability of heavy metals in the effluent once it mixes in the receiving water. The permittee may conduct a water effect ratio study to justify a change to a water quality-based metals limit. WERs are typically greater than 1.0 but less than 2.0. WQS staff are responsible for reviewing and approving the proposed study plan, and the final results. Once an acceptable WER is established for a metal in an effluent, the numeric water quality criterion for that metal is multiplied by the WER to produce a new instream criterion for determining the WLA. The permit writer should include the WER in the fact sheet rationale for the limit to which it

applies. A WER may be continued from one permit to the next as long as the conditions on which it was originally based have not changed. When a permit is reissued, the permittee does not have to conduct another study for the WER. The continuation of the WER should be noted in the fact sheet. The WER study report should be part of the new permit file. The DEQ WQS staff should be consulted before any WER study plan is approved or implemented (including copper).

(d) **Variances to the Temperature Standards:** Temperature variances must follow the requirements for alternative effluent limitations under § 316(a) of the CWA. Contact OWQS for guidance if a permittee requests a variance for a water quality-based temperature limit.

(e) **Metals Translator for Metals Limits:** Water quality-based limits for heavy metals are to be written as total recoverable whenever practicable (9VAC 25-31-230.C). In order to convert a water quality criterion for metals from dissolved to total recoverable, a chemical translator must be used. The default ratio between dissolved and total recoverable is 1:1. The permittee may wish to establish an effluent-specific ratio to show that an alternate metals limit is appropriate. The use of any ratio other than the default should be discussed in the fact sheet. Contact WQS staff for details on chemical translator studies. **This permit provision does not have to be specifically identified in the public notice.**

c. TMDL-based Water Quality Limitations

New or modified VPDES permits must be consistent with the assumptions and requirements of TMDL Waste Load Allocations (WLAs) as per federal regulations (40 CFR §122.44 (d)(1)(vii)(B)), and EPA approval is needed for any changes to the WLA and TMDL, regardless of the rationale for such a change. The Board approves all TMDLs and adopts wasteload allocations as part of the Water Quality Management Planning Regulation (9VAC 25-720), except in those cases when permit limitations are equivalent to numeric criteria contained in the Virginia Water Quality Standards, such as for bacteria.

In cases where a proposed permit or modification is affected by a TMDL WLA, permit and TMDL staff must coordinate to ensure that new or expanding discharges are consistent with the assumptions and requirements of the TMDL WLA. The procedures below describe the available options and the process that should be followed under those circumstances, including public participation, EPA approval, State Water Control Board actions, and coordination between permit and TMDL staff.

Procedure: There are several options available for sediment, bacteria, and nutrients, (see GM14-2015) to process a permit or modification that is affected by a TMDL WLA. Other pollutant parameters should be evaluated on a case-by-case basis and are thus not addressed in this section. In all cases, the permit staff and the TMDL staff must coordinate activities to ensure effluent limits are consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by EPA. .

(1) Process a permit or modification that maintains the existing TMDL WLA loading.

In this case, no TMDL modification is required and the permit processing continues. (TMDLs are sometimes based on expansion scenarios that account for growth of facilities, or the permit modification can be processed while maintaining the existing TMDL WLA, e.g. by reducing concentrations limits in the permit to account for increasing flow.)

(2) Process a permit or modification that provides an insignificant increase to the TMDL.

This is usually accepted to be an increase of less than 1% of the annual allowable loading, but other demonstrations of no significant impact may be possible (e.g.

additional allocation scenarios developed as part of TMDL development, but not selected as the basis for the final TMDL). To ensure that a new or modified permit is written in accordance with an approved TMDL, the TMDL must be modified and approved by EPA before the permit is issued. The TMDL must be public noticed with the proposed permit action. The steps in this process are:

- Verify that the percentage increase in the WLA needed to accommodate this permit modification is less than 1% of the WLA. RO permit and TMDL staff must agree on this decision.
- Prepare a letter requesting EPA modification of the TMDL WLA for the Central Office TMDL Modeling Coordinator signature and transmit for processing. An example is provided in Guidance Memorandum 14-2015.
- Submit the permit or modification package to EPA as required for the issuance or modification of a permit and include the TMDL information. The permit package must include the permit fact sheet which should describe the WLA and TMDL changes needed to accommodate the increasing discharge. The fact sheet should also state DEQ's rationale for supporting the change (e.g. no impact to water quality since the increase is < 1% of the total load, or other demonstration of no significant impact).
- After EPA provisional agreement with the TMDL modification, public notice the permit action as required and include the TMDL modification information. Example language for inclusion in the public notice is included in Guidance Memorandum 14-2015.
- Obtain final approval for the TMDL modification from EPA TMDL staff upon completion of the comment period.
- Notify the Watershed Program Staff to publish amendment of the Water Quality Management Planning Regulation in the Virginia Register and obtain Board approval for TMDL modification and, if needed, regulatory amendment.
- Issue the final permit, deferring issuance until after the regulatory amendment has been approved by the Board.

(3) A TMDL modification may be required for new or expanding discharges in non-bacteria watersheds with no future growth allocation, or where the above referenced tracking thresholds have been exceeded. Regional staff should work with the Central Office TMDL Modeling Coordinator to determine if a TMDL modification is warranted. (See GM14-2015).

(4) A TMDL modification may be required for non-bacteria TMDLs without a Future Growth allocation, and for watersheds that are not effluent dominated. Individual permit issuances or reissuances that result in a) additional nonpoint source reductions or b) an overall increase to the TMDL waste load allocation require a TMDL modification. (See GM14-2015).

(5) A TMDL modification may be needed for bacteria TMDLs without a future growth allocation to maintain Water Quality Standards with increases to the TMDL WLA. For bacteria TMDLs with no explicit Future Growth allocation or where Future Growth allocation has been depleted, issuance of most individual permits which involve bacterial discharges may proceed without a TMDL modification or notification of Region III EPA TMDL staff provided a) the permit is consistent with water quality standards for bacteria , and b) the watershed is not effluent dominated (i.e., WLA > LA)4 . In effluent dominated streams, the concentration of bacteria in the expanded discharge may have a direct relationship to the bacteria concentration in the waterbody. In non-point source

dominated systems, DEQ has found that discharges which meet water quality standards generally dilute the non-point source loadings of bacteria in the receiving stream. (See GM14-2015).

(6) Process a permit modification that requires remodeling of the TMDL, potentially resulting in additional nonpoint source reductions.

The processing of these requests is similar to the process in item (2) above, with the additions shown below. The permit documentation and the letters referenced in item (2) must be modified accordingly.

If additional loading must be accommodated, permit staff will request a TMDL remodeling effort to evaluate the impact of the additional loading on in-stream water quality. Any costs incurred by the TMDL remodeling effort will be paid for by the permittee.

If the modeling shows that the extent of the proposed TMDL modification does not require a change in the nonpoint source load allocations, follow the procedures outlined in (2) above.

If the modeling shows that the extent of the proposed TMDL modification requires a change in the nonpoint source load allocations, a public comment period will be scheduled to present the proposed modifications to the public. EPA TMDL staff will be notified of the proposed change at the same time. There will be a 30-day comment period associated with the presentation of the draft TMDL modification, and the public notice procedures as outlined in Guidance Memo No. 04-2010 (Public Participation Procedures for Water Quality Management Planning) will be followed. After the conclusion of the public comment period, follow the procedures outlined in item (2) above.

Additional Considerations: Because of the additional workload associated with TMDL and regulatory modifications, regional TMDL and permit staff should ensure to the extent possible that the wasteload allocations developed for TMDLs consider expansion plans by permitted facilities in the watershed.

Additionally, wasteload allocations in watersheds without permitted facilities should not be shown as zero. Rather, they should be represented in the TMDL, expressed in terms of "less than" a number equal to or smaller than 1% of the Total Maximum Daily Load.

d. Professional Judgment (PJ) Limits

Section 402(a)(1)(B) of the Clean Water Act (the Act) authorizes "such conditions as the Administrator determines are necessary to carry out the provisions of this Act." This authorization is also set forth in 9VAC25-31-210 A which states in part "in all permits, the department shall establish conditions, as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of the Law." These provide the basis for the so-called PJ limits. Virginia regulations don't have any requirements as to what basis needs to be considered when a PJ limit is formulated. It could be based on water quality considerations in a particular case or on the capability of a particular installed (or proposed) treatment technology. Neither the federal nor state regulations prohibit the application on a case-by-case basis of any PJ permit limitation that is needed to protect the quality and beneficial uses of a specific receiving stream.

PJ limitations are defined as those limitations that are developed based on either a technology or water quality basis. These limitations are developed for a category of discharges or for individual dischargers based on knowledge of treatment processes, analytical data, empirical evidence from similar facilities, site conditions, cost, *etc*. PJ limits fall into two categories: those that are adopted as regulation in accordance with 40 CFR § 125 and the Virginia APA; and those that are established on a case-by-case basis for an individual discharge.

These limits result:

- When the minimum effluent guideline limits are not sufficiently stringent to maintain compliance with a water quality standard and a more stringent limit is required.
- When a numerical standard exists and where the permit limit needed to attain compliance can be reasonably quantified, e.g. based on modeling studies.
- As a result of a TMDL or waste load allocation resulting from the continuing planning process.

The basis for such limits generally fall into one of two categories:

- Agency guidance – The judgement is contained in guidance that reflects a consensus of the agency's opinion. Such guidance is not regulation and reasonable, valid alternatives are acceptable. Such guidance provides adequate justification for permit limits that are normally included for specific parameters in certain types of permits.
- Case by case decisions – The difference between this and "a" above is that these are case by case considerations made by specific permit writers for specific permits and are not contained in formal agency guidance.

A PJ limit developed for a specific facility as authorized by section 402(a)(1)(B), is based on the judgment of the permit writer (or collective judgment of the issuing agency and confirmed by the permit writer) where that judgment is considered and applied on a case-by-case basis. The judgment may consider available or installed technology, the required water quality, or any combination of these considerations.

Agency guidance should be evaluated for its application on a case-by-case basis considering the specific facility in question before it is used as the basis for a PJ limit. All fact sheets for permits that contain a limit based on agency guidance should include a statement that the permit writer has reviewed and evaluated the guidance to confirm its applicability to the case being considered before it was applied to a particular discharge. The permit writer should also evaluate other valid, reasonable alternatives to the agency guidance before setting the limit.

The federal minimum effluent guidelines may be consulted to assist a permit writer in formulating judgment regarding both the types of pollutants that a certain process may be expected to produce and the capabilities of treatment technology to remove them. However, federal guidelines cannot be arbitrarily applied to a facility that is not in the category. The judgment that leads to a limit must be considered on a case-by-case basis and formulated for the specific facility in question. It should be clearly stated in the fact sheet that the guidelines were consulted only to help in formulating a PJ limit.

The permit writer may consider each pollutant that can reasonably be expected to be present in a discharge, how each would impact a water quality standard and formulate a judgment regarding what limits would prevent objectionable conditions. A limit based on the judgment of the individual permit writer and/or his supervisors is acceptable providing the basis is properly documented in the fact sheet.

C. Antidegradation (9VAC25-260-30)

Whenever a discharge permit is issued, reissued, or modified, anantidegradation review must be performed on the discharge and documented in the Fact Sheet. Antidegradation policies can play a critical role in helping states protect the public resource of water whose quality is better than established criteria levels and ensure that decisions to allow reductions in water quality are made in a public manner and serve the public good. This review is also required for new sources or new discharges to impaired waters (9VAC25-31-50.C.9).

9VAC25-260-30 establishes three categories of antidegradation protection for the surface waters of the state. These categories will be referred to as Tier 1, 2 and 3. If data or information is not available to make a determination, the stream is assumed to be Tier 2. Public water supplies and trout streams are assumed to be Tier 2 unless information is available to indicate otherwise.

1. Tier 1

9VAC25-260-30.1 requires that the existing beneficial uses and the quality necessary to protect such existing uses be maintained.

2. Tier 2

9VAC25-260-30.2 requires that the existing water quality be maintained for all waters wherein the existing quality exceeds the water quality standards.

Note: There are certain waters that do not attain the standards due to natural causes. These waters fall into two primary categories:

a. Periodic, short-term exceedance of generally one criteria, e.g. periodic summer exceedance of the temperature criteria in class VI waters.

   The exceedance may not necessarily be considered a violation of the standards. This is particularly true if the uses are not adversely impacted. Waters may be assigned to Tier 2 provided the periodic excursions above the criteria do not curtail the uses of the water body. This will depend on the specific case and the judgement of the DEQ employee investigating the water in question.

b. Routine and long-term exceedance of one or more criteria, e.g. swamps that practically never attain the 5 mg/l D.O. criteria during critical conditions.

   When waters fail to meet the standards due to natural causes then it is apparent that the standard is in error and requires modification. In this case, it is not possible to assign a Tier ranking because there is no valid standard to compare the quality to. Permits should contain limitations that are designed to allow no significant additional impact due to the discharge of pollutants.

3. Tier 3

9VAC25-260-30.3 prohibits permanent new or increased discharges into waters designated by the Board as providing exceptional environmental setting, aquatic communities, or recreational opportunities. Existing mixing zones from upstream or tributary discharges existing in these waters cannot be expanded and no new mixing zones will be allowed to be created in or extend into these waters. Only temporary, short – term impacts shall be allowed on a case-by-case basis.

Note: Permits for existing sources may be reissued but may not allow expansions of flow, mixing zones or pollutants (neither mass loading nor concentration may be raised).

Any entity seeking to lower water quality in Tier 2 waters through a new or increased discharge of pollutants must submit an antidegradation socioeconomic demonstration for consideration by the

regional office. Any discharger seeking such an action should first submit a proposed study work plan to the regional office for review, comment and/or approval before undertaking such a demonstration. (The same rationale for application or collection of data provided in the guidance for antidegradation category determination applies for this demonstration).

The antidegradation demonstration shall identify the important social or economic developments to the area in which the waters are located that will not occur if the significant lowering of water quality is not allowed. Developments considered, should, as a minimum, fall into one or more of the following categories:

- Increase in the number of jobs;
- Increase in personal income or wages;
- Reduction in the unemployment rate or other social service expenses;
- Increase in tax revenues;
- Provision of necessary social services.

Prior approval from DEQ staff shall be required for use of any alternative economic indicators. In conducting the analysis of social or economic development, the applicant should follow the EPA Water Quality Standards Handbook and the EPA draft Economic Guidance Workbook for Water Quality Standards. The EPA workbook provides worksheets to assist applicants in their evaluation of socioeconomic impacts, but the applicants should feel free to use anecdotal information to describe any current community characteristics or anticipated impacts that are not listed in the worksheets. The workbook provides few useful economic ratios and tests for evaluating socioeconomic impacts, so the applicant's demonstration will primarily consist of a narrative evaluation of the relative magnitude of indicators such as increases in unemployment, losses to the local economy, decreases in tax revenues, and indirect effects on other businesses. Bureau of Economic Analysis multipliers can also be used by the applicant to estimate the effect of reduced economic activity on output (sales), earnings, and employment.

D. Antibacksliding (9VAC25-31-220.L)

Anti-backsliding refers to statutory and regulatory provisions that prohibit the renewal, reissuance, or modification of an existing NPDES permit that contains effluent limitations that are less stringent than those established in the previous permit. The CWA as well as state regulations include a prohibition on specific forms of backsliding, exceptions to the prohibition, and a backstop provision that provides an absolute limitation on backsliding. Note that State anti-backsliding regulations at 9VAC25-31-220 L are effectively the same as the provisions in CWA section 401(o) and both are referenced in the discussion below. Federal antibacksliding regulations are found at 40 CFR 122.44(l).

1. Prohibition Against Backsliding

CWA section 402(o)(1) prohibits the relaxation of effluent limitations in two situations:

a. To revise an existing TBEL that was developed on a case-by-case basis using best professional judgment (BPJ) to reflect subsequently promulgated effluent limitations guidelines and standards (effluent guidelines) that would result in a less stringent effluent limitation.

b. Relaxation of an effluent limitation that is based on state standards, such as water quality standards or treatment standards, unless the change is consistent with CWA section 303(d)(4).

The two prohibitions against relaxation of effluent limitations are subject to the exceptions in CWA section 402(o)(2) (9VAC25-31-220 L 2), which are outlined below. In addition, limitations based on state standards may also be relaxed if the change is consistent with the provisions of CWA section 303(d)(4). Section 303(d)(4) may be applied independently of section 402(o).

2. Exceptions to Anti-backsliding Prohibition

CWA section 402(o)(2) (9VAC25-31-220 L 2) outlines specific exceptions to the two prohibitions specified above. CWA section 402(o)(2) provides that relaxed effluent limitations may be allowed where:

- There have been material and substantial alternations or additions to the permitted facility that occurred after permit issuance and that justify the relaxation.
- New information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance and that would have justified a less stringent effluent limitation.
- Technical mistakes or mistaken interpretations of the law were made in issuing the permit under CWA section 402(a)(1)(B) (i.e., a BPJ-based permit).
- Good cause exists because of events beyond the permittee's control (e.g., natural disasters) and for which there is no reasonably available remedy.
- The permit has been modified under the law and CWA sections 301(c), 301(g), 301(h), 310(i), 301(k), 301(n), or 316(a).
- The permittee has installed and properly operated and maintained treatment facilities required to meet the effluent limitations in the previous permit but still has been unable to meet the effluent limitations. Relaxation may be allowed only to the treatment levels actually achieved, but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification.

Note: The exceptions for material and substantial alternations or additions to the permitted facility, and for new information, shall not apply to any revised waste load allocations or any

alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of the law or the CWA or for reasons otherwise unrelated to water quality.

3. Relaxing Limitations Based on WQS Through Compliance with CWA 303(d)(4)

Under CWA section 402(o)(1) (9VAC25-31-220 L 1), effluent limitations based on state standards (e.g., WQS), a TMDL, or the state's continuing planning process may be relaxed if the revised effluent limitation is in compliance with CWA section 303(d)(4).

CWA section 303(d)(4), *Revisions of Certain Effluent Limitations*, has two parts: paragraph (A), which applies to nonattainment waters, and paragraph (B), which applies to attainment waters.

a. Nonattainment water: CWA section 303(d)(4)(A) allows the establishment of a less stringent effluent limitation when the receiving water has been identified as not meeting the applicable water quality standard if the permittee meets two conditions. First, the existing effluent limitation must have been based on a total maximum daily load (TMDL) or other wasteload allocation (WLA) established under CWA section 303. Second, relaxation of the effluent limitation is only allowed if attainment of the water quality standard will be ensured or the designated use not being attained is removed in accordance with the water quality standards regulations. This subsection does not provide an exception for establishing less stringent limitations where the original limitation was based on state permitting standards (e.g., state treatment standards) and was not based on a TMDL or WLA.

   For purposes of implementation, a nonattainment water is one where the applicable water quality standard (i.e., the standard underlying the effluent limit being relaxed) is not being met. To determine nonattainment, review, or ask planning (specifically your regional office TMDL Water Planning staff) to review, the most recent water quality assessment data for the pollutant(s) of concern for the relevant segment of the receiving water.

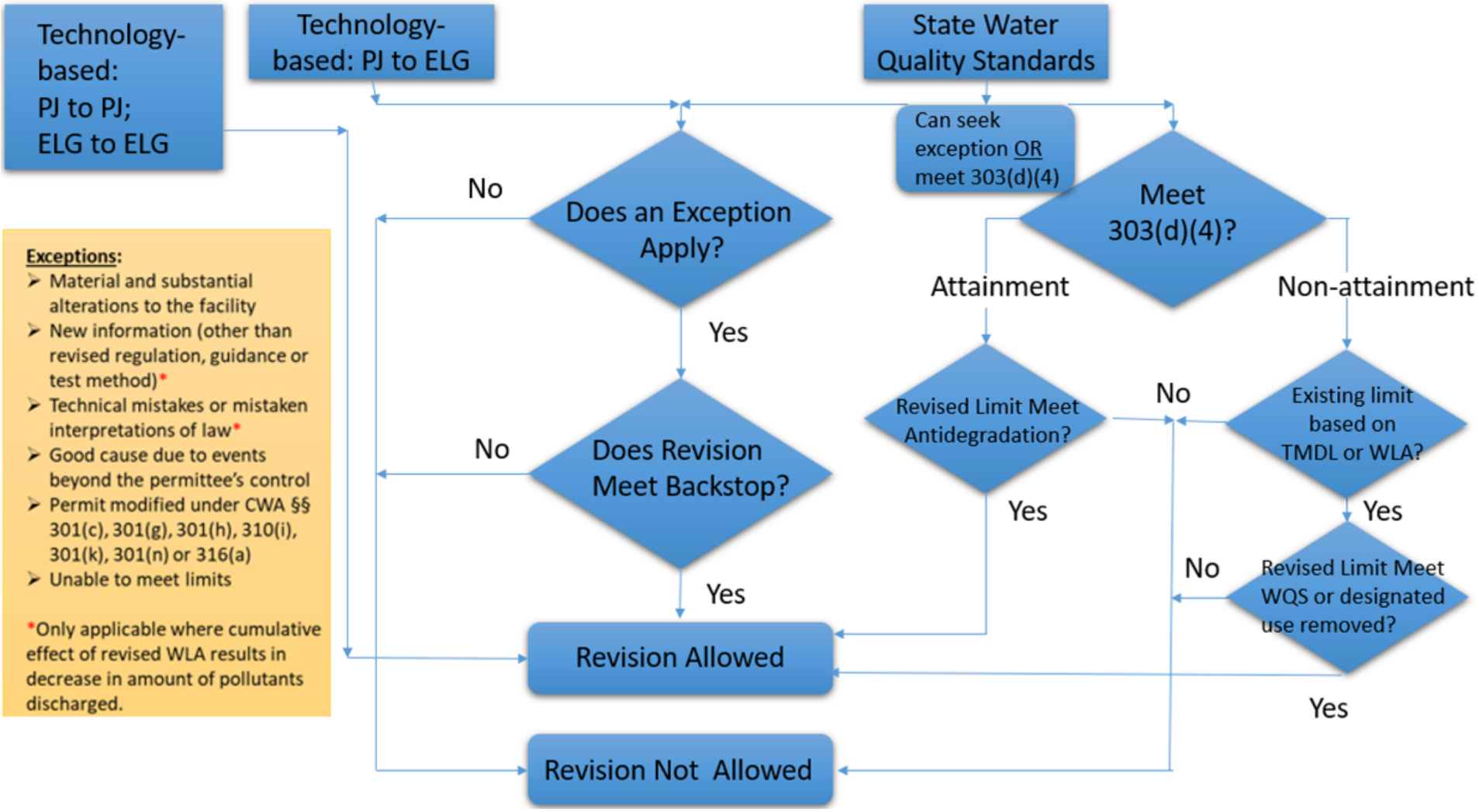
b. Attainment water: CWA section 303(d)(4)(B) applies to waters where the water quality equals or exceeds levels necessary to protect the designated use, or to otherwise meet applicable water quality standards (i.e., an attainment water). Under CWA section 303(d)(4)(B), a limitation based on a TMDL, WLA, other water quality standard, or any other permitting standard may only be relaxed where the action is consistent with state's antidegradation policy.

   Under antidegradation, for Tier 1 waters that just attain the applicable standards, no further lowering of water quality is allowed. For Tier 1 waters that do not attain the applicable standards, the waters quality must be improved to the point where the standards are attained. In both cases the TMDL or WLA must ensure that the applicable standards are attained. For Tier 2 waters, existing water quality that exceeds water quality standards must be maintained.

4. Any Relaxed Effluent Limitation Must Meet Backstop

In no event may a permit with respect to which an anti-backsliding exception applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by applicable effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, issued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a Virginia water quality standard applicable to such waters.

Overview of Anti-Backsliding Based on 9VAC25-31-220 L



E. Permit Drafting Procedures

1. **Research background of the facility**: Permit writers should review current file and ECM to become familiar with site operations and overall condition of the facility. It is helpful to do this prior to sending the reissuance reminder letter, to ensure the permit writer is requesting everything that is needed to draft the permit.

2. **Maintenance Fees**: Check the Finance tab in CEDS to ensure the facility is up to date on its maintenance fees. If the facility is delinquent on its fees, contact the office of Financial Management to verify if the fee has been paid. Once you confirm that the fee has not been paid, send an email to the permittee with an invoice provided by the finance department and let the permittee know that the permit cannot be processed or administratively continued if the fees are not paid and provide a deadline of one week. If payment is not received, refer the facility to compliance. If the fee is not paid before the expiration date, the permit should be allowed to expire, as administrative continuation is not allowed. Additionally, the permittee should be referred to Compliance. However, if the fees are paid and current when the application is submitted, but the permittee falls behind on a fee during the drafting phase, the permit can still be reissued.

3. **Outfall Numbering**: Number outfalls as follows:

   a. Begin numbering external process discharges as 001, 002, 003, etc.

   b. Begin internal process discharges with the last number of the corresponding external discharge (example External Outfall 001, Internal Outfalls 101, 102; External Outfall 002, Internal Outfalls 201, 202, etc.).

   c. For outfalls comprised solely of stormwater associated with a regulated industrial activity and outfalls which have comingled discharges of process water and stormwater where the stormwater regulations dictate sampling of the outfall during a storm event, substitute the leading 0 with a 9 for storm event sampling and follow numeric order with the other outfalls (i.e. 001, 002 etc.). For example, commingled outfall 001 is designated 901 for storm event monitoring, and stormwater only outfalls are designated as 902, 903, etc.

   d. For municipal sludge monitoring, there are two types of outfall numbers. The first designates the DMR for reporting sludge production and use. This outfall number begins with SP and is followed by one number, e.g. SP1. The number designates the type of sludge treatment. Most permittees will have only one process for sludge and thus will only need a SP1 outfall. If the plant uses more than one sludge treatment method, e.g. anaerobic digestion and composting, then each process will have its own outfall designation for production and use reporting: SP1 – anaerobic digestion and SP2 – composting. Record the outfall number and the corresponding treatment process in the Fact Sheet and notify the permittee which is which.

      For the DMR for reporting sludge quality monitoring results, the outfall number begins with an S and is followed by two numbers, e.g. S01 or S02. The numbers designate the site receiving the sludge. For facilities who are responsible for sludge quality, but not for land application activities, only S01 will be needed. If the facility is land applying its own sludge, it must have a S[XX] outfall number for each land application site. If these outfall numbers are not consistent with the site identification numbers in the Sludge Management Plan, the permittee should provide a site reference table along with the DMRs. Contact the Office of Land Application to ensure all land application sites are correctly mapped in CEDS.

e. In certain cases, the above numbering system will not work (i.e. ≥ 100 external outfalls). Where necessary, assign alternative numbers to internal outfalls provided that the corresponding external outfall is clearly identified in the Fact Sheet and permit. All outfall numbers are limited to 3 digits; **do not use letters, except for sludge DMRs**.

f. Once an outfall number is assigned to a location, either an external or an internal outfall number, it must remain with that location. Renumbering outfalls at reissuance will cause CEDS to find false violations and Significant Noncompliance determinations. Render old outfall numbers inactive, but do not reassign the number to another location.

4. Effluent Screening and Limitation Development (Section C of the Fact Sheet)

a. **Pull DMR data** for the current permit cycle and export to an excel file.

1) Create a summary table that compiles all DMR data into one spreadsheet. Replace all <QL values with zero.

2) Calculate statistics for the DMR data, including the average, maximum, minimum for all parameters, 90th percentile for temperature, and 90th, 75th, 50th, and 10th percentiles for pH.

3) New ammonia criteria calculations: For all municipals, and industrials with ammonia limits or detected results for ammonia in the application, request a minimum of 1 year (preferably 2 years) of daily temperature and pH data to calculate the 90th percentile for temperature and the 90th, 75th, 50th, and 10th percentiles for pH to use in MSTRANTI.

4) In the absence of effluent temperature data for municipal facilities or industrial facilities without a heated discharge, the permit writer may assume an annual 90th percentile temperature value as follows: PRO and TRO - 28 degrees C (annual) and 18 degrees C (wet), BRRO, NRO, and VRO - 25 degrees C (annual) and 15 degrees C (wet), and SWRO – 24 degrees C (annual) and 14 degrees C (wet). For industrial facilities with heated discharges that do not provide discrete data, the permit writer may use the 90th percentile of the monthly maximum temperature data for the current permit cycle reported on the DMR to substitute for the 90th percentile of daily temperature values.

5) In the absence of daily pH data, monthly effluent DMR data for the current permit cycle may be used to derive conservative approximations. Use the 50th percentile of the monthly maximum pH data reported on the DMRs for the current permit cycle for the 90th, 75th, and 50th percentile of daily pH values. Calculate the 10th percentile using monthly maximum pH DMR data.

6) If available, calculate mean of effluent hardness or assume default value of 50 mg/L east of the Blue Ridge and 100 mg/L west of the Blue Ridge.

7) Extract any pages from the application that provide data to be used in the evaluation to include in the Fact Sheet Attachments (e.g., data found in the EPA Forms and Attachment A - Water Quality Monitoring Form data). Identify all data "hits" that are >QL, and <QL when the QL used is greater than the Site-Specific Target Value (SSTV), which is the same as the Method Target Value (MTV) provided in the MSTRANTI output from the previous reissuance.

R Studio is used to perform the Reasonable Potential Analysis (RPA). The R Studio website can be found at: https://rconnect.deq.virginia.gov/__landing__/#WPTools

b. **MIX** is used when there is no site-specific model available at the outfall discharges to a free-flowing stream (i.e. MIX is not used for tidal, intermittent streams, or swamps). The MIX program estimates the maximum size of a mixing plume from a discharge that enters the side of a free-flowing stream. Please note that this program is intended solely to determine if a complete mix assumption is appropriate and cannot be used to estimate the actual size of an expected mixing zone. Save the MIX output and include in the Fact Sheet attachments.

   MIX inputs:

   1) Effluent flow:
      - Municipal: Enter facility design flow
      - Industrial: Calculate from DMR data – the greater of either the maximum of 30-day average flows or the average of 30-day maximum flows
   2) Stream flows: From Planning Coordination Form
   3) Stream slope: It is suggested that using the slope for the first 0.5 to 1 mile below the discharge is a reasonable approximation. If not calculated from a topographical map or GIS, assume the following (as noted in GM00-2011):
      - 0-2 ft/mile (0.00038 ft/ft) – flat water with minor riffles
      - 3-6 ft/mile (0.00057 – 0.001 ft/ft) – moderate rapids or pool and riffle
      - 6 ft/mile – heavy rapids or pool and riffle
   4) Stream width: Use the width that was used in the previous reissuance. If you believe that number is incorrect or you need to determine the width, you may use GIS or aerial imagery to measure the stream width in the vicinity of the outfall or perform a site inspection. **Please note that the width needed is that associated with a drought flow.**
   5) Bottom scale: The number representing bottom roughness is on a scale of 1 to 5:
      - "1" represents a sand or silt bottom that is very smooth and even.
      - "2" through "4" grade between two extremes with 3 representing the "average stream."
      - "5" represents a very rough bottom consisting of large rocks and boulders.
   6) Channel scale: The number representing the degree of meandering or bank irregularities, and should be determined based on knowledge of stream, Google aerial view, and/or what was previously selected in prior reissuances.
      - "1" represents a moderately meandering channel of moderate uniformity.
      - "2" represents a smaller stream with more significant meandering and less uniform channel.
      - "3" represents a severely meandering and very non-uniform channel.

c. **MSTRANTI (Water Quality Criteria/Wasteload Analysis program)** is used to estimate appropriate Wasteload Allocations (WLAs) for various parameters based on user input stream and effluent information. MSTRANTI considers acute, chronic, and human health standards when computing a WLA. Additionally, the program adapts the most recent Water Quality Criteria for WLA computations and considers antidegradation when appropriate. The program can compute WLAs for saltwater, transition zones, tidal freshwater, and freshwater (free-flowing) depending on the user input.

1) Enter stream information:

(a) For intermittent streams or swamps – there is no ambient flow so effluent information is also entered for the stream.

(b) pH: Background data obtained from planning staff or MSTRANTI background tool.

(c) Temperature: Background data obtained from the planning coordination.

(d) Hardness: Background data obtained from the planning coordination or MSTRANTI Background Tool (default value of 50 mg/l east of the Blue Ridge and 100 mg/l west of the Blue Ridge may be used). Regardless of the mix value or ambient data, the minimum hardness value used to set the WQS cannot be less than 25 mg/l, and the maximum value used to set the WQS cannot be greater than 400 mg/l. This is because hardness values outside these values are off the scale used to establish the WQS hardness equation.

(e) Tier Designation: Obtained from planning staff. If the facility was discharging prior to the adoption of the revised ammonia criteria (October 8, 2021), use Tier 1 in MSTRANTI to calculate the WLAs for ammonia only. For all other parameters, use Tier 2 if the receiving stream is Tier 2.

(f) Early Life Stages Present: Always select "Yes" per the reasoning described in 9VAC25-260-155.

(g) Type of Analysis: Choose based on the receiving stream.

(h) Use Default Water Effect Ration (WER) of 1: Always choose "Yes" (unless the facility completed a WER study). Otherwise, users may select metals from the list that appear after clicking "No" to enter WERs for a given metal. Water effect ratios are NOT applied to Copper Special Standards (see below).

(i) Include Copper Special Standards in Parameter List: Answering "Yes" to this will allow users to select some of the special standards present in 9VAC25-260-310 for analysis. Selecting a standard will cause it to be included in the parameter selection described below. Users may request additional standards be added to the program by contacting Connor Brogan at the Central Office.

(j) Chemical Selection: Permit writers are required to pick chemicals from the drop-down menu for analysis. Multiple chemicals may be selected, but only chemicals selected in this menu will be displayed in the results. You may select "ALL CHEMICALS" if you would like to see the results for all 100+ chemicals in the MSTRANTI program (this will include copper special standards only if they have been selected from the "Copper Special Standards" question). Alternatively, the permit writer may select "ALL METALS" to have the program compute WLAs for all metals in the DEQ WQC standards in 9VAC25-260-140.

(k) Background Concentrations: Permit writers must input receiving waterbody background concentrations for EACH chemical selected from the drop-down menu. Most concentrations should be entered as ug/L; however, some chemicals are quantified in other units (i.e. ammonia is measured in mg N/L).

Users may input background concentration using one of four methods:

- Method 1: Manually enter each background concentration on a new line in the order of selected chemical.
- Method 2: Download the provided template and enter background concentrations where prompted. It is recommended that the permit writer does not delete any rows or parameters from the *.CSV file. Upload background concentrations by uploading this modified CSV file. Only chemicals selected in the "Chemical Selection" step will be used in the analysis, background concentrations for other parameters will be ignored.
- Method 3: Assume all background concentrations are zero. Clicking this button will set background concentrations of all selected parameters to zero. This method may be used in the absence of background data.
- Method 4: Use the MSTRANTI Background Concentration tool. This tool uses the DEQ probabilistic monitoring dataset to generate relevant background concentrations for certain parameters based on the input user geologic scale and allows export into MSTRANTI. This tool is limited to the parameters evaluated within the DEQ probabilistic monitoring dataset. *Please note that the Tool exclusively incorporates freshwater data gathered from wadable, free-flowing streams and rivers. No tidal or estuarine data is included in the Tool.* Consequently, the Tool is specifically suited for application to **free-flowing freshwater streams and rivers**. At this time, it should not be employed for tidally influenced rivers.

(l) Public Water Supply: Indicate whether the receiving stream is used as a public water supply. If so, this program will use the appropriate human health standards to calculate WLAs.

(m) New Ammonia Criteria: Select "Yes" as all facilities should have the new ammonia criteria implemented after 10/8/2023.

2) Enter stream flows:

(a) Modeled: If the facility or DEQ performed a site-specific model, enter stream ratios from the model.

(b) Free flowing stream: Stream flows are found in the Flow Frequency Memo or DFLOW.

(c) Intermittent Stream/Swamps/Marshes: Mixing is not allowed, so permittee must meet standards at the end of pipe. Enter zero for flows.

(d) Lakes: It is recommended that no mixing zones be allowed in lakes unless the discharger provides actual physical/chemical data to demonstrate acceptable conditions both within the mixing and the lake as a whole. This means that the effluent itself should meet all applicable criteria prior to discharge. In order to consider decay, the actual boundaries of the mixing zone and the residence time within it for passing or drifting organisms must be known. The model included with this guidance is not suitable for this application because it was

not formulated to accurately model a mixing zone. If a discharger wishes to account for decay within a mixing zone, it is recommended that the discharger be required to submit a study that defines the boundaries of the actual mixing zone and associated hydraulic considerations.

(e) Tidal: Use tidal defaults (historically used 2:1 acute and 50:1 chronic for all facilities, but now we only use 50:1 for discharges to very large bodies of water). If the tidal stream is not large, and 2:1 and 50:1 were used previously, contact the Office of VPDES Permits. If the permittee does not concur with the ratios, a permit can require a site-specific study to be conducted to determine ratios. MSTRANTI is set up to account for the parts of the stream versus the effluent in the tidal freshwater and saltwater modules; therefore, enter the ratios as they appear (e.g. if the dilution ratios are 2:1 acute and 10:1 chronic, you will enter 2 for the Acute WLA Multiplier, and 10 for the Chronic and Human Health multipliers in MSRANTI). In MSTRANTI, choose "Tidal Freshwater" option.

(f) Wet seasons inputs: Only applicable for temperature/flow tiering for ammonia to provide relief from stringent limits in the winter months when the stream flows are higher and the temperatures are lower. Wet season limits will be expressed as ammonia limits for certain months of the year [e.g., Ammonia (May – November) and Ammonia (December – April)]. In these cases, the permit writer needs to calculate the 90% Temperature (Wet Season) for the effluent and stream using the temperature data for the winter months to input in MSTRANTI and will enter the wet season stream flows from the flow frequency memo/DFLOW. For example, to determine the 90th percentile for temperature for Ammonia (December - April), the permit writer will only use the effluent temperature data during December – April in the calculation and then enter that in for 90% Temperature (Wet Season). The permit writer will use all the temperature data for all months to calculate the Ammonia (May – November) limits. Seasonal limits may be provided for intermittent streams (based on low temperature months).

(g) Enter mixing information:

i. Use MIX outputs for free flowing streams

ii. Assume 100% for intermittent streams, swamps, tidal (because mixing or the lack of mixing is accounted for in the stream to effluent ratios)

3) Enter effluent information:

(a) Hardness: Calculate mean of effluent or assume default value of 50 mg/L east of the Blue Ridge and 100 mg/L west of the Blue Ridge.

(b) Temperature: Use 90th percentile of daily effluent temperature data. For all municipals, and industrials with ammonia limits or detected results for ammonia in the application, request a minimum of 1 year (preferably 2 years) of daily temperature data to calculate the 90th %tile for temperature to use in MSTRANTI.

In the absence of effluent temperature data for municipal facilities or industrial facilities without a heated discharge, the permit writer may assume an annual 90th percentile temperature value as follows: PRO and TRO - of 28 degrees C (annual) and 18 degrees C (wet), BRRO, NRO, and VRO - 25 degrees C (annual) and 15 degrees C (wet), and SWRO – 24 degrees C (annual) and 14

degrees C (wet). For industrial facilities with heated discharges that do not provide discrete data, the permit writer may use the 90th percentile of the monthly maximum temperature data for the current permit cycle reported on the DMR to substitute for the 90th percentile of daily temperature values.

(c) pH: Use 90th, 75th, 50th, and 10th percentiles from daily effluent pH data.

For all municipals, and industrials with ammonia limits or detected results for ammonia in the application, request a minimum of 1 year (preferably 2 years) of pH data to calculate the 90th, 75th, 50th, and 10th for pH to use in MSTRANTI. In the absence of daily pH data, typically monthly effluent DMR data for the current permit cycle may be used to derive conservative approximations. Use the 50th percentile of the monthly maximum pH data reported on the DMRs for the 90th, 75th, and 50th percentile of pH values.

(d) Discharge flow:

1) For municipal facilities: enter facility design flow

2) For industrial facilities: if there is a design flow specified, use that; otherwise, calculate from DMR data the greater of either the max of 30-day average flows or the average of 30 day max flows.

d. Complete **MSTRANTI Data Source Sheet** to use in the Fact Sheet Attachments

e. **STATs (Statistically Derived Permit Limits program)** estimates the variability associated with materials in an effluent and determines appropriate permit limits that take that variability into account. STATs balances WLAs against user-input effluent data to evaluate appropriate limits abased on an assumed effluent data distribution.

Limits are required based on the following case structure for acute and chronic conditions:

1) If the WLAa is greater than the 97th percentile of the daily values then no acute limit is needed, otherwise a limit is needed.

2) If the WLAc is greater than the 97th percentile of the 4-day averages (30-day average for ammonia) then no chronic limit is needed, otherwise a limit is needed.

Select "Yes" if running the RPA for ammonia (a 30-day average will be used as the averaging period in chronic calculations). Otherwise, select "No" (a 4-day average will be used as the averaging period in chronic calculations).

If there is a limited dataset and STATs shows a limit may needed based *on one data point*, there are two options available depending on the permit expiration date:

(1) If the permit is close to expiration and there is not enough time to collect another sample using the correct QL (i.e., DEQ MTV for metals), perform the following:

i. Confirm with the permittee that they are committed to resampling using the appropriate QL (DEQ MTV for metals).

ii. Administratively Continue the current permit for a minimum of 6 months.

iii. Permittee conducts as many samples as practical, preferably ten, but no fewer than two samples, either on a weekly, monthly or quarterly frequency.

iv. If the pollutant is detected, use the new detected result(s) and the previous result(s) to see if a limit is needed. If no limit is needed, you are done. Stop here.

v. If a limit is needed, add the limitation for the pollutant to the permit (if this is for a metal, add quarterly monitoring for hardness).

(2) If there is enough time to collect a sample, ask the permittee to resample using the appropriate QL (DEQ MTV for metals).

i. If the pollutant is detected, use the new detected result(s) and the previous result(s) to see if a limit is needed. If no limit is needed, you are done. Stop here.

ii. If a limit is needed, add the limitation for the pollutant to the permit (if this is for a metal, add quarterly monitoring for hardness).

Example 1: The permit currently does not have a zinc limitation. A compliance schedule was provided for a new zinc limitation. The permit writer should include dissolved zinc monitoring and final total recoverable zinc limitation.

Example 2: The permit has a zinc limitation and STATs calculated a more stringent zinc limitation. A compliance schedule was included in the permit. The permit should include interim total recoverable zinc limitation and final total recoverable zinc limitation.

WLAa and WLAc: The WLAs are obtained from MSTRANTI and can be found in the "Most Limiting Allocations" column.

Units: Please ensure the same units are used for the WLAs from MSTRANTI and effluent data and select the appropriate unit.

QL: Use the DEQ QL or Method Target Value (for metals) from MSTRANTI. The QL (sometimes referred to as the "censoring point"), signifies the point in the effluent distribution below which data exists but their actual value cannot be determined. Below are QLs for commonly analyzed parameters:

1) TRC QL = 0.1 mg/L

2) Ammonia QL = 0.2 mg/L

3) All metals QL = Site Specific Target Values (SSTVs), which are labeled as Method Target Value (MTV) in the MSTRANTI output spreadsheet. The permit writer should use these values as long as they are not less than the following:

Silver 0.2 µg/L
Aluminum 2.0 µg/L
Arsenic 1.0 µg/L
Cadmium 0.3 µg/L
Chromium 0.5 µg/L
Copper 0.5 µg/L
Iron 1.0 µg/L
Mercury 1.0 µg/L
Manganese 0.2 µg/L

Nickel 0.5 µg/L
Lead 0.5 µg/L
Antimony 0.2 µg/L
Selenium 2.0 µg/L
Zinc 2.0 µg/L

(all other QLs are included in the OneDEQ permit templates)

samples/mo and #samples/wk: Enter the sampling frequency from the VPDES Permit Writers' Manual, Version 1.0, MN-1 "Sample Schedule Table" based on design flows for municipals. Typically use 1 per month for industrials. *If the facility was given reduced monitoring frequencies, do not use that frequency in STATs. Always use the frequencies in the "Sampling Schedule Table" to determine limits.*

Data input: Enter available DMR or application data for the pollutant either manually or upload from CSV file with the following exceptions:

1) Ammonia

   (a) Ammonia (municipals): For all municipal facilities input 9 mg/L (do not use DMR data). *If the permit contains ammonia limitations greater than 9mg/L or actual effluent ammonia data indicate that the expected value is greater than 9 mg/L, then the analysis should be performed using the actual data rather than the default value.*

   (b) Ammonia (industrials): Use the effluent data to determine if a limit is needed. *If limit already exists for ammonia or TKN, use fictitious high datum to force the program to calculate a limit. The resulting limit can be compared to the existing limit to determine if it is sufficiently stringent.*

   (c) If there is a TKN limitation of 3 mg/L in the permit, the permit writer should use 3 mg/L in STATs for ammonia. If STATs shows that TKN is not protective of weekly average limitation but is protective of monthly average limitation, the permit writer can disregard the weekly average limitation as the new ammonia chronic criteria is expressed as a 30-day average, and therefore an ammonia limit does not need to be included in the permit. If STATs shows that TKN is not protective of monthly average ammonia limitation, the permit writer should include the new ammonia limitation and may consider removing the TKN limitation or reducing TKN monitoring. Since TKN is composed of organic nitrogen and ammonia as N and is being replaced with a more protective ammonia limitation, this action would not contravene the antibacksliding provisions as set forth in the VPDES regulation at 9VAC25-31-220.L Additionally, when placing an ammonia effluent limit in a permit in-lieu of a TKN limit, it is recommended that BOD_5 effluent limits replace carbonaceous biochemical oxygen demand-5 day ($CBOD_5$) limits as BOD_5 accounts for both nitrogenous and carbonaceous demand. TKN addresses the nitrogenous demand component and $CBOD_5$ addressed the carbonaceous demand.

   (d) Calculate acute and chronic WLAs in MSTRANTI R-tool using the revised criteria as if the discharge were to a Tier I stream. Determine if the previous Tier II effluent limits or the new Tier I effluent limits are more limiting. If the existing Tier II effluent limits based on the previous WQC are more limiting, then they should be maintained under the Board's Anti-backsliding Policy. If the limits based on the revised criteria and a Tier I evaluation are more limiting, then the new limits should be included in the permit and the WLA is considered

to be protective of a Tier I stream. In this situation the STATS R-Tool should be run a second time for any municipal facility using any actual data rather than the default value of 9 mg/L. If the use of actual data for a municipal facility results in a finding of "no limit necessary", then the facility has demonstrated that it consistently complies with the new limit and no schedule of compliance is provided. A four-year schedule of compliance should suffice for most permittees. All schedules must require compliance as soon as possible on a case-by-case basis (9VAC25-260-155 G 3 a; also see 9VAC25-31-250 A 1) and must include interim milestones in accordance with 9VAC25-31-250.A. Documentation that the schedule represents "as soon as possible" should be included in the fact sheet. For those permittees that request a schedule of compliance greater than a permit cycle (five years), the regulations (9VAC25-260-155 G 3 a) specify four factors that DEQ may consider as to whether an extended schedule of compliance is justified. *(see the Ammonia Phased Implementation Guidance for more information)*

(e) In no case should previously effective ammonia limits be relaxed based on the transition from a Tier II to a Tier I reasonable potential determination. Nor should water quality tier determinations or effluent limits for any other parameters be modified.

(f) In the case of an unbuilt facility, **the current tier designation of the stream** should be used for the RPA. New WQC is the basis for all future permitting decisions; however, there should be no regression from any limitation based on the application of Tier 2 for the previous WQC.

2) Chlorine and Chlorine Produced Oxidants (CPO): For chlorine and CPO, effluent data are not necessary to determine that a reasonable potential exists for the facility to cause or contribute to a violation of the standards.

(a) For municipal facilities that use chlorine for disinfection, input 20 mg/L (do not use DMR data). You can use this same approach for any industrial facility that is treating waste like a WWTP.

(b) If the WLA is greater than 4.0 mg/L, STATs should be run with the following inputs:

(1) WLAa = 4.0

(2) WLAc = 4.0

(3) One datum of 20 mg/L is input to force the program to calculate a limit.

(c) If the WLA is less than 4.0 mg/L, run STATs with the following inputs:

(1) WLAa = calculated values

(2) WLAc = calculated values

(3) One datum of 20 mg/L is input to force the program to calculate a limit.

3) Total Metals vs. Dissolved Metals

(a) If only total recoverable metals data is available for a metal from the EPA Forms or DMR data (i.e., no dissolved metals data from Attachment A) use the total metals data to see if the RPA produces a limit. If no limit is needed, no further action needed. If a limit is needed, ask the permittee to resample

for the dissolved metal or include monitoring for the dissolved metal in the permit and reevaluate at the next reissuance.

(b) If total recoverable metals and dissolved metals data is available for the same metal (i.e., metals data from EPA Forms/DMR data, and Attachment A) only use the dissolved metals data in the RPA. Limits for metals are always imposed as total recoverable.

4) Laboratory's QL greater than QL specified in Attachment A: If the permittee submits the Attachment A Water Quality Criteria Monitoring Form and the QL that the laboratory used is greater than the DEQ Method Target Value (MTV) for metals that was specified for the QL, run STATs using the lab QL to see if a limit is needed.

(a) If no limit is needed, no further action is needed. Stop here.

(b) If STATs shows a limit is needed based on one data point, there are two scenarios depending on the permit expiration date:

(1) If the permit is close to expiration and there is not enough time to collect another sample using the correct QL (i.e., DEQ MTV), add quarterly monitoring for the pollutant in the permit and reevaluate at the next reissuance. Stop here if this is chosen.

(2) If there is enough time to collect a sample, ask the permittee to resample using the appropriate QL (DEQ MTV for metals). If the sampling result is <QL (non-detect for the correct QL), no further action is needed. Stop here.

i. If the pollutant is detected, use the new detected result and the previous lab QL in STATS to see if a limit is needed (The only exception to using the previous lab QL in the STATS analysis is if the lab used a much higher QL than the newly detected result, in this case, run STATs using the detected result). If no limit is needed, you are done. Stop here.

ii. If a limit is needed, add the limitation for the pollutant to the permit (if this is for a metal, add quarterly monitoring for hardness).

5) Human health parameters: STATs should not be used to estimate a reasonable potential for the human health criteria. In general, with parameters that have a human health WQC but no aquatic life acute/chronic WQC, the most limiting HH WLA should be established as the limit. In Tier 2 systems, this includes the antidegradation WLA found in MSTRANTI, which uses just 10% of the unused assimilative capacity of the river (as opposed to 25% for non-HH parameters). For Tier 1 streams, use the HH WLA as the limit. Additionally, the method target value from MSTRANTI should be used for the QL. It is important to note that the criteria for these human health parameters are developed based on long exposure periods. The permittee should perform additional monitoring before a limit is added to the permit. With long exposure periods, a single high sample is less impactful to overall water quality than it would be when dealing with aquatic life criteria, which is based on 1-hour or 4-day (or 30-day for ammonia) exposure periods.

The existing regulations require the inclusion of weekly average and monthly average limits in discharge permits for POTWs and daily maximum and monthly average limits or industrial treatment plants. This approach may be reasonable when applied to limits based on technology studies or when the maximum limit is not a defined function of the average but is some arbitrary number.
However, when the limits are based on a statistical description of the effluent variability, these multiple limits are unnecessary. This is because both average and maximum limits are based on parameters calculated from the same distribution. In this case, all limits that can be derived from that distribution specify exactly the same distribution of effluent concentrations and consequently specify exactly the same effluent quality.

It is recommended that:
Permits for facilities treating domestic waste should have weekly average and monthly average permit limits.

Permits for facilities treating industrial waste should have daily maximum and monthly average permit limits.

5. Additional Considerations

All effluent limitations should generally be written using two significant figures with the following exceptions:

a. More than two significant figures may be necessary for water quality-based limits (to be consistent with the underlying standard) or for limits expressed as large numbers that do not contain decimal points.

b. One significant figure is acceptable for bacteriological limits, acute and chronic WET endpoints, and BOD only if a single digit effluent is required.

c. Bacteriological and WET data are based on "counts" and therefore not subject to significant figure rules and the method for determining BOD is not accurate enough to provide data beyond a whole number.

Permittees are only required to report the same number of significant digits as the permit limit. Two-digit whole numbers should be footnoted and larger numbers that are multiples of 10 should be in scientific notation (e.g., 10 footnote would read "Limit given is expressed in two significant figures"; 760,000 should be 7.6×10^5). See rules for significant figures, rounding and precision in GM06-2016 and Amendment #1 for measured concentration values (not counts, days or conversion factors).

Any outfall comprised solely of stormwater associated with a regulated industrial activity should be identified on a Part I.A page to authorize the discharge of 2x only.

F. Effluent Monitoring Frequency

Minimum frequencies for monitoring effluent quality and quantity for the purpose of determining compliance with VPDES permits are recommended in Sections MN-1 and IN-1. Reductions in those frequencies have usually been made only when requested by a permittee and when there was overwhelming evidence that effluent quality could not be manipulated by a permittee. The anti-backsliding regulation at 40 CFR 122.44(l) may apply when monitoring

frequency requirements are made less stringent and should also be part of this analysis. See the 2010 NPDES Permit Writers Manual, Section 7.2.2.

EPA published *Interim Guidance For Performance-Based Reduction Of NPDES Permit Monitoring Frequencies* (EPA 833-B-96-001) in April 1996. This initiative is an effort to reduce the cost of environmental compliance and to provide incentives to facilities that demonstrate outstanding performance and consistent compliance with their permits. DEQ supports this initiative and Sections MN and IN contain recommendations, based on this EPA document, for routine consideration of reduced monitoring frequency during processing of all VPDES permit reissuance applications. The three steps of the protocol are:

1. Upon receipt of an application for permit reissuance, determine if the facility qualifies for reduced monitoring.
2. Determine the degree of monitoring reduction that should be allowed.
3. Make provisions in the permit to require increased monitoring if the facility does not continue to maintain its past compliance record.

There may be cases where reduced monitoring may be appropriate, but the circumstances do not fit this guidance (e.g., a limit may not be needed, but antibacksliding prevents its removal). Some minimal monitoring frequency may be appropriate, but would not be based on this guidance. In such cases, the permit writer should provide complete documentation regarding his/her decision in the fact sheet.

G. Compliance Schedules

Develop and include schedules of compliance in permits, when appropriate (9VAC25-31-250). See the OneDEQ permit template located on DEQnet. **The permit writer should ensure that the compliance schedule is provided in accordance with the 2007 Hanlon Memorandum.** The schedule must include an enforceable sequence of events leading to compliance with interim milestones for schedules longer than one year. Consider the following items when developing schedules of compliance:

1. A schedule of compliance cannot be incorporated into a permit for compliance with a technology-based limit even if the limit is new to the permit. The final deadline for compliance with technology-based limits was March 31, 1989.
2. A schedule is allowable for water quality-based limits. The schedule should be no longer than necessary for compliance with new water quality-based limits (9VAC25-31-250.A.3).
3. Time periods between progress reports cannot be more than one year apart.

Coordinate with enforcement staff and review enforcement files for existing enforcement actions/orders which may contain schedules.

H. Electronic Discharge Monitoring Report (DMR) Preparation

1. Using CEDS, develop limitations and monitoring requirements for each outfall that will be reflected in the e-DMR. The e-DMR should contain the limitations and monitoring requirements (including WET testing requirements) and number of significant figures described in the Part I.A page. Develop DMRs for sludge monitoring where required.

If there are interim and final limits, include only the interim limitations on the DMR. In many cases, the DMR may also reflect limits contained in special conditions in addition to

those contained on the Part I.A page. Permits with continuous monitoring of chlorine limits and pH excursion time are examples of this.

> NL on the e-DMR should match "NL" on the limits page in CEDS. Where "NA" appears on the limits page in CEDS, "******" should be on the e-DMR.

2. All permits require, at a minimum, once a year reporting of monitoring results (9VAC25-31-220.I). The yearly reporting requirement applies to existing facilities and facilities not yet constructed. For proposed or non-operational facilities, have the permittee report "no discharge" on the e-DMR.

For facilities not built that require e-DMR submittal as if the facility was built, no additional considerations are needed. The permittee submits a "no discharge" DMR as stated on the effluent limitations page until commencement of discharge or CTO issuance. No notifications to other staff are necessary as the transition in CEDS and ICIS is seamless with this option.

For facilities not built that require annual monitoring until the commencement of discharge or issuance of the CTO, the permit may contain a special condition that recognizes the annual monitoring until commencement of the discharge or issuance of the CTO (e.g. The permittee shall submit DMRs annually until the issuance of the CTO at which time DMR submittal shall be monthly. The annual DMR shall be no later than January 10 of the following year. At that time, a permit authorized change would be initiated in CEDS to increase the typical monitoring frequencies (See CEDS User Manual for VPDES). Regional compliance auditors and central office ICIS coordinator must be notified when discharge begins.

The regional water permit manager may decide for facilities not built to not require a DMR until the facility commences discharge (for industries they provide notice 10 days prior to commencing discharge) or upon issuance of the CTO (for municipalities). Discuss this option with compliance staff before allowing in a permit. For major permits, also notify the central office ICIS coordinator so that DMR non-receipt violations are not received. The effluent limits pages should contain a statement that recognizes that the permittee is authorized to discharge upon commencement of discharge or issuance of the CTO (e.g. During the period of the issuance of the CTO for a facility or until the permit's expiration date, whichever occurs first, the permittee is authorized to discharge from outfall number 00X. The discharge shall be limited and monitored as specified below or in Part I.A.x).

Other changes to special conditions may be needed to reflect the acknowledgement that commencement of discharge signals other requirements (i.e operations and maintenance manual requirement, water quality criteria monitoring, new discharges permitted from Form 2D and Form 2F sampling). The owner may request a reporting waiver if the facility is not yet constructed, and they submit a schedule for anticipated completion.

3. Consult the most recent listing of DMR parameter codes in CEDS to ensure that current codes are used. If there is no parameter code for a pollutant that requires monitoring, initiate a request for the inclusion of the new code into the list of DMR parameters. Draft a memo describing the requested parameter code, sampling frequency, sampling units, the time (in months) the parameter is to be monitored and the reasons for the request. This memo is from the Water Permits Manager to the Office of VPDES Permits. The

Office of VPDES Permits will forward the request to OIS. OIS will create the parameter code and copy all regions and Office of VPDES Permits with the changes.

4. Other actions, such as completion of construction, may necessitate development of a revised DMR. If a consent order or decree supersedes a permit limit, a new DMR should be developed to reflect the new limit. The appropriate DMR should be available to the permittee for the first monitoring report due date after the completion of construction or once the Order or Decree has been issued.

5. Identify Tiered DMR Parameter Codes: Take note of the following when developing tiered limits.

a. There should be no more than two tiers in a permit primarily because of the administrative and technical difficulties of drafting, tracking, monitoring, and enforcing the permit. These tiers should be associated with a "wet season" and a "dry season", or "cold" and a "warm" season.

b. Tiered permit limits are acceptable for ammonia, BOD, DO, TKN and CBOD. [Even though ammonia has toxic properties, it is non-persistent and biodegradable and therefore tiering ammonia limits is acceptable].

c. The toxics, other than ammonia, listed in the Water Quality Standards should not be tiered due to the potential for bioaccumulation. The volatile portions of the toxic pollutants do not have a pronounced tendency to bioaccumulate but may have interactions with others that do have that tendency.

6. DMR Parameter Codes for Chlorine

a. Code# 005 - Cl_2 Total - TRC concentration in the final effluent for municipal or industrial dischargers that have a water quality-based limit or a limit based on PJ AND the limit is expressed as a monthly average or a weekly (average) maximum. This is the primary DMR code for chlorine effluent limits.

b. Code# 157 - Total Cl_2 Contact - For minimum Cl_2 concentration after Cl_2 contact and prior to dechlorination. (Allow for 10% excursions on the DMR for this limit, i.e. daily sampling = 30 per month, therefore 3 excursions per month are allowed. Applies to this parameter ONLY.) This code is used for determining adequate disinfection. Use the same sample type (e.g., grab) for parameter code 213 and parameter code 157.

c. Code# 158 - Total Cl_2 Final – TRC concentration in the final effluent for industrial dischargers that have a technology based Cl_2 limit (steam electric for example).

d. Code# 213 - Cl_2 Inst. Tech (Min) - Use where exceptions to samples for #157 are allowed. Sections IN-3 and MN-3 have examples. Use the same sample type (e.g., grab) for parameter code 213 and parameter code 157.

7. CEDS Procedures: This section of the VPDES permit manual is to identify CEDS data entry problems and solutions as problems are encountered. The rules that were originally developed in Guidance Memo No. 05-2010, CEDS Data Entry Rules, are listed below. For more information please reference the updated CEDS VPDES IP User's Manual on DEQNET.

If any problem areas that are not addressed below, please pass them on to the Office of VPDES Permits.

Rule 1: Enter the same MONITORING START DATE and same 1ST DMR DUE DATE for interim, final and enforcement limits.

Rule 2: The MONITORING START DATE must be equal to or after the effective date, must be the first day of the month, and must be the first day that begins a monitoring period for which reporting is required.

Rule 3: The 1ST DMR DUE DATE must be separated from the MONITORING START DATE by a monitoring period plus 10 days.

Rule 4: The LIMIT START DATE must be greater than or equal to the effective date.

Rule 5: There must be no time gaps or overlaps between interim and final limit date ranges.

Rule 6: Final limits are always required.

Rule 7: Tier number assignment must be "0" for non-seasonal parameters. If there is more than one seasonal limit value per parameter begin with "1" for the first season.

Rule 8: Check all the monthly check boxes regardless of reporting frequency unless there are seasonal parameters.

Rule 9: In compliance schedule events, DATE RECEIVED = the date that a compliance schedule requirement is received or met but not necessarily completed.

Rule 10: In compliance schedule events, DATE COMPLETED = date event is complete (all requirements met - may be the same as date received).

Rule 11: In compliance schedule events, DATE REVIEWED = date reviewed by appropriate DEQ staff.

Rule 12: Flag the "ADMINISTRATIVELY CONTINUED" box in the general information screen when permits are continued. The box must be checked prior to 10 p.m. on the 20th of the month in which the permit expires.

Rule 13: When representative outfalls are allowed note in the DMR comments section which outfalls are being sampled.

Rule 14: GIS information should be added under the GIS tab on the CEDS facility screen as well as on the outfall screen.

Rule 15: When a permit is modified, update the DATE SIGNED event but do not change the DATE EFFECTIVE event in the events table.

Nutrient Guidance Related CEDS Data Entry Rules

In assigning parameter codes to nutrients for Significant Discharger List (SDL) permits and for making the associated CEDS data entries, please consult the following exhibit:

Exhibit IV-4 Use of Nitrogen and Phosphorus Parameter Codes for Significant Discharger List (SDL) Permits

Parameter Code	Reporting Frequency	Type of Limit	Monitoring Start Date *	When to use code	Compliance Determination
012	Do Not Use for SDL Nutrient Guidance Based Limits			for non-SDL related parameters (e.g., EPA effluent guidelines)	As normal

013	Do Not Use for SDL Nutrient Guidance Based Limits			for non-SDL related parameters (e.g., EPA effluent guidelines)	As normal
791	Monthly	load and concentration	see Rule 2	for monthly limits	End of month, as normal
792	Annual	load only	January 1 (per Rule 2)	for determining compliance with annual load	At the end of the year only
793	Monthly	load and concentration	see Rule 2	for monthly limits	End of month, as normal
794	Annual	load only	January 1 (per Rule 2)	for determining compliance with annual load	At the end of the year only
805	Monthly	load only	see Rule 2	for reporting unlimited cumulative load; always include if annual load limits apply	No limit compliance determination, Limit should be NL, for reporting only
806	Monthly	load only	see Rule 2	for reporting unlimited cumulative load; always include if annual load limits apply	No limit compliance determination, Limit should be NL, for reporting only

*See Rule 2 and 3 from the guidance, appearing above, apply as always.

8. Reporting of Flagged Data

a. All data, including flagged or qualified data, shall be reported and used in applicable calculations on the DMR, unless disclosed to the Department with technical justification (e.g., laboratory documentation). The permittee shall make a reasonable attempt to notify the Department in advance of submitting the DMR.

b. The permittee shall provide the certificate of analysis or an equivalent document in a format approved by the Department establishing the basis for qualifying or flagging data due to any reason such as, but not limited to, failing any aspect of QA/QC criteria; improper preservation or holding times; or presentation of ">" or "<" numerical results.

c. Upon finalization of guidance by the Department on managing flagged or qualified data, the permittee shall submit flagged or qualified data in accordance with the procedures established in such guidance. Prior to finalization of such guidance, the permittee may include the flagged or qualified data in the specified calculation on the DMR or, if the DMR has already been submitted to the Department, amend the DMR to include such data.

d. The inclusion of flagged or qualified data in the DMR under this provision shall not be considered a violation of the certification that the DMR is true, accurate, and complete.

SECTION V

MODIFICATION and TERMINATION PROCEDURES

Table of Contents

A. Initiation of Modifications

The authority of the State Water Control Board to modify VPDES permits is clearly stated in the State Water Control Law (§ 62.1-44.15(5b)) and the VPDES Permit Regulation (9VAC25-31-370).

> If a permit is modified, only the part of the permit being modified is subject to change or public comment.

1. Causes for Modification

The modification of a VPDES permit may be initiated by the permittee, interested persons, or the Department's staff. **Another option to consider is to revoke and reissue if the modification request falls within 15 months of permit expiration.** In this case, the RO may send a Reissuance in Lieu of Modification letter (see DEQnet). Determination of the need for a revocation and reissuance versus a modification is generally done on a case-by-case basis. Note that the current fee regulation requires a new application fee for a revoke and reissue. Procedures for Revocation and Reissuance are presented in Section III.

The VPDES Permit Regulation at 9VAC25-31-390.A specifies that a permit may be modified only when any of the following occur:

a. There are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

b. The Department has received new information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance. For VPDES general permits this cause includes any information indicating that cumulative effects on the environment are unacceptable. For new source or new discharger VPDES permits this cause shall include any significant information derived from effluent testing required on the permit application after issuance of the permit.

c. The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. Permits may be modified during their terms for this cause only as follows:

(1) For promulgation of amended standards or regulations, when:

a) The permit condition requested to be modified was based on a promulgated effluent limitation guideline, EPA approved or promulgated water quality standards, or the Secondary Treatment Regulations incorporated by reference in 9VAC25-31-30; and

b) EPA has revised, withdrawn, or modified that portion of the regulation or effluent limitation guideline on which the permit condition was based, or has approved a state action with regard to a water quality standard on which the permit condition was based; and

c) A permittee requests modification in accordance with this regulation within ninety (90) days after Federal Register notice of the action on which the request is based

(2) For judicial decisions, a court of competent jurisdiction has remanded and stayed EPA promulgated regulations or effluent limitation guidelines, if the remand and stay concern that portion of the regulations or guidelines on which the permit condition was based and a request is filed by the permittee in accordance with this regulation within ninety (90) days of judicial remand; or

(3) For changes based upon modified state certifications of VPDES permits.

d. The Department determines if good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy. However, in no case may a VPDES compliance schedule be modified to extend beyond an applicable CWA statutory deadline.

e. When the permittee has filed a request for a variance pursuant to 9VAC25-31-100 L or M within the time specified in this regulation.

f. When required to incorporate an applicable CWA Section 307(a) toxic effluent standard or prohibition.

g. When required by the reopener conditions in a permit which are established under 9VAC25-31-220 B or C or 9VAC25-31-800 E.

h. Upon request of a permittee who qualifies for effluent limitations on a net basis under 9 VAC 25-31-230 G or when a discharger is no longer eligible for net limitations.

i. As necessary under 9VAC25-31-800 E for a pretreatment program.

j. Upon failure to notify another state whose waters may be affected by a discharge.

k. When the level of discharge of any pollutant which is not limited in the permit exceeds the level which can be achieved by the technology-based treatment requirements appropriate to the permittee.

l. To establish a notification level as provided in 9VAC25-31-220 F.

m. To modify a schedule of compliance to reflect the time lost during construction of an innovative or alternative facility, in the case of a POTW which has received a grant under Section 202(a)(3) of CWA for 100% of the costs to modify or replace facilities constructed with a grant for innovative and alternative wastewater technology under Section 202(a)(2) of CWA. In no case shall the compliance schedule be modified to extend beyond an applicable CWA statutory deadline for compliance.

n. To correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions.

o. When the discharger has installed the treatment technology considered by the permit writer in setting effluent limitations imposed under the Law and Section 402(a)(1) of the CWA and has properly operated and maintained the facilities but nevertheless has been unable to achieve those effluent limitations. In this case, the limitations in the modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by a subsequently promulgated effluent limitations guideline).

p. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

2. Modification Requests

a. A permittee or an interested person may request the modification of a permit by submitting a written request to the appropriate RO. See DEQnet for a sample modification request. A modification request contains the following information:

(1) A statement of present permit conditions in question.

(2) A statement of the proposed changes being sought.

(3) Reasons and justification for the changes or a revised application if the request involves modification or substantial increase in flow, loading, or outfall location.

(4) Application forms or revised plans/documents, as necessary.

b. Upon receipt of a modification request from a permittee or interested person, staff may determine if there are additional modifications needed. If additional modifications are needed, notify the permittee and make all the modifications at the same time.

c. If the modification requires the submittal of a new application due to substantial changes to the operation or discharges, process the application following the procedures in Section II. This includes the statutory requirements for notification of local governments and riparian landowners (§ 62.1-44.15:4 D).

d. Along with the modification request/application, the permittee must also submit the Public Notice Billing Authorization Form. If this form is not submitted, the permit writer shall not send a letter stating that the modification request is complete. This form requests an authorized signature and billing contact information that the permit writer will need when they contact the newspaper to set up the public notice. 9VAC25-31-100.E. allows the department to request "any supplemental information…completed to its satisfaction" along with the application. This form should not be considered a permittee's concurrence with the draft modification. If this signed form is not received with the modification request, the permit writer shall not send the application complete notice.

3. Permit Fees

For modifications initiated by the permittee, collection of the appropriate permit fee is required before the application or modification request can be deemed complete. Permit fees are not required for DEQ or third party-initiated modifications. Fee forms and fees should be sent by the permittee to DEQ, Receipts Control, P.O. Box 1104, Richmond, VA 23218 and not retained by the regional office.

4. Denial of Requests for Modification

a. See Section II for a discussion of reasons for denial.

b. Prepare a written response to the requestor giving reasons for the denial. Include a statement that denials may be appealed to the Director.

c. Denials of modification requests do not require public notice.

5. Modifications Not Requiring Public Notice (9VAC25-31-400)

The following permit modifications are considered minor modifications and do not require public notice and opportunity for hearing unless they would render the applicable standards and limitations in the permit less stringent, or unless contested by the permittee. Minor modifications may only:

a. Correct typographical errors;

b. Require more frequent monitoring or reporting by the permittee;

c. Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement;

d. Allow for a change in ownership or operational control of a facility where the department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Department;

[NOTE: A reasonable interpretation of d. above is to allow for a name change of a facility via a minor modification as this is a legal change similar to an ownership change. This can be requested via letter using the change of name agreement form in Section L.]

e. Change the construction schedule for a discharger which is a new source. No such change shall affect a discharger's obligation to have all pollution control equipment installed and in operation prior to discharge.

f. Delete a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits; or

g. Incorporate conditions of an approved POTW pretreatment program (or a modification thereto that has been approved in accordance with the procedures in this regulation) as enforceable conditions of the POTW's permits.

The modifications in b - g above require an amendment to the Fact Sheet and a modification date on the permit cover page. Include all information applicable to the minor modification in the Fact Sheet amendment.

A complete permit should be transmitted to the owner for all modifications. However, if the region elects to only transmit the modified pages to the owner, ensure that the transmittal letter contains a summary of the pages being replaced.

B. Modification Procedures

1. Review the Modification Request/Application

a. Review the modification request/application within 14 days of receipt of the request. The RO is responsible for consistent review of applications and correct determinations regarding incomplete applications and the need for application deficiency letters. The modification request must include the PN Billing Authorization Form for the request to be deemed complete.

b. For all modifications other than minor modifications forward a copy of the modification request/application to the VDH Office of Drinking Water Field Office. Forward a copy of the modification request/ application to the VDH-DSS, VMRC, DWR, DCR, USFWS, and NOAA where appropriate (see Section II).

c. The **four-month** time period to modify the permit starts upon determination that the modification request/application is complete.

d. If the modification requires the submittal of a new application due to substantial changes to the operation or discharges, process the application following the procedures in Section II. This includes the statutory requirements for notification of local governments and riparian landowners (§ 62.1-44.15:4 D).

2. Office of VPDES Permits Model Review

Regional modeling packages do not require Office of VPDES Permits review. Send other models to the Office of VPDES Permits for review prior to including results into the modified draft permit. Changes to effluent parameters (flow and pollutant concentrations) in a previously approved model do not require Office of VPDES Permits review. Send any other changes in an approved model to the Office of VPDES Permits for review.

3. Fact Sheet and Draft Permit Preparation

a. Fact Sheets are required for all permit modifications that require public noticing. Clearly identify in the FS why the permit is being modified and what specific changes or additions are being made. See Section MN or Section IN for Fact Sheet preparation guidance.

b. Prepare a draft of the permit pages containing the proposed modification. See Section III for additional guidance on preparing draft permit pages.

c. If the modification could impact a TMDL Waste Load Allocation applicable to the receiving stream, see the procedures outlined in Section III.A.6.g.

4. Public Notice Preparation

Every modification, except those that qualify as minor modifications (9VAC25-31-400), must receive public notice. Restrict the details on effluent limits and land application sites in the public notice to the items being modified. Follow the format available on DEQnet when developing the public notice for the newspaper.

C. Draft Permit Review

Unless otherwise specified or the recipient objects, all information forwarding for draft permit review will be done via placing items in the appropriate regional directory on the public file share site https://public.deq.virginia.gov/ or as attachments to emails**. Please use the permit number and name or abbreviated name of the facility for the file folder containing the permits (e.g. VA0081256HRSDBoatHarbor**). When **f**orwarding the information to individuals (e.g. draft permits to owners, EPA, VDH, etc.) using the public file share reference the link in an email. Suggested transmittal letters available on DEQnet may be used in the email sending the information to the individual. Documents with original signatures, handwriting or drawings should be scanned.

1. Regional Review

Each Regional Office shall implement an internal review process for draft permits. The review shall include the application, fact sheet, permit and public notice. The review should occur before the draft permit is sent to outside organizations and to the applicant for review. The below methods should be used as appropriate.

a. Peer Review. Another permit writer or technical reviewer in the regional office should evaluate the permit package to ensure that the permit limits, conditions, and other requirements are applicable to the discharge, that the limits are technically accurate, that the permit is consistent with current technical and procedural guidance, and that there is continuity between the draft permit and any pervious permits issued for this discharge.

b. Regional Planning Review. Planning staff should provide a statement for the file indicating that the pollutant management activity either conforms or is consistent with applicable Total Maximum Daily Loads, the Water Quality Management Plan Regulation, applicable area or basin-wide water quality control and waste management plans or policies or will be consistent with the applicable planning document during its next revision. Do not reissue any permits which conflict with any Total Maximum Daily Loads, the Water Quality Management Plan Regulation, or area-wide or basin-wide water quality control and waste management plan or policy.

c. Water Permit Manager Review. Management should review the draft permit package for consistency with regional policies and procedures. They should also be the final check for readability and typographical errors.

2. Office of VPDES Permits Review

The staff of the Office of VPDES Permits is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to the Office of VPDES Permits for review and indicate which program areas (technical, WET, 316a, 316b, pretreatment, stormwater, groundwater, etc.) need review. Consult OWP&CA staff for additional guidance as needed.

3. VDH Review

VDH review of draft permits and fact sheets is not required unless the VDH Office of Drinking Water Field Office specifically requests it.

4. EPA Review (40 CFR 123.44; 9VAC25-31-50.C)

Send any changes in a major facility permit, except minor modifications, to the EPA Region 3 via EPA's PRMTS portal. Send any changes in a minor facility permit with an applicable EPA approved TMDL where the permit contains an effluent limit based on the TMDL and the change is related to the TMDL to EPA for review (draft modifications related to bacteria TMDLs do not need to be reviewed by EPA nor do draft modifications unrelated to the TMDL for facilities not included in 40 CFR Part 122 Appendix A), industrial facilities included in 40 CFR Part 122 Appendix A, facilities with 316(b) requirements regardless of major, minor or TMDL status (must also copy EPA HQ), facilities that are listed on the Chesapeake Bay Significant Dischargers List (SDL).

a. Forward a copy of the application/mod. request, draft permit, and Fact Sheet utilizing the EPA PRMTS portal. This may be concurrent with the submittal of this information to VDH.

b. If a proposed permit modification would change the permit status from minor to major, EPA review is required.

c. EPA can either comment upon and/or object to the draft permit pages in writing within **30 days**. To account for mailing and handling, **one week** in addition to the 30-day comment period is allowed from the date of mailing to EPA. EPA **comments** must be responded to but may not necessitate permit changes (see below). EPA **objections** must be resolved prior to permit modification. A permit cannot be modified with unresolved EPA objections. If EPA fails to comment or object within the above comment period, or requests an extension of time in which to comment, the RO may email a reminder to the EPA Region 3 contact in Section L (copy CO).

d. Any responses to EPA's suggested changes or objections should be coordinated with CO. The RO compiles any additional information requested by EPA and changes to draft permits and fact sheets.

e. If EPA has further objections to the application or draft modified permit, the Office of VPDES Permits will coordinate efforts to reach an agreement with EPA. Upon notification from EPA of any comments or objections from the EPA, the RO redrafts the modified pages as necessary.

f. If EPA's comments are not incorporated into the draft modified permit, the RO should either include EPA's comments in the Response to Comments memo and send to EPA or send a separate letter to EPA explaining why their comments were not included. This letter can be included in the final permit package that goes to EPA after the modification is completed.

5. Owner Review

a. Forward a complete copy of the entire draft permit and Fact Sheet to the owner after receiving EPA concurrence (for major permits). The RO may elect to send the draft permit package to EPA prior to owner review. If the draft permit package is provided to the owner prior to EPA's review, courtesy copies of draft permits may be sent to the owner prior to EPA review as long as they understand the permittee should be informed that EPA comments may result in changes to the draft permit. The owner has 14 days after receipt of a copy of the draft permit to comment and/or object to its provisions.

b. When public notice is **required**, transmit a copy of the public notice and authorization form with the draft modified permit to the permittee, using the Draft Permit/PN

Transmittal Letter to Owner when PN Billing Authorization Form Required (available on DEQnet).

c. When using the **optional** public notice procedure, transmit the public notice and PN verification form to the permittee using the Draft Permit/Optional PN Transmittal Letter to Owner when PN Authorization Form not Required (Owner Contacts the Newspaper) available on DEQnet.

d. The owner is responsible for the payment of the public notice and acknowledges that they must pay the cost by completing the Public Notice Billing Authorization Form. Receipt of the form is required with the submittal of the modification package.

e. If the permittee refuses to pay for a modification initiated by DEQ or an interested person, contact the Regional Director for approval to pay for the PN. If a proposed modification is initiated by the DEQ staff or an interested person, permittee consent is not required for the public notice.

f. See Section VI for public participation procedures, local government notification, and other agency reviews required for permit modification.

In addition to the general notice, all individuals identified in 9VAC25-31-290.C.1.a, b, c, and d shall be mailed, by electronic or postal delivery, a copy of draft permit, application, and Fact Sheet (if not previously received). Additionally, for proposed sewage discharges to or in near proximity to shellfish growing areas, DEQ must also provide notification to VDH-DSS and VMRC of the public comment period, and provide a copy of the final permit, if issued, to DSS (See GM07-2009).

D. Final Permit Processing

Unless otherwise specified or if the recipient objects, all information forwarding for final permit processing will be done electronically via email**.**

1. Modified Permit Package

Compile and forward the Modified Permit Package for review and signature upon completion of the public notice period, or upon completion of the public hearing (if one occurred).

a. Prepare the modified permit package (final permit, fact sheet and response to comments), including all changes made as a result of the public notice and comments received. Make any necessary changes to the fact sheet to reflect these permit changes.

b. Prepare the letter transmitting the modified permit to the owner for signature. This letter should be on regional office letterhead. If the DMR changes, ensure that the first DMR due date referenced in the transmittal letter is the 10th day of the month immediately following the first full month in which the modified permit is effective. As required by the State Water Control Law, this letter and the accompanying package must be sent to the permittee via certified mail. See Section L for an example Permit Transmittal Letter.

c. Route the modified permit package through the RO, up to the person with delegated authority to sign the permit under the DEQ Agency Policy Statement No.-2-09, October 31, 2008, as provided by §§ 2.2-604 and 10.1-1185 of the *Code of Virginia*. All modifications should be approved by the appropriate regional personnel including the Planning representative and Water Permit Manager.

d. The permit's signature line is titled and signed by the position with delegated authority to sign the permit under the DEQ Agency Policy Statement No.-2-09, October 31, 2008, as provided by §§ 2.2-604 and 10.1-1185 of the *Code of Virginia*. For minor permits, the Regional Water Permit Manager may sign in the absence of the RD. In cases where a public hearing has been held on a proposed permit, the permit is signed after the State Water Control Board has made a final decision to issue the permit.

2. Dating the Permit

Date the permit cover page to reflect the modification. The modification date appears between the effective and expiration dates. The modification date is the date the modified permit is signed. Effective and expiration dates do not change with modifications.

3. Final Package Distribution

Distribute the permit package as follows:

a. Owner by CERTIFIED MAIL (§62.1-44.15(9)) either postal certified mail or electronic certified (read receipt request) when agreed to by the permittee (see agreement question in Application Addendum Section L). The permittee must agree to electronic certified final package distribution.

- Transmittal Letter
- Permit
- DMR (only if unable to use eDMR)
- Response to Comments (if modification required a public notice)

- Fact Sheet (for change of ownership where new owner did not see draft permit package or if changes have been made to fact sheet during modification)

b. EPA (via EPA's PRMTS Portal)

- Transmittal Letter
- Permit
- Fact Sheet and Fact Sheet Attachments

c. RO & Office of VPDES Permits (Upload files to ECM as described in Section III.C.3.c)

- Transmittal Letter and Permit (Combined as one document)
- Fact Sheet
- Application/Modification Request

d. Regional Compliance Auditor

- Transmittal Letter
- Permit

4. Update CEDS

RO should complete data entry into CEDS to reflect the modification date and check on the accuracy of other entries for this permit. Check DEQNET for most recent CEDS user manual.

E. Change of Ownership/Facility Name Modifications

A change of ownership can be accomplished either as an automatic transfer under 9VAC25-31-380.B or as a minor modification under 9VAC25-31-400. In either case, change of ownership does not require permit fees or public notice if it is the only modification to the permit. A change of ownership requires a written request from the new owner asking for the change and agreeing to abide by all conditions and requirements in the permit. The new owner should also submit documentation of the change of ownership. Proof of sale is acceptable for documentation of change of ownership. In the interest of customer service and for compliance and enforcement purposes, all changes of ownership, including automatic transfers, require a **complete permit and Fact Sheet** (if the new owner did not see the draft permit package) be submitted to the new owner with the final package.

1. Automatic Transfer

A permit can be automatically transferred to the new owner if:

a. The current owner notifies the RO **30 days** in advance of the proposed transfer of the facility or property title, and

b. The current owner's notification includes a written signed agreement between the existing and proposed new owner containing a specific date of transfer of permit, or responsibility, coverage and liability between them, verification that all his outstanding Annual Fee payments to date are settled or will be settled by the new owner and,

c. The Director does not, within the 30-day time period, notify the existing owner and the proposed new owner of the department's intent to modify or revoke and reissue the permit.

2. Change of Ownership as a Minor Modification

a. The current owner notifies the RO of the proposed change in ownership. The RO receives a Change of Ownership Agreement Form signed by both the current and new owners. Ensure that the Change of Ownership Agreement Form is signed in accordance with application signature requirements. An example of the Change of Ownership Agreement Form is available on DEQnet. The CEDS Core Data Change Request Form in addition to the Change of Ownership Agreement Form in (available on DEQnet) is appropriate when an ownership change has the potential to affect more than one media.

b. Once the Change of Ownership Agreement Form has been received, change the owner information on the permit cover page, add a modification date between the effective and expiration date, update or amend the permit Fact Sheet and send revised permit and Fact Sheet with the transmittal letter to the permittee via certified mail or email with read receipt. For major facilities, submit the updated Fact Sheet and permit to EPA via EPA's PRMTS Portal. EPA will not review change of ownership requests.

c. For change of ownership, the **four-month** time period to modify the permit starts with receipt of the Change of Ownership Agreement Form from the current and new owners. If the current owner's signature form is unobtainable (e.g. owner deceased, no forwarding address, etc.), the four months start with receipt of the Change of Ownership Agreement Form, signed by the new owner.

F. Termination of Permits (§62.1-44.15(5) and 9VAC25-31-410)

Permits may be terminated either at the request of the permittee, an interested person, or upon staff initiative. Avoid using the word "revoke" to mean "terminate". Termination means the permit will cease to exist. In state and federal regulations, "revoke" is only used in the phrase "revoke and reissue", and it indicates a continuing permit.

The final decision on a contested permit termination may only be made by the State Water Control Board (§62.1-44.14), however, a procedure for uncontested permit terminations is outlined below. Before any permit can be terminated, the Board must give the permittee notice and an opportunity for a hearing (§62.1-44.15(5b)).

If a permit is close to its expiration date and the owner ceases operations or has stopped the discharge, it may be more expedient to simply allow the permit to expire. This does not require public notice. If the permittee does not want to wait until the permit expiration date, he should submit written notice to the RO advising of the reason for the request for permit termination. Make the appropriate changes to CEDS once the permit has expired.

> The termination of municipal facility operations should be conducted in consultation with VDH. This may require initiation of the facility's financial assurance plan, if applicable, or a closure plan and site inspection.

1. Causes for Permit Termination

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

a. The permittee has violated any regulation or order of the Board, any provision of the Water Control Law, or any order of a court, where such violation results in a release of harmful substances into the environment or poses a substantial threat of release of harmful substances into the environment or presents a hazard to human health or the violation is representative of a pattern of serious or repeated violations which in the opinion of the Board, demonstrates the permittee's disregard for or inability to comply with applicable laws, regulations or requirements;

b. Noncompliance by the permittee with any condition of the permit;

c. The permittee's failure to disclose fully all relevant material facts, or the permittee's misrepresentation of any relevant material facts in applying for a permit, or in any other report or document required under the Water Control Law or the VPDES Permit Regulation;

d. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit termination;

e. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit; or

f. There exists a material change in the basis on which the permit was issued that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit necessary to protect human health or the environment. (Such as plant closure or connection to a POTW).

2. Procedure for Uncontested Permit Termination

Permit terminations are uncontested when the permittee is in agreement with the termination because the permit is no longer needed, usually due to one of the following situations:

- Cease of the discharge, operation or activity;
- A change in operations or activity at the site;
- Connection of a discharge to a publicly owned or privately owned treatment works;
- A change to a different type of permit (i.e., individual to general, VPDES to VPA).

The procedure is:

a. Termination is proposed by the permittee, or by the staff, in response to one of the situations listed above. Verification and documentation that the permit is no longer necessary is made.

b. The staff must advise the permittee of the right to a hearing by sending the "Intent to Terminate" form letter and "Termination Agreement Form" and ask that the form be signed and returned.

c. If the termination agreement form is signed and returned indicating the permittee has waived the right to a hearing and certifying that there are no pending state or federal enforcement actions on the permit, the "Uncontested Termination Notification Letter" is sent to the permittee by certified mail informing him that the permit is terminated. **The termination is effective 30 days from this notification.** The notification letter should be signed at the same regional office level as has authority to issue (sign) the type of permit being terminated.

d. The termination agreement form and correspondence is filed by the regional office EPA Region III should be notified. An email notification of termination to EPA is sufficient.

e. CEDS is updated.

The above referenced termination documents can be found in Section L of this manual.

3. Procedure for Contested Permit Termination

a. If the permittee does not agree to the termination, does not return the termination agreement form, or if there is a pending enforcement action on the permit, contact the permittee in writing and arrange a meeting to discuss the permittee's situation.

b. If the permittee does not agree to the termination following a meeting, then DEQ staff should hold an informal fact finding hearing pursuant to §2.2-4019.

c. If the permittee agrees to the termination following the §2.2-4019 hearing and there are no pending enforcement actions on the permit, obtain the signed termination agreement form and follow the procedure for uncontested permit terminations.

d. If there is a pending enforcement action, but the permittee agrees to the termination, follow the procedures below for public notice and Department action. No formal hearing is required.

e. If the DEQ staff and the permittee do not reach agreement on termination and DEQ still intends to terminate the permit, a formal hearing is required before the Department (APA §2.2-4020). Contact the Office of Regulatory Affairs and Outreach and Office of VPDES Permits for further guidance if a formal hearing is necessary.

f. If the permittee does not agree to the termination or if there is a pending state or federal enforcement action on the permit, a public notice of intent to terminate must be issued. The format of a public notice of termination is the same as the public notice for permit issuance, except that it states the Department intends to terminate the permit.

g. Department approval, through the Office of Enforcement, must be obtained after public notice when the permittee agrees to the termination but there is a pending enforcement action. The Department will terminate the permit, if it decides it is appropriate.

h. If the termination is approved by the hearing officer, the regional office staff notifies the permittee by sending a copy of the decision, and a transmittal letter. This notification to the permittee must be sent by certified mail and signed at the same regional office level as has authority to issue (sign) the type of permit being terminated.

i. Send copies of termination notifications to EPA Region III

j. If the Department does not approve termination in any case, the permittee is so notified.

k. CEDS must be modified to reflect the facility's change in status.

The above referenced termination documents are available on DEQnet.

4. Annual Maintenance Fees

For any permit termination, an annual maintenance fee is not required for a permit that is terminated prior to April 1 in the year of termination. For "termination by notice" which is the case with uncontested permit terminations, the terminations are effective 30 days after notification, so if the termination notification letter is sent out on or before March 1 maintenance fees do not apply.

G. Denial of Requests for Termination (9VAC25-31-370.B)

Prepare a letter to the requestor giving reasons for the denial. Denials of requests for termination are not subject to public notice, comment, or hearings.

SECTION VI

PUBLIC PARTICIPATION AND PUBLIC HEARING PROCEDURES

Table of Contents

A. Public Participation Procedures

1. Newspaper Public Notice (§§ 62.1-44.16 and 62.1-44.19; 9VAC25-31-290)

a. Upon owner concurrence, proceed to public notice by publication once a week, for two consecutive weeks, in a newspaper of general circulation in the county, city or town in which the discharge is located. There is no list of acceptable newspapers kept by the agency. Newspapers must meet the requirements in §8.01-324.B.5. Contact the newspaper if you are unsure as to the status. The Transmittal Letter to the Newspaper and the Public Notice Verification Form are available on DEQnet.

> **In addition to the general notice, all individuals identified in 9VAC25-31-290.C.1.a, b, c, and d shall be mailed, by electronic or postal delivery, a copy of draft permit, application, and Fact Sheet (if not previously received). Please note that the draft permit, Fact Sheet, and associated documents should only be sent to DWR, USFWS, DCR, and NOAA if T&E coordination was required (See Section II). Additionally, for proposed sewage discharges to or in near proximity to shellfish growing areas, DEQ must also provide notification to VDH-DSS and VMRC of the public comment period, and provide a copy of the final permit, if issued, to DSS (See GM07-2009).**

b. The VPDES Permit Regulation at 9VAC25-31-290.B requires a period of at least **30 days** following the date of the initial public notice publication, during which time interested persons may submit their written comments (i.e. if the initial PN appears in Wednesday's newspaper, Thursday will be the first day of the 30 day comment period). If the comment period ends on a weekend or a holiday, the comment period should be extended through the next working day. Defer further processing actions until completion of public notice procedures. **The permit cannot be signed until after the comment period ends.**

c. If a decision is made to deny the permit based upon comments received, follow the Denial Procedures in Section II of this manual.

d. Send copies of the draft permit, Fact Sheet and application to persons who request them during the comment period. Attempt to resolve comments which were received during the comment period. Retain and consider all written comments submitted during the 30 days. Retain and consider all email comments. Send a copy of the Response To Comments to those individuals who commented during the public notice period. See below. If there are changes made to the draft permit as a result of public comment and those who commented on the original draft permit are sent the response to comments letter, no additional public notice is required.

If any changes are made in a draft permit for major facilities after the 30-day comment period, forward a copy of the revised pages of the draft permit and Fact Sheet to EPA for concurrence.

e. All issuance and reissuance files at the RO are to contain evidence of publication and of the publication dates of the public notice. Actual public notices or a photocopy of the notice with a sworn statement from the newspaper that the notice was published on the proper dates are the preferred documentation. The RO may continue with the standard procedure of having the newspaper forward the certification of publication to

the RO, or the RO may, by letter, require the owner to obtain certification, while informing the owner that permit processing will not proceed until the verification form is received at the RO.

Regulations require proof of publication but no specific type of proof is listed in the regulation, therefore if the region is unable to obtain the sworn statement from the newspaper other means of providing proof of publication in the file are acceptable, such as printing off a copy of the notice from the newspaper website. If this is done and the date of publication does not appear on the printed notice, the permit writer should add the dates and verify the publication dates by signature.

2. Public Notice Preparation

a) Public notice formats

Once the permit has been drafted, the permit writer should prepare the newspaper public notice. There are two types of public notices for VPDES permits. A full public notice and an abbreviated public notice. For minor industrial facilities §62.1-44.16 of the Code of Virginia allows to the extent authorized by federal law (not majors) and if the permit applicant so chooses an abbreviated public notice to be published in the newspaper listing the name of the permitted facility, the type of discharge, and a link to the Department's website with the full public notice. See minor industrial newspaper notice protocol below. The example public notices found in this section contain the language that has been developed and authorized by the Policy Division. Common sense deviations from the exact format are allowable. All public notice templates, including pretreatment program proposals, approvals and hearing notices, and TMDL notices can be found on DEQnet.

The public notice templates were developed to provide consistency and brevity in the notices published in the newspaper. The template sections cover the minimum content requirements of the law and regulations. The template does not address other requirements such as the duration of comment periods, what newspapers to use or the frequency of publication. These items are addressed in the applicable law, regulations, and permit manuals.

Modifying the Template: Some minor modifications can be made to the templates to address specific cases. If you have questions on making modifications, contact the central office program manager.

Public Comment Period: The public comment period begins on the date of the first week newspaper publication of the notice. However, when counting days to the end of the public comment period, start with the day after publication. If the last day of the public comment period falls on a Saturday, Sunday, or State Holiday, set the close of the comment period on the first business day after the Saturday, Sunday, or Holiday. (If a closing occurs, for example due to inclement weather, on the scheduled closing date, comments should be accepted through the next business day.) Also, do not put a time of day. All comment periods close at 11:59 p.m.

Setting an End Time for a Public Hearing/Public Meeting: While the template provides the option of including an end time for a public hearing or public meeting, setting an end time for a public hearing is only appropriate when the location has advised that the facility closes at a certain time. Also, if an end time is announced in the notice, the public hearing or public meeting cannot be ended prior to the announced end time.

Information Briefing: Having an "informational briefing" immediately before convening a public hearing is not required by the laws and regulations. However, it is agency policy.

Questions on the templates: Questions on the templates should be directed to the Central Office program manager.

b) Full public notice contents

Section 62.1-44.15:01 of the State Water Control Law says that the Board shall include in the permit public notice a statement of the estimated local impact of the proposed action, which at a minimum must include information on the specific pollutants involved and the total quantity of each which may be discharged. In the public notice templates developed, in order to provide information that the public could understand, the interpretation was made that rather than listing specific pollutants and amounts the intent of the law could be satisfied by listing generic groups of pollutants (e.g., bacteria, nutrients, organic matter, physical and chemical properties, solids, thermal, metals, inorganics, radionuclides, pesticides, organics) using the associated crosswalk (see table below) and statement of quantities listed as "amounts that protect water quality". The categorizations are not meant to be all inclusive with respect to parameters that may be limited within an individual permit. If a proposed limited parameter is not included in this list, please consult with your regional permit manager and Central Office staff as to how to proceed with including it in the public notice. This crosswalk was developed based on a summarization of the Attachment A priority pollutant categories and Standard Methods.

The public notice template also gives the flow from the facility. If the discharges are to more than one receiving stream, the total flow to each stream should be listed.

In the case of permits where waste is land applied, in order to meet the intent of the law, the volume of material to be land applied and the location of the land application sites should be included in the public notice. This is in addition to the description of the proposed activity and a listing of generic pollutants specified in the permit. The VPDES Permit Regulation specifically requires that the public notice include the location of sludge/waste storage and land application sites.

BACTERIA		
E. coli	Fecal Coliform	Enterococci

NUTRIENTS		
Ammonia-N	Nitrate + Nitrite	Total Nitrogen
Nitrate	Orthophosphorus	Total Phosphorus
Nitrite	Total Kjeldahl Nitrogen	

ORGANIC MATTER		
BOD_5/$CBOD_5$	COD	TOC

PHYSICAL & CHEMICAL PROPERTIES		
Alkalinity	Dissolved Oxygen	Salinity
Color	Hardness	Turbidity
Conductivity / Specific Conductance	pH	

SOLIDS	
Total Dissolved Solids	Total Suspended Solids
Total Solids	Volatile Solids

THERMAL	
Heat Rejection (BTUs)	Temperature

METALS		
Aluminum	Chromium VI	Nickel
Antimony	Copper	Selenium
Arsenic	Iron	Silver
Barium	Lead	Thallium
Cadmium	Manganese	Zinc
Chromium III	Mercury	

INORGANICS		
Bromide	Fluoride	Sulfate
Chloride	Oil and Grease	Sulfide
Chlorine, Total Residual / Free	Total Petroleum Hydrocarbons	Sulfite
Cyanide	Phenols	

RADIONUCLIDES	
Beta Particle & Photon Activity (mrem/yr)	Combined Radium 226 and 228
Combined Radium 226 and 228	Uranium

PESTICIDES		
Aldrin	Beta-Endosulfan (synonym = Endosulfan II)	Kepone

Chlordane	Endosulfan Sulfate	Malathion
Chlorpyrifos (synonym = Dursban)	Endrin	Methoxychlor
DDD	Endrin Aldehyde	Mirex
DDE	Guthion (synonym = Azinphos Methyl)	Parathion (synonym = Parathion Ethyl)
DDT	Heptachlor	Toxaphene
Demeton (synonym = Dementon-O,S)	Heptachlor Epoxide	
Diazinon	Hexachlorocyclohexane Alpha-BHC	
Dieldrin	Hexachlorocyclohexane Beta-BHC	
Alpha-Endosulfan (synonym = Endosulfan I)	Hexachlorocyclohexane Gamma-BHC (syn. = Lindane)	

ORGANICS		
Acenaphthene	Carbon Tetrachloride	Hexachlorobenzene
1,2-Dichlorobenzene	Chlorobenzene (synonym = Monochlorobenzene)	Hexachlorobutadiene
1,2-Dichloroethane	Chlorodibromomethane	Hexachlorocyclopentadiene
1,2-Dichloropropane	2-Chloronaphthalene	Hexachloroethane
1,2-Diphenylhydrazine	Chloroform	Indeno(1,2,3-cd)pyrene
1,2-trans-dichloroethylene	Chrysene	Isophorone
1,3-Dichlorobenzene	Dibenzo(a,h)anthracene	Methyl Bromide(synonym = Bromomethane)
1,3-Dichloropropene	1,2-Dichlorobenzene	Methylene Chloride (synonym = Dichloromethane)
1,4-Dichlorobenzene	1,3-Dichlorobenzene	Nitrobenzene
2,4-Dinitrotoluene	1,4-Dichlorobenzene	N-Nitrosodimethylamine
3,3-Dichlorobenzidine	3,3-Dichlorobenzidine	N-Nitrosodi-n-propylamine
Acrolein	Dichlorobromomethane	N-Nitrosodiphenylamine
Acrylonitrile	1,2-Dichloroethane	PCB, total
Anthracene	1,1-Dichloroethylene	Pentachlorobenzene
Benzene	1,2-trans-dichloroethylene	Pyrene
Benzidine	1,2-Dichloropropane	1,1,2,2-Tetrachloroethane
Benzo (b) fluoranthene (synonym = 3,4-Benzofluoranthene)	1,3-Dichloropropene	1,2,4,5-Tetrachlorobenzene

Benzo(a)anthracene	Diethyl Phthalate	Tetrachloroethylene (synonym = Tetrachloroethene)
Benzo(a)pyrene	Dimethyl Phthalate	Toluene
Benzo(k)fluoranthene	Di-n-butyl Phthalate (synonym = Dibutyl Phthalate)	1,2,4-Trichlorobenzene
Bis (chloromethyl) Ether	2,4-Dinitrotoluene	1,1,1-Trichloroethane
Bis 2-Chloroethyl Ether	Dioxin (synonym = 2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1,1,2-Trichloroethane
Bis 2-Chloroisopropyl Ether	1,2-Diphenylhydrazine	Trichloroethylene (synonym = Trichloroethene)
Bis 2-Ethylhexyl Phthalate (syn. = Di-2-Ethylhexyl Phthalate)	Ethylbenzene	2-(2,4,5-Trichlorophenoxy propionic acid (synonym = Silvex or 2,4,5-TP)
Bromoform	Fluoranthene	Vinyl Chloride
Butyl Benzyl Phthalate	Fluorene	

MISCELLANEOUS ***The following parameters should be listed individually in the notice, as appropriate.***	
Application Rate	Flow
Evaporation	Whole Effluent Toxicity (expressed as "toxicity" in notice)

c. Full Public Notice Protocol

If the region manages coordination with the newspaper, send the Public Notice Billing Authorization Form to the permittee with the reissuance reminder letter. Attach it to the reissuance reminder letter. Completion of this form is considered part of a complete application.

- Develop the traditional full public notice. The template is available on the DEQnet.
- Develop the mailing list notice using the template below:

  The purpose of this notice is to seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of ***[treated wastewater/stormwater]*** *into a waterbody in* ***City/County****, Virginia. Applicant:* ***Applicant Name; Applicant Address****. Facility:* ***Facility Name; Facility Address****; Permit No. VA00****XXXXX****. DEQ Contact:* ***Permit Writer****, Phone:* ***(XXX) XXX-XXXX****, Email:* ***FirstName.LastName****@deq.virginia.gov****. Public Comment Period:* ***Month Day, Year to Month Day, Year.***

- Conduct regional review of notice content.
- Send the mailing list notice paragraph to Vandelia Wheatley (CO). Vandelia will cut and paste exactly what you send her into the weekly notice. While it is ideal for the mailing of this notice to precede or coincide with the newspaper publication date, there are opportunities for case-by-case decisions otherwise to prevent

expiration. **NOTE: This notice should NOT be distributed before a draft is ready for public comment. Include comment period dates in the paragraph.**

- Send the full notice with comment period dates either to the newspaper for publication or to the permittee to coordinate publication independently. This correspondence should:
  1) Match the template language on DEQnet.
  2) Include the signed Public Notice Billing Authorization, as applicable.
  3) Include the Public Notice Verification Sheet (DEQnet)
- **Coordinate with the newspaper, as necessary, on proof reviews and confirm publication dates.**

d. Industrial Minor Abbreviated Newspaper Public Notice per §62.1-44.16

- If the region manages coordination with the newspaper, send the public notice billing authorization form (DEQnet) to the permittee with the reissuance reminder letter. Attach the form to the reissuance reminder letter. Completion of this form is considered part of a complete application.
- Send an email to the permittee offering the abbreviated public notice procedure; or, alternatively, the Public Notice Billing Authorization form (DEQnet) may be used to document the permittee's preference regarding whether to use the abbreviated newspaper notice. If the permittee elects for the abbreviated notice, proceed with the remaining steps. If not, revert to the standard full public notice protocol.

> Email exchange or billing authorization should be retained in the permit record and a comment may be added to the Fact Sheet as follows:
> "In accordance with Chapter 552 of the 2018 Acts of Assembly, the VPDES permit regulation 9VAC25-31-290 has been revised to allow, if the permittee so elects, an abbreviated public notice procedure for industrial minors, in which an abbreviated notice is published in the newspaper with a link to the full notice on the Department's website. The permittee [did/did not] elect to use the abbreviated procedure."

- Develop the abbreviated public notice for the newspaper. A template for the abbreviated newspaper publication is on DEQnet.
- Develop the traditional full public notice also on the DEQnet for posting on the website.
- Develop the mailing list notice (the weekly notice that is mailed out from CO) using this template:

  *The purpose of this notice is to seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of **[treated wastewater/stormwater]** into a waterbody in **City/County**, Virginia. Applicant: **Applicant Name; Applicant Address**. Facility: **Facility Name; Facility Address**; Permit No. VA00**XXXXX**. DEQ Contact: **Permit Writer**, Phone: **(XXX) XXX-XXXX**,*

*Email: **FirstName.LastName**@deq.virginia.gov**. *Public Comment Period: **Month Day, Year to Month Day, Year.***

- Conduct regional review of notice content.
- Send the mailing list notice to Vandelia Wheatley in CO. While it is ideal for the mailing of this notice to precede or coincide with the newspaper publication date, there are opportunities for case-by-case decisions otherwise to prevent expiration. **NOTE: This notice should NOT be distributed before a draft is ready for public comment.**
- Send the full notice (complete with comment period dates) via email to Central Office (CO) at the same time you contact the newspaper for publication of the abbreviated notice (or the permittee if they handle newspaper publication), **but no later than 3 full business days prior to the posting deadline**. The email should:
  1) Be addressed to the water permits division web author, Michelle Henicheck and copy Peter Sherman in order to make sure your request gets forwarded to someone in the Office of Communications for posting in the event Michelle is on leave. In the event neither Peter nor Michelle are available, contact the Office of Communications directly to get public notices published on the web. Please be mindful of your timeframe in making the initial contact with CO and place a phone call to ensure the request has been received if a response is not received or you do not see the notice on the website within 24 hours;
  2) Use the following naming convention for the email subject: VA00XXXXXFacilityName;
  3) Attach the full finalized notice with the same naming convention as the email header;
  4) Identify the planned newspaper publication date; and
  5) Identify the deadline for web posting.
- The newspaper correspondence should:
  1) Match the template language on DEQnet;
  2) Include the signed Public Notice Billing Authorization; and
  3) Include the Public Notice Verification Sheet (DEQnet)
- **Coordinate with the newspaper, as necessary, on proof reviews and confirm publication dates.**

> If the sworn statement (affidavit) from the newspaper cannot be obtained, other means of providing proof of publication in the file are acceptable, such as printing off a copy of the notice from the newspaper website. If this is done and the date of publication does not appear on the printed web site notice, the permit writer should add the dates and verify the publication dates by signature.

3. Public Notice Procedures When Owner Does Newspaper Publication

Send the transmittal letter, draft permit, Fact Sheet, actual public notice, and the public notice verification form to the owner. The transmittal letter instructs the owner to review the permit and then publish the public notice in a newspaper designated by the permit writer. The owner must send verification of the publication to the RO within **35 days** of the transmittal letter date.

If verification is not received in 35 days, inform the owner that permit processing will cease until verification is received.

4. Mailing List and Website Posting

Federal and state regulations concerning NPDES programs mandate the use of a mailing list to provide potentially interested parties the opportunity to receive additional information and comment on specific permit actions. See 9VAC25-31-290 for the specific requirements concerning mailing lists for VPDES permits.

- Send an electronic copy of the mailing list public notice template (below) to Vandelia Wheatley for inclusion on the mailing list at the same time the public notice is submitted to the newspaper. The mailing list is distributed once every two weeks by hard copy and publication on the DEQ website and via "Constant Contact" where individuals may sign up for email notifications as soon as the website is updated with the two week distribution.

  Mailing List Template:

  The purpose of this notice is to seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of ***[treated wastewater/stormwater]*** *into a waterbody in* ***City/County****, Virginia. Applicant:* ***Applicant Name; Applicant Address****. Facility:* ***Facility Name; Facility Address****; Permit No. VA00****XXXXX****. DEQ Contact:* ***Permit Writer****, Phone:* ***(XXX) XXX-XXXX****, Email:* ***FirstName.LastName****@deq.virginia.gov****.** *Public Comment Period:* ***Month Day, Year to Month Day, Year.***

- When using the optional PN procedure, send the mailing list template to Vandelia Wheatley at the same time the public notice package is sent to the owner.
- If people make comments or requests for information after the mailing list is sent, but prior to the public notice appearing in the newspaper, tell them the information will be sent following the notice in the newspaper.
- The mailing list is the mechanism by which the EPA (for minor permits), DWR, VIMS, F&WS, NMFS, Corps of Engineers, and adjacent states are notified of upcoming VPDES permit actions and are given the opportunity to comment on them. Provide additional information (application, draft permit, FS) concerning permit actions to these entities if requested by them. They have the 30-day public comment period for their review and comment.
- Place a copy of the mailing list page(s) with the notification of permit action in the permit correspondence file.

5. Local Government Notification

As required by the State Water Control Law Section 62.1-44.15:01, the permit full public notice must be mailed (or emailed) to three specific people in the locality where the discharge is to take place. They are: the chief elected official (i.e. mayor or chairman of Board of Supervisors), the chief administrative officer (i.e. city or town manager or county administrator) and the appropriate planning district commission.

> If a discharge in a town has a mixing zone or other pollution impact that extends into the surrounding county, then both the town and the county should be notified.

Because of the distinct legal citation applicable here, a separate letter (or email) should be sent to each of the local officials rather than a copy of the letter (or email) sent to the newspapers or other agencies. This mailing should occur when the permit public notice is sent to the newspaper and the 2-week mailing list. If the regional office uses the optional public notice procedures, then the regional office would still be responsible for notifying these local officials. The law does not give the option of the permittee doing it. **These notices may be sent to local officials by postal mail that is not certified, or by e-mail.** The DEQ RO is responsible for maintaining the most current postal and electronic mailing addresses. If an e-mail notice to a local official is returned undeliverable, DEQ staff must take immediate action to ensure the notice is delivered to the correct e-mail address or send the notice via postal mail. The DEQ RO documents the fact that they sent the letters in the permit file.

If the applicant is one of the local officials listed above, receipt of the PN authorization from that person constitutes the notice required by the law. Other government officials and/or the planning district will still need to be notified. See DEQnet for an example letter.

6. Adjacent States Recommendations

If the RO does not incorporate recommendations of any affected state, provide that state and the EPA Regional Administrator for Region III with a written explanation of the reasons for not incorporating such recommendations. Provide this letter on all permits (major and minor) before final permit action.

7. Other Agency Comments (9VAC25-31-330)

a. Address comments from the Department of Wildlife Resources (DWR) on permits for proposed discharges into trout streams (Class V & VI).

b. Address comments from the Virginia Institute of Marine Science (VIMS) on permits for new discharges into tidal areas.

c. If the U.S. Fish and Wildlife Service (F&WS) or the National Marine Fisheries Service (NMFS) advise the RO in writing, during the 30-day comment period, that special conditions need to be imposed upon the permit to avoid substantial risk to public health, or impairment of fish and/or wildlife resources, including endangered species, the permit writer may include these special conditions in the permit if they are necessary to carry out the provisions of the SWCL or the CWA. If the requested conditions are not included in the draft permit, notify the requesting agency of the reasons for not including the requested conditions. Generally, threatened and

endangered species coordination will occur prior to the public comment period (see Section II.F).

d. If the Corps of Engineers (COE) advises the RO in writing, during the 30 day comment period, that anchorage and navigation of any of the waters of the United States would be substantially impaired by the granting of a permit, ask the owner to either modify the application to satisfy the COE or withdraw the application. Failure to do either results in a denial recommendation.

   If the COE advises the RO that imposing specified conditions upon the permittee is necessary to avoid any substantial impairment of anchorage and/or navigation, include the conditions specified by the District Engineer. Any objection or redress by the applicant are to be made through the applicable procedures of the COE.

e. Address comments from other agencies on the mailing list if they have concerns about the draft permit.

8. Public Hearing

It is very important these exact procedures are followed as deviating from the procedures could result in litigation. Any questions about procedures should be directed to the Division of Policy. See Section V.B for public hearing procedures.

If a decision is made to deny the permit based upon the hearing, follow the procedures for denials that received a public hearing described in Section VI.H.6 of this manual.

> Provide EPA the opportunity to comment on a major permit that has been revised as a result of a public hearing.

9. Response to Comments (9VAC25-31-320)

During the public comment period for the draft permit or public hearing, maintain a list of those individuals, organizations, etc., that respond to the notice for the comment period. After the public comment period, a Response to Comments memorandum must be developed. Include in this document a description of any changes made to the draft permit; and a brief description of, and staff response to, all significant comments received during the permit public comment period(s), and, if applicable, the public hearing comment period. List and respond to comments received from the owner, the public, EPA, adjacent states and other state/federal agencies.

The following items may be included in the Response to Comments. If they are not, then they must be documented elsewhere in the permit file:

(a) Include a statement regarding the planning status of the discharge. The discharge should be described as either in conformance with the existing planning documents for the area OR state that the discharge is not addressed in any planning document but will be included when the plan is updated.

(b) Include one of the following statements about VDH review of the draft permit in the Response To Comments memo, unless VDH has waived the right to comment and/or object to the draft permit:

- "VDH has no objections to the draft permit." OR
- State VDH comments and/or objections, if applicable, and how resolved.

The Response to Comments memo shall be made available to the public and a copy of it should be sent to those who commented during the public notice. Send EPA a copy of the Response to Comments memo with the revised permit pages. If a public hearing will not be held for a draft permit, send the Response to Comments memo to commenting parties following the comment period of the draft permit. If a public hearing will be held for a draft permit, send the Response to Comments memo to commenting parties following the comment period of the public hearing.

B. Public Hearing Procedures

Chapter 356 of the 2022 Acts of Assembly (SB 657, effective July 1, 2022) shifted the authority to issue permits and other powers, including conducting hearings and issuing orders, from the State Water Control Board to the Department of Environmental Quality (Department). To remain informed about permitting decisions, the fifth enactment clause requires the Department, at each regular board meeting, to provide an overview and update regarding any "controversial permits" pending before the agency. Immediately after such presentation by the Department, the board has an opportunity to respond to the presentation and provide commentary regarding such pending permits. The fifth and sixth enactment clauses of the law define a "controversial permit" as permitting action for which a public hearing has been granted pursuant to the law and set out procedural requirements for granting and conducting a public hearing on a permit action during a public comment period in instances where a public hearing is not mandatory under state law or federal law or regulation. This section of the Permit Writer's Manual establishes procedures for controversial permits that the Department considers under the State Water Control Law, which are therefore relevant to the State Water Control Board. Note that the law did not change the State Water Control Board's authority over the adoption of regulations.

The requirements for controversial permits have been codified at Code of Virginia §10.1-1184.1 and Part IV of the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation, 9VAC25-31-260 et seq. They include conducting an additional informal public hearing process for controversial permits, the Department providing an overview and update to the State Water Control Board regarding any controversial permits that are pending, and, before rendering a final decision on a controversial permit, publishing a Summary of and Response to Public Comments ("Summary of Comments") received during the draft permit public comment period, public hearing, and public hearing comment period. The Department must also hold a second public hearing to provide an opportunity for individuals who previously commented, either in person at the draft permit public hearing or in writing during the public comment period, to respond to the Department's Summary of Comments. No new information will be accepted during the public hearing for the Summary of Comments.

Set forth below are the Water Division procedures for informal VPDES permit public hearings (hearings), except for hearings on terminations of permits. Its purpose is to identify specific legal requirements for hearings, specific steps to be taken for authorizing and convening these hearings and acquiring Department's action, and the responsibilities of the Originating Unit (OU) and other agency offices in the hearing process. These procedures are to be used by all Water Division units. **It is very important these exact procedures are followed to ensure compliance with the law and VPDES Permit Regulation.**

1. Determining Need for Hearing on Applications for Permits

a. Maintain a list of those individuals, organizations, etc. that responded to the public notice of the draft permit. Review all responses to the public notice and requests for public hearing in order to make a recommendation on the need for a public hearing. The final decision on holding a public hearing must be made by the Director within 30 days after the close of the public comment period above, unless the applicant agrees to a later date. In those cases where the owner has requested a hearing or the staff recommends that a public hearing should be held and there has been no notice of a comment period on a draft permit, the final decision on holding a public hearing should be made by the Director within 30 days after the request for public hearing was received from the owner or the recommendation was made by the staff. In those

instances, the public notice would then be a joint notice of the draft permit and the public hearing (proceed to section B.2).

b. Determine whether the responses and requests meet the following criteria:

1) There is a significant public interest in the issuance, denial, modification, or revocation of the permit in question as evidenced by receipt of a minimum of 25 individual requests for a public hearing;

2) The requesters raise substantial, disputed issues relevant to the issuance, denial, modification, or revocation of the permit in question; and

3) The action requested by the interested party is not on its face inconsistent with, or in violation of, state law, federal law or any regulation promulgated thereunder.

c. If fewer than 25 individual requests for a public hearing are received, staff may proceed to review and consider public comments and develop recommended final action on the permit (unless the permit is otherwise a "controversial permit" under law or regulation). If the permit is considered to be controversial, staff should prepare a "Hearing Authorization Memorandum" to the Director in accordance with Section B.2 below.

d. If at least 25 individual requests for a public hearing that meet the criteria in B.1.b(2), and B.1.b(3) above are received, staff will proceed under Section B.2 for authorization to convene or deny a hearing.

2. Authorization to Deny or Convene a Hearing

(**NOTE: Final decision on holding a public hearing must be made by the Director within 30 days after the close of the public comment period.** In those cases where the owner has requested a hearing or the OU believes that a public hearing should be held and there has been no notice for the comment period of the draft permit, the final decision on holding a public hearing should be made by the Director within 30 days after the request for public hearing was received from the owner or was made by the OU.)

a. The OU shall prepare a "Hearing Authorization Memorandum" to the Director which includes:

1) Brief background (include a purpose statement, information on the project, draft permit development, compliance with notification requirements, etc.).

Example "Hearing Authorization Memorandum" is available on DEQnet.

2) Summary of issues raised/comments received and requests for a public hearing from the public.

3) Summary of staff's analysis and response to issues raised as they apply to Section B.1.b.

4) Recommendation for denying or holding a hearing.

5) Rationale for recommendation (i.e., criteria in Sections B.1.c.(2) or (3) are met or not met).

6) Copy of all responses received (if there are a large number of responses, send representative samples).

b. Submit the "Hearing Authorization Memorandum" electronically to the Division Director, Director of Operations, and Chief Deputy **within 21 days of the close of the draft permit public comment period.**

c. Division Director, Director of Operations, and Chief Deputy review package and consult, as necessary, with the Director with a decision from the Director made within 30 days of the close of the draft permit public comment period.

d. If the Director grants a public hearing through the signature and issuance of the "Hearing Authorization Memorandum" then staff shall proceed to Section B.4 to arrange for the draft permit public hearing. The hearing has to be between 45 and 75 days after emailing or mailing the notice of the decision to grant the public hearing to (1) each requester and (2) the applicant or permittee in accordance with 9VAC25-31-315.D.

e. If the Director denies a public hearing, the staff may proceed with appropriate and necessary steps to finalize the permit action. However, in accordance with §10.1-1184.1.C and 9VAC25-31-315.D, staff shall notify by email or mail at the last known address (1) each requester and (2) the applicant or permittee of the decision to grant or deny a public hearing.

3. Draft Permit Public Hearing Preparation

a. Staff determines legal requirements for notice of public hearing based on statutes and regulations. These include newspaper notice in the city or county where the facility that is subject of the permit is located at least 30 days before the hearing date.

b. Regional Director or appropriate media Division Director identifies selects a hearing officer for the Draft permit public hearing through the following steps:

1) The Regional or Division Director appoints the Hearing Officer from DEQ staff. The Regional or Division Director issues a "Hearing Officer appointment memo" naming the Hearing Officer and describing their Hearing responsibilities, copying the Regional Office Permitting Staff, Division Director, Director of Operations, and the Chief Deputy. When arranging a date for the hearing, it is important to remember that the hearing must be held within **45 to 75** days after notice of the decision is mailed to requesters of the hearing and to the applicant or permittee. (NOTE: Permit public hearings held in response to public requests shall be in the evening (i.e., 7:00 p.m.) and there should be an information briefing immediately preceding the public hearing to provide information and answer questions. The need for a public information briefing will be determined through coordination between the Regional Director and Director of Water.)

2) The Hearing Officer should have basic knowledge of the laws and regulations involved in the case. All staff within Pay Band 6 and above are authorized by DEQ's Delegation Memo to serve in the capacity of a Hearing Officer. Staff prepares opening remarks and briefing material for Hearing Officer (opening remarks, "Authorization Memorandum", travel arrangements, map, parking etc.) 10 days prior to hearing.

3) The Hearing Officer will preside over both the "Draft Permit Public Hearing" and the "Summary of Comments Public Hearing".

c. Draft Permit public hearings held in response to public requests shall be in the evening (i.e., 7:00 p.m.) and there shall be an informational briefing immediately preceding the public hearing to provide information and answer questions. Staff shall prepare a presentation for the informational briefing. The Regional Director shall coordinate with the Hearing Officer to arrange for a mutually acceptable time, date and place for the hearing that complies with all legal requirements.

   1) While the template provides the option of including an end time for a public hearing, setting an end time for a public hearing is only appropriate when the location has advised that the facility closes at a certain time. Also, if an end time is announced in the notice, the public hearing cannot be adjourned prior to the announced end time.

   2) Staff and Hearing Officer should agree on commenter time limit; typically, commenters are limited to three minutes.

d. Staff provides written notice to requesters of the public hearing and to the applicant or permittee of the decision to grant the hearing within **14** days of the decision.

e. Staff prepares "Draft Permit Public Hearing" notice using public notice templates on DEQnet.

f. The public comment period for any permit subject to the locality particularly affected provisions of the water laws cannot close in less than **15 days** after the public hearing) Staff should consider publication schedules of local newspapers when establishing the public comment period.

g. Staff finalizes the "Draft Permit Public Hearing" notice and forwards a copy to the appropriate Board Coordinator to post the notice of the hearing to the Virginia Regulatory Town Hall and to media web coordinator for posting to DEQ Public Calendar and the external DEQ website, and a notification of the "Draft Permit Public Hearing" to the Water Division staff responsible for inclusion in the DEQ mailing list.

h. Staff provides a copy of the Draft Permit Public Hearing notice to the appropriate media Division Director to advise that this is a "controversial permit" to be reported to the Board.

i. Staff is responsible for mailing the notice to interested parties, including those who requested a public hearing; any entities required by law or regulation to receive notice and appropriate agency staff. Notice can be by postal mail or email or as directed by applicable law or regulation.

j. Staff sends notice to newspaper for publication in accordance with notice requirements and agency purchasing procedures, and verifies newspaper receipt and publication of notice. The cost of public notice shall be paid by the owner in accordance with 9VAC25-31-290.C.2. The notice shall be published ***once*** in a newspaper of general circulation in the city or county where the facility is located.

k. The Board Coordinator causes notice of hearing to be posted to the Virginia Regulatory Town Hall as a public notice (with no Town Hall public forum).

4. Draft Permit Public Hearing (First Hearing)

a. Attendees include technical support personnel from OU, management representatives from the appropriate headquarters or regional office based on program or geographical areas of responsibility and the degree of public interest and controversy surrounding the permit.

b. Staff records proceedings or hires a court reporter and receives all written statements for inclusion in the hearing file and closes the files in accordance withdate specified in notice. A tape recording OR written transcript of the hearing should be permanently kept on file (File Series: 006001) and available to the public. The regional office may consider hiring a court reporter instead of recording the hearing if the regional office has reason to believe the final decision will be challenged.

1) In order to secure a court reporter, staff will need to develop an Agency requisition to be submitted to the Department's Office of Procurement Services. Please contact Renee Bishop (Procurement) for the current contract rates to be included in the requisition.

2) The Department is contracted for acquisition of a court reporter. Coordination must occur through DEQ's Office of Procurement Services.

3) Costs associated with Court Reporter services are covered by the program's budget.

5. Summary of Comments Public Hearing Preparation

DEQ must conduct a second public hearing on the agency's Summary of Comments for any draft permit receiving a public hearing. **A final case decision should be made within 90 days of the close of the "Draft Permit Public Hearing" public comment period if possible.** This deadline may be challenging to accomplish in all scenarios since the timeline will include the need to notice and conduct the summary "Summary of Comments Public Hearing".

a. Summary of Comments Public Hearing for Controversial Permits

1) Following the close of the Draft Permit Public Hearing public comment period, staff prepares a Summary of Comments which includes the Agency's Response to Comments (see example Summary of Comments on DEQnet).

2) Staff prepares draft "Summary of Comments Public Hearing" notice using public notice templates on DEQnet.

3) At least 20 days prior to the "Summary of Comments Public Hearing", staff finalizes the notice and forwards a copy of the notice and the Summary of Comments to the appropriate Board Coordinator to post as a meeting notice on the Virginia Regulatory Town Hall (with the "Summary of Comments" and response to comments included) and to the media web coordinator for posting to the DEQ Public Calendar. **The public shall be provided with at least 14 days advance notice of the summary of public comments hearing. Notice shall be provided**

as specified in 9VAC25-31-290 C 2 (once a week for two successive weeks in a newspaper of general circulation in the area affected by the discharge).

4) The Board Coordinator causes notice of hearing and the Summary of Comments to be posted to the Virginia Regulatory Town Hall.

6. Summary of Comments Public Hearing (Second Hearing)

a. Attendees include technical support personnel and management representatives from central or regional office based on program or geographical areas of responsibility.

b. Individuals who previously commented, either in person at the draft permit public hearing or in writing during the public comment period will have an opportunity to respond to the Department's Summary of Comments. **No new information will be accepted at that time.**

c. Staff records proceedings or hires a court reporter and receives all written statements for inclusion in the hearing file and closes the file following the close of the summary of comments public hearing.

7. Final Action by the Department

a. Regional staff prepares a Final Permit Package for Hearing Officer consideration. The package shall include:

1) A Memorandum to the Director from the Hearing Officer including;

a) a purpose statement;

b) background information on the permit up through the authorization to convene a summary of comments public hearing;

c) any commentary from the Board (provided by the Division Director);

d) a summary of any written or verbal comments received during the Summary of Comments Public Hearing;

e) any revisions made to the draft permit summary of comments or permit language after the summary of comments public hearing;

f) a clear and concise statement that the permit Fact Sheet, Engineering Analysis, or other permit supporting documentation includes the legal basis, scientific rationale, and justification for the decision reached; and

g) a recommendation to authorize issuance/denial of the permit.

2) A copy of the Summary of Comments document developed after the Draft Permit Public Hearing;

3) Full copy of comments received during the public comment periods, the Draft Permit Public Hearing, and the Summary of Comments Public Hearing; and

4) A copy of the draft permit.

b. In making its decision on a controversial permit, the Department shall consider the verbal and written comments received during the public comment periods, the Draft

Permit Public Hearing, and the Summary of Comments Public Hearing made part of the record, any commentary of the Board, and the Agency files.

c. The Hearing Officer conveys the Final Permit Package to the Division Director, the Director of Operations, and the Chief Deputy for review prior to Director consideration.

d. The Division Director conveys the Final Permit Package to the Director for consideration.

e. The Director signs the Memorandum recommending issuance of the permit thereby providing the Director's certification of the decision, and returns it to the appropriate Regional or Central Office for inclusion in the record. The decision shall be conveyed to the permittee or applicant with confirmation of receipt.

f. Permit signature, issuance, and distribution will be completed by the appropriate Regional or Central Office immediately but no later than two (2) business days after the Director's authorization.

g. When the decision of the Department is to deny a permit, the Department shall, in consultation with the Attorney General's Office provide a clear and concise statement explaining the reason for the denial, the scientific justification for the same, and how the Department's decision is in compliance with applicable laws and regulations.

8. Public Hearing Timelines

STEPS	TIMELINE DRIVER
Close of Draft Permit Comment Period	Submit the "Authorization Memorandum" electronically to the Division Director, Director of Operations, and the Chief Deputy within 21 days of the close of the public comment period on the draft permit.
DEQ Hearing Decision	9 VAC 25-31-315(C) states in part: "Upon completion of the public comment period on a permit action, the director shall review all timely requests for public hearing filed during the comment period on the permit action and, within 30 calendar days..."
Notify in writing applicant and each requester of hearing of decision to grant hearing.	Within 14 days of decision to hold a hearing. 9VAC25-31-315(D) states "The director of DEQ shall notify by email or postal mail at his last known address (i) each requester and (ii) the applicant or permittee of the decision to grant or deny a public hearing."
Notice of Draft Permit Public Hearing Published	9 VAC 25-31-315(E)(2) states in part: "...publish notice of a public hearing to be published once in a newspaper of general circulation in the city or county where the facility or operation that is the subject of the permit or permit application is located at least 30 days before the hearing date."
Draft Permit Public Hearing Held	9 VAC 25-31-315(E) states in part: "If the request for a public hearing is granted, the director shall: Schedule the hearing at a time between 45 and 75 days after emailing or mailing of the notice of the decision to grant the public hearing."
Close of Draft Permit Public Hearing Comment Period	9 VAC 25-31-315(F) states: "The public comment period shall remain open for 15 days after the close of the public hearing if required by § 62.1-44.15:01 of the Code of Virginia."
Finish Summary of Comments	DEQ Public Hearing Procedures, page 6: "Following the close of the draft permit public hearing public comment period, staff prepares a Summary of Comments...and at least 20 days prior to the summary of public comments public hearing, staff finalizes notice and forwards a copy of the notice and the summary of comments to the appropriate Board Coordinator to post as a meeting notice on the Virginia Regulatory Town Hall...and to the media web coordinator for posting to the DEQ Public Calendar."
Send Information to Town Hall	
Notice of Summary of Comments Public Hearing Published	DEQ Public Hearing Procedures, page 6: "Public notice period for the summary of comments public hearing shall be 14 days."
Summary of Comments Public Hearing Held	DEQ Public Hearing Procedures, page 7: Staff prepares a Memo to Director including (but not limited to) all background information, comments, revisions (if applicable), fact sheet/permit, etc., supporting justification for the recommendation to issue/deny permit.
Agency Permit Decision	DEQ Public Hearing Procedures, page 6: The Agency's goal is to issue a determination within 90 days of the close of the draft permit public hearing comment period, when possible.

9. Example of Opening Remarks for Draft Permit Public Hearing

HEARING OFFICER OPENING REMARKS

PUBLIC HEARING
[NAME OF PERMITTEE]
[DATE]

Good evening. It is now XX:00 PM, Day, Date.

This hearing is now called to order. My name is [Hearing Officer] and I'm a [position title]. I will serve as Hearing Officer for tonight's hearing. You will be presenting your comments directly to me and the recorder for entry into the administrative record.

This public hearing is being held in [Location] at [Address]. It is being held pursuant to Virginia Code section 10.1-1184.1 and the requirements of sections 315 and 316 of the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation, Title 9, Agency 25, Chapter 31 of the Virginia Administrative Code.

The purpose of this hearing is to allow the opportunity to provide comments on the draft permit proposed to be issued by the Department of Environmental Quality to [Applicant Name] for [Facility Name]. The draft permit would allow for the discharge of treated sewage wastewaters/wastewater/stormwater at a rate of XX gallons per day into the [Receiving Stream] in [County].

A notice of this hearing and the opportunity for public comment was published in the [Newspaper Name] on [Date]. This notice was also published in the Virginia Regulatory Town Hall on [Date]. The public comment period will extend through [Date]. During this period, the Department of Environmental Quality will be accepting comments on the proposed draft VPDES permit.

During this hearing, public comments are encouraged on the technical merits of the draft permit. In order to be recognized to speak on this project, you must sign in to comment at the back of the room.

I invite anyone who wishes to speak at this hearing but has not signed up to comment, to do so at this time.

{Pause}

- I would now like to review the procedures for the hearing so we can work to allow as many here as possible to have a chance to be heard within the allotted time for this hearing. This hearing will have to end at XX PM and if anyone that wanted to comment but was unable to do so at this hearing, you will still be able to submit a written comment for the administrative record before the end of the public comment period. Thank you for being here and participating in this hearing. Public participation is an important and essential part of the Department's decision process, and I appreciate you taking the time to be a part of it.

- [Staff Name] with the Department of Environmental Quality will make the staff presentation prior to hearing public comments.

- Each commenter will be given three minutes to comment, and the timer will begin once you start.
- The applicant will have the opportunity to provide comments.
- You will be called to come forward and speak one person at a time and in the order that is recorded on the official sign-up sheet to comment for this Public Hearing. If there are any governmental elected or appointed officials, you will be invited to speak first.
- This meeting is being recorded for the administrative record. Please speak slowly and clearly so your comments can be accurately and completely recorded into the official record of this hearing. [We have a court reporter for this hearing to record your comments.]
- Please introduce yourself before making a comment by giving full name and who you represent if applicable prior to making your comments.

Again, please limit your comment period to a maximum of 3 minutes in order to allow those who are present and desire to speak an opportunity to do so. If your comment has been covered by a previous commenter it is appropriate to simply state that you agree with the previous commenter. At 3 minutes or when done, whichever comes first, the next commenter will be called and we will move on, even if you are not finished with your comments.

You have an opportunity to submit written comments after the hearing today. Please send those to [Permit Writer] at the Department of Environmental Quality, XX Regional Office, [Mailing Address] or Permit.Writer@deq.virginia.gov. Written comments must be received before 11:59 p.m. on [Date].

[Permit Writer Name] is the Department's permit writer for this project. At this time, he/she is the person who is designated as the Department's representative for this project.

[Permit Writer] would you please stand up and be recognized? Thank You.

Questions presented during this public hearing will not be answered tonight and no decisions concerning the permit action will be made here today. Following the close of the draft permit public hearing public comment period, DEQ staff will prepare a Summary of Comments received and the Department's Response to Comments.

A second public hearing will then be held to provide individuals who previously commented, either in person at this hearing or in writing during the public comment period, the opportunity to respond to the Department's Response to Comments.

Notice of the second hearing will be posted to the Virginia Regulatory Town Hall with the Summary of Comments and Response to Comments included.

Following the second hearing, the Director of the Department of Environmental Quality will consider all applicable information regarding the draft permit. He will issue a decision to approve or deny the proposed draft permit for [insert name of permit]

[Permit Writer], would you please bring forth the Official sign-up list to comment? Thank You.

{Pause} {Register brought forth}

The signup to comment sheet indicates that there are [no/number] individuals who wish to speak on the record at this time.

If there is anyone present that has not signed up to comment and wishes to their entered into the official record, please come forward to sign up to comment at this time.

[Call on [Staff Name] to make the staff presentation.]

[Call on the applicant to provide comments.]

[If there are persons who do wish to speak – call them up one at a time until all have spoken. Let each speaker know when they have reached 3 minutes and call the next speaker.

[At the conclusion state:] I hereby declare that this hearing is adjourned as of this time, XX PM, [Day], [Date].

Thank you everyone for coming.

Hearing is ended.

10. Example of Opening Remarks for Summary of Comments Public Hearing

HEARING OFFICER OPENING REMARKS

PUBLIC HEARING
[NAME OF PERMITTEE]
[DATE]

Good evening. It is now XX PM, [Day], [Date].

This hearing is now called to order. My name is [Hearing Officer] and I'm a [position title]. I will serve as Hearing Officer for tonight's hearing. You will be presenting your comments directly to me and the recorder for entry into the administrative record.

This public hearing is being held in [Location] at [Address]. It is being held pursuant to Virginia Code section 10.1-1184.1 and the requirements of sections -315 and 316 of the Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation, title 9, Agency 25, Chapter 31 of the Virginia Administrative Code.

The purpose of this hearing is to obtain input on the Department of Environmental Quality's Summary of Comments from individuals who previously commented, either in person at the draft permit public hearing or in writing during the public comment periods for the draft VPDES permit proposed to be issued to [Applicant Name] for [Facility Name]. The draft permit would allow for the discharge of treated sewage wastewaters/wastewater/stormwater at a rate of XX gallons per day into the [Receiving Stream] in [County]. No new information will be accepted at the hearing. Only comments regarding the Department's Summary of Comments will be accepted.

In order to speak at this hearing, you must have previously commented, either in person at the draft permit public hearing or in writing during the public comment periods. In order to be recognized to speak at this hearing, you must sign in to comment at the back of the room.

I invite anyone who wishes to speak at this hearing but has not signed up to comment, to do so at this time.

Thank you for being here and participating in this hearing. Public participation is an important and essential part of the Department's decision process, and I appreciate you taking the time to be a part of it.

- Each commenter will be given three minutes to comment, and the timer will begin once you start.

- You will be called to come forward and speak one person at a time and in the order that is recorded on the official sign-up sheet to comment for this Public Hearing. If there are any governmental elected or appointed officials, you will be invited to speak first.

- This meeting is being recorded for the administrative record. Please speak slowly and clearly so your comments can be accurately and completely recorded into the official record of this hearing. We have a court reporter for this hearing to record your comments.]

- Please introduce yourself before making a comment by giving full name and who you represent if applicable prior to making your comments.

Again, please limit your comment period to a maximum of 3 minutes. If your comment has been covered by a previous commenter it is appropriate to simply state that you agree with the previous commenter. At 3 minutes or when done, whichever comes first, the next commenter will be called and we will move on, even if you are not finished with your comments.

[Permit Writer] is the Department's permit writer for this project. At this time, he/she is the person who is designated as the Department's representative for this project.

[Permit Writer] would you please stand up and be recognized? Thank You.

Questions presented during this public hearing will not be answered tonight and no decisions concerning the permit action will be made here today.

Following this hearing, the Director of the Department of Environmental Quality will consider all applicable information regarding the draft permit. He will issue a decision to approve or deny the proposed draft permit for [Applicant Name].

[Permit Writer], would you please bring forth the Official sign up list to comment? Thank You.

{Pause} {Register brought forth}

The signup to comment sheet indicates that there are [no/number] individuals who wish to speak on the record at this time.

If there is anyone present that has not signed up to comment and wishes to enter their comments into the official record, please come forward to sign up to comment at this time.

[If there are persons who do wish to speak – call them up one at a time until all have spoken. Let each speaker know when they have reached 3 (or however many) minutes and call the next speaker.

[At the conclusion state:] I hereby declare that this hearing is adjourned as of this time, XXX PM, [Day], [Date].

Thank you everyone for coming.

Hearing is ended.

SECTION VII

CONTACT INFO FOR STATE AND FEDERAL AGENCIES

Table of Contents

A. Agency Addresses and Telephone Numbers

1. VDH - Office of Drinking Water

Abingdon Field Office (AFO)
407 East Main Street, Suite 2
Abingdon, VA 24210
Phone: (276) 525-6148
Fax: (276) 676-5659
Email:
David.Dawson@vdh.virginia.gov

Culpeper Field Office (CFO)
400 South Main Street – 2nd Floor
Culpeper, VA 22701-3318
Phone: (540) 829-7340
Fax: (540) 829-7337
Email:
Jeremy.Hull@vdh.virginia.gov

Danville Field Office (DFO)
211 Nor Dan Drive, Suite 1040
Danville, VA 24540
Phone: (434) 836-8416
Fax: (434) 836-8424
Email:
Ray.Weiland@vdh.virginia.gov

Richmond Field Office (RFO)
109 Governor Street, 6th Floor
Richmond, VA 23219
Phone: (804) 864-7409
Fax: (804) 864-7520
Email:
James.Reynolds@vdh.virginia.gov

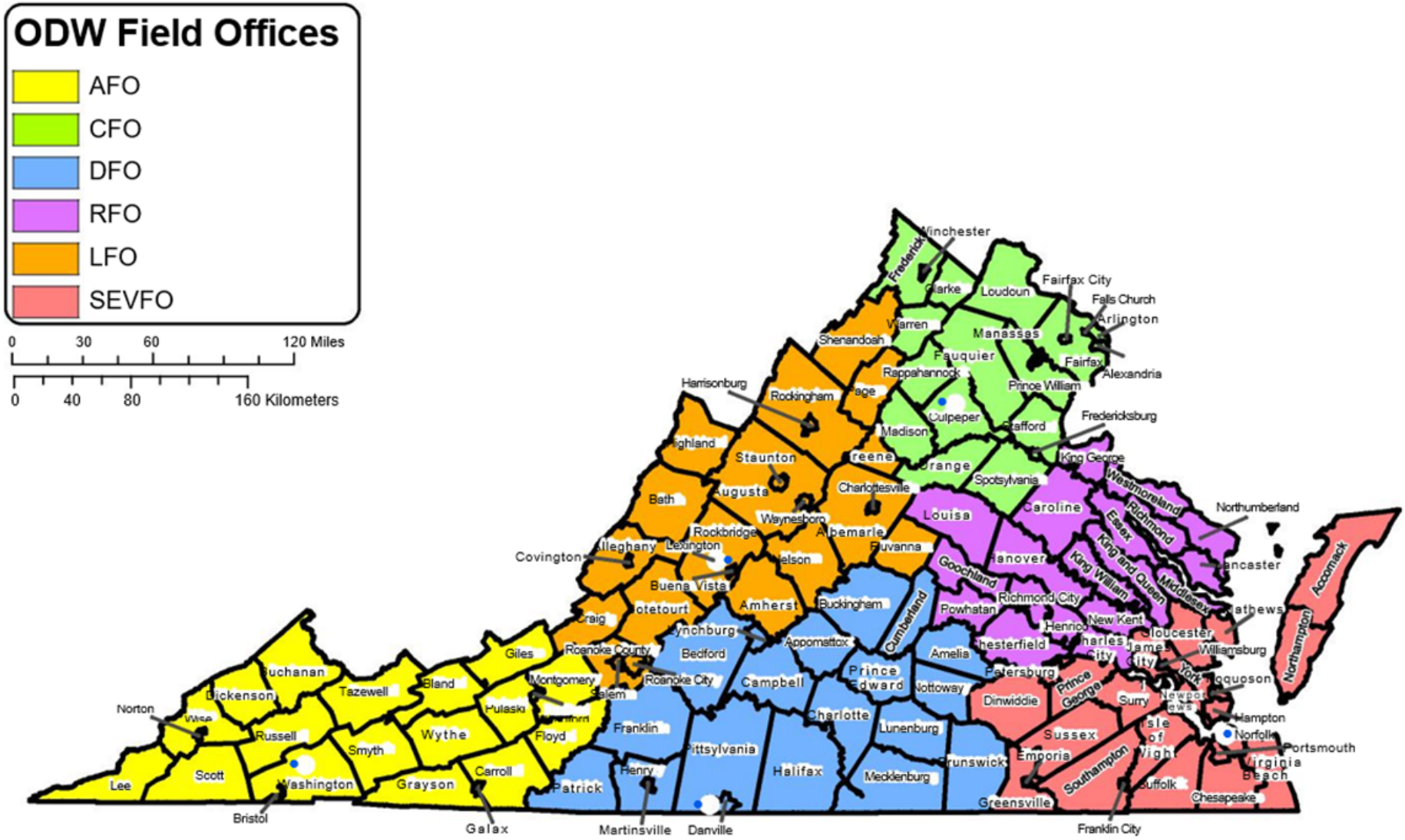
Lexington Field Office (LFO)
131 Walker Street
Lexington, VA 24450
Phone: (540) 463-7136
Fax: (540) 463-3892
Email:
Steve.Kvech@vdh.virginia.gov

Southeast Virginia Field Office (SEVFO)
830 Southampton Avenue, Room 2058
Norfolk, VA 23510
Phone: (757) 683-2000
Fax: (757) 683-2007
Email:
Daniel.Horne@vdh.virginia.gov

2. VDH - Division of Shellfish Safety

Shellfish Sanitation
Adam Wood, Growing Area Manager
Virginia Department of Health, Division of Shellfish Safety and Waterborne Hazards
99 FMC Drive, Kilmarnock VA 22482
Cell: (804) 839-2809
adam.wood@vdh.virginia.gov

3. VDH Office of Drinking Water Field Offices and Counties Served [1]



[1] https://www.vdh.virginia.gov/drinking-water/contact-us/

4. **State And Federal Agency Addresses**
   (See Section II.F for threatened and endangered species procedures)

EPA
Ryan Shuart
EPA Region 3 Permits Section
Phone: 215.814.2714
Shuart.ryan@epa.gov

Department of Wildlife Resources
P.O. Box 90778
Henrico, VA 23228-0778
Telephone: 804-367-1000

U. S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, VA 23061
Telephone: 804-693-6694

National Marine Fisheries Service
U. S. Department of Commerce
Oxford Laboratory, 904 S. Morris St.
Oxford, Maryland 21654
Telephone: 410-226-5771

Virginia Institute of Marine Science
P. O. Box 1346
Gloucester Point, Virginia 23062
Telephone: 804-642-7000

Fisheries Management Division
Virginia Marine Resources Commission
2600 Washington Ave. 3rd Floor
Newport News, VA 23607
Telephone: 757-247-2200
VMRC: jpa.permits@mrc.virginia.gov

Department of Energy (previously Dept. of Mines, Minerals and Energy)
Primary Contact:
Paul Saunders (804) 519-7440, paul.saunders@dmme.Virginia.gov
Permitting engineers:
Eastern Virginia - Sarah Hamm at (276) 233-2475
Western Virginia- Bentley Smith at (540) 425-3548 or (276) 252-6477.

U.S. Army Engineering District
Norfolk
803 Front Street
Norfolk, VA 23510-1096

For VDOT District Offices: https://www.vdot.virginia.gov/about/districts/

5. State Agencies in the States Bordering Virginia

Kentucky	Department for Environmental Protection Division of Water, KPDES Branch 300 Sower Boulevard 3rd Floor Frankfort, KY 40601 Phone: 502-564-3410 Fax: 502-564-4245 https://eec.ky.gov/Environmental-Protection/Water/Pages/Meet-the-Division-of-Water.aspx
Maryland	Wastewater Discharge Permit Program Maryland Department of the Environment 1800 Washington Blvd. Baltimore, Maryland 21230 Telephone: 410-537-3323
North Carolina	NC DENR/Division of Water Quality 217 West Jones Street Raleigh, NC 27603 Telephone: 877-623-6748
Tennessee	David W. Salyers, Program Manager Department of Environment and Conservation 312 Rosa L Parks Ave Nashville, Tennessee 37243
West Virginia	Matthew Sweeney, Engineer Senior Division of Water and Waste Management 601 57th Street, SE Charleston WV 25304 Telephone: 304-926-0499

SECTION VIII

WHOLE EFFLUENT TOXICITY (WET) PROGRAM

Table of Contents

A. Definitions, Acronyms, and Abbreviations

Acute to Chronic Ratio (ACR) – The ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor for estimating chronic toxicity based on acute toxicity data, or for estimating acute toxicity based on chronic toxicity data.

Acute Toxicity – An effect that usually occurs shortly after the administration of either a single dose or multiple doses of a pollutant. Lethality to an organism is the usual measure of acute toxicity. Where death is not easily detected, immobilization is considered equivalent to death.

Criteria Continuous Concentration (CCC) – The EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed indefinitely without causing unacceptable chronic effects. Numerically, this equates to 1.0 TU_c.

Chronic Toxicity – An effect that is irreversible or progressive or occurs because the rate of injury is greater than the rate of repair during prolonged exposure to a pollutant. This includes low level, long-term effects such as reduction in growth, reproduction, or fecundity.

Criteria Maximum Concentration (CMC) – The EPA national water quality criteria recommendation for the highest instream concentration of a toxicant or an effluent to which organisms can be exposed for a brief period without causing an acute effect. Numerically, this equates to 0.3 TU_a.

Contaminated Non-Process Wastewater – Any water which, during manufacturing or processing, comes into incidental contact with any raw material, intermediate product, finished product, by-product, or waste product by means of rainfall runoff, accidental spills, leaks caused by failure of process equipment or discharges from safety showers and related personal safety equipment.

Continuous Discharge - A discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Coefficient of Variation (CV) – A standard statistical measure of the relative variation of a distribution or set of data, defined as the standard deviation divided by the mean. It is also called the relative standard deviation (RSD). The CV can be used as a measure of precision within and among laboratories, or among replicates for each treatment concentration.

Discharge Monitoring Report (DMR) – The form supplied by the Department, or an equivalent form developed by the permittee and approved by the Department, for the reporting of self-monitoring results by permittees.

Flows: 7Q10 – The critical receiving stream flow used to calculate chronic aquatic life water quality standards. It is the low flow which, on a statistical basis, would occur for a 7 consecutive day period once every 10 years.

1Q10 – The critical receiving stream flow used to calculate acute aquatic life water quality standards. It is the lowest stream flow which, on a statistical basis, would occur over a 1-day period once every 10 years.

30Q5 – The critical receiving stream flow which is used to calculate the non-carcinogenic human health water quality standards. It is the lowest stream flow which, on a statistical basis, would occur for a 30-day consecutive period once every 5 years.

Inhibition Concentration (IC) – Usually seen as IC_{25}, the estimated concentration that would cause a 25% reduction in effect from the control organisms.

Instream Waste Concentration (IWC) – The concentration of an effluent, expressed as a percentage, which occurs in the receiving waterbody after mixing. To calculate the IWC, divide the effluent flow by the 7Q10 (chronic IWC, or IWC_c) or 1Q10 (acute IWC, or IWC_a) added to the effluent flow. Also known as receiving water concentration (RWC).

Intermittent Stream – A stream that contains flowing water for extended periods during a year but does not always carry flow.

Lethal Concentration (LC) – Usually seen as LC_{50}, the concentration of a toxic pollutant or effluent expressed as percent volume that is lethal to 50% of the test organisms within the prescribed period.

Lowest Observed Effect Concentration (LOEC) – The lowest concentration of an effluent or toxicant that results in statistically adverse effects on the test organisms (i.e., where the values for the observed endpoint are statistically different from the control. It is seen as a secondary end point for chronic tests.

Minimum Significant Difference (MSD) – The magnitude of difference from the control where the null hypothesis is rejected in a statistical test comparing a treatment with a control. MSD is based on the number of replicates, control performance, and power of the test.

No Observed Adverse Effect Concentration (NOAEC) – An acute test endpoint, the highest concentration at which survival is not significantly different from the controls., and below which there is no statistically significant adverse effect.

No Observed Effect Concentration (NOEC) – A chronic test endpoint, the highest concentration of toxicant to which organisms are exposed in which the values for the observed responses are not statistically different from the controls, and below which there is no statistically significant adverse effect.

Non-Contact Cooling Water – Water which is used to reduce temperature which does not come into direct contact with any raw material, intermediate product, waste product (other than heat), by-product or finished product.

Publicly Owned Treatment Works (POTW) – Any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. Sewers, pipes, or other conveyances are included in this definition only if they convey wastewater to a POTW providing treatment.

Reasonable Potential – Where an effluent is projected or calculated to cause an excursion above a water quality standard based on several factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reference Toxicant Test – A toxicity test performed with a quantified chemical in accordance with the procedures required for effluent tests. It checks the sensitivity of the organisms being

used and the suitability of the test methodology. Reference toxicant data are part of a routine QA/QC program to evaluate the performance of laboratory personnel, and the robustness and sensitivity of the test organisms.

Significant Industrial User (SIU) – This includes, except as provided in paragraph 3. of this definition:

1. All industrial users subject to Categorical Pretreatment Standards under 9VAC25-31-780 and incorporated by reference in 9VAC25-31-30; and
2. Any other industrial user that:
   - discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact 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 (DEQ), as defined in 9 VAC 25-31-840A, 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.
3. Upon a finding that an industrial user meeting the criteria in paragraph 2. of this definition has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard 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 Part VII (9VAC25-31-730 et seq.) of this regulation, determine that such industrial user is not a significant industrial user.

Test Acceptability Criteria (TAC) – In order that toxicity test results be considered acceptable, the effluent and the reference toxicant must meet specific criteria as defined in the test method (e.g., for the chronic *Ceriodaphnia dubia* survival and reproduction test, the criteria are as follows: the test must achieve at least 80 percent survival and an average of 15 young per surviving female in the controls).

Toxicity – The inherent potential or capacity of a material to cause adverse effects in a living organism, including acute or chronic effects to aquatic life, bioaccumulation of pollutants in the tissues of aquatic organisms at levels which result in potential harm to the organism or pose a risk to organisms in the food chain, or detrimental effects on human health or other adverse environmental effects.

Technical Support Document (TSD) – EPA's Technical Support Document for Water Quality-based Toxics Control (March 1991, EPA505/2-90-001).

Toxic Unit (TU) – Units utilized to measure Whole Effluent Toxicity, TU_a refers to an acute toxicity unit and TU_c refers to a chronic toxicity unit.

Waste Load Allocation (WLA) – Wasteload Allocation is the portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

Water Quality Standards (WQS) - regulations that describe water quality requirements in general terms or numerical limits for specific physical, chemical, and biological characteristics of water. Water quality standards consist of numeric or narrative water quality criteria, use designations for state waters and an antidegradation policy. These statements and limits serve as the enforceable means, particularly through their use in VPDES permit limits and certification

of 401 applications, to protect the beneficial use of State waters such as swimming, fishing, propagation and growth of aquatic life, and domestic water supply. (See 9VAC25-260-00 et seq.)

B. WET Applicability

1. Introduction

The U.S. Environmental Protection Agency (EPA) established an integrated toxics control program in 1984 following the analysis of effluent data that suggested the previously established technology-based effluent limits (TBELs) were not fully protective of aquatic life. This finding supported that complex effluents may contain numerous toxicants that lead to possible additive, synergistic, or antagonistic effects. The Clean Water Act (CWA) goals of "protection and propagation" and the CWA's national policy that the "discharge of pollutants in toxic amounts be prohibited" provide a basis for the implementation of a program to control such effects. This approach, and consequent regulations, established the requirement for NPDES permits to include water quality-based effluent limits (WQBELs), when necessary, to achieve water quality standards (WQS). One such requirement is 40 CFR 122.44(d)(1)(iv), which states "When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the numeric criterion for whole effluent toxicity, the permit must contain effluent limits for whole effluent toxicity (WET)."

Virginia utilizes the EPA recommended numeric criteria for WET of 0.3 toxic unit-acute (TU_a) and 1.0 toxic unit-chronic (TU_c), and the narrative criteria of "no toxics in toxic amounts." The WET program employs acute and chronic toxicity tests to measure such aggregate toxicity of pollutants present in wastewater. An acute toxicity test is designed to measure mortality or lethality and has an exposure time that is generally 96 hours or less. A chronic toxicity test is usually conducted with species of an age that they represent a critical life phase and can have exposure times that range from minutes to days. Chronic tests measure mortality and immobility as well as sublethal effects such as growth or reproduction. In addition to the type of test required, test species, monitoring period, and frequency also need to be established to generate data that is representative of the effects of the effluent on the receiving water's biology. The test requirements are determined by several factors, including the evaluation of the instream waste concentration (IWC), which is a representation of the possible dilution or mixing of an effluent in the receiving water, the variability of the effluent, and chemical composition of the effluent.

The determination that a facility is subject to WET requirements depends on the classification of the facility (municipal or industrial), the design flow, and the characterization of the effluent. Generally, effluents that are known or believed to contain pollutants that cause or may contribute to toxicity in the receiving water are subject to WET requirements. Once an effluent has been thoroughly characterized, a determination can be made for monitoring requirements, including test species, monitoring frequency, and reporting requirements.

All permit applications should be carefully reviewed to determine if there is "reasonable potential for toxicity" from the discharger. Reasonable potential (RP) is demonstrated if a discharge causes, has the potential to cause, or contributes to toxicity in the receiving water. An RP analysis can be performed with or without WET testing data and can determine if a WET limit is necessary. RP analyses can be performed as frequently as new information is made available but should be performed at a minimum of once every permit cycle before a permit is issued or reissued. See Section F, Reasonable Potential Analysis, for more detailed information on when and how to perform these analyses.

2. Municipal Facilities

The following criteria have been developed by Virginia DEQ for municipal facilities, including privately or Publicly Owned Treatment Works (PVOTWs and POTWs, respectively), to determine if the discharger is subject to WET requirements:

a. All facilities permitted as a major municipal facility with design flow rates greater than or equal to 1.0 MGD.
b. All facilities with an approved pretreatment program or required to develop a pretreatment program.
c. Other facilities based on consideration of the following factors:
    i. The variability of pollutants or pollutant parameters in the effluent; or
    ii. The Instream Waste Concentration (IWC); or
    iii. Existing controls on point or non-point sources, including total maximum daily load (TMDL) calculations for the receiving stream segment and the relative contribution of the facility; or
    iv. Receiving stream characteristics; or
    v. Other considerations that could cause or contribute to adverse water quality impacts.

The main determining factor for municipal facilities that are subject to WET requirements concerns the variability of the influent. As municipal influent consists of wastewater from several sources, it is challenging to reliably qualify the pollutants that may be a part of the waste stream.

3. Industrial Facilities

The following criteria have been developed for industrial facilities to determine if the discharger is subject to WET requirements:

a. Any industry whose Standard Industrial Classification (SIC) code(s) are included in Appendix A of the WET Guidance (Guidance Memo No. 00-2012).
b. Any industry with an IWC greater than or equal to 33%.
c. Any other discharge that is determined to have the potential for toxicity or instream impact based on evaluation of manufacturing processes, indirect dischargers, treatment processes, effluent or receiving stream data, or other relevant information. Possible candidates for this criterion are:
    i. Bulk Oil Storage Facilities
    ii. Water Treatment Plants
    iii. Tunnels
    iv. Coal Mining Operations, including coal pile runoff.
    v. Water Conditioning Facilities
    vi. Facilities that do not discharge process water but may discharge contaminated stormwater.
    vii. Heating/Cooling Compressor wastewater
    viii. Boiler blowdown/Steam condensate
    ix. Wastewater treated through an oil/water separator.
    x. Effluents with significant concentrations of degreasers
    xi. Noncontact cooling water discharges with an IWC less than 1% but which are treated with chemical additives.

Industries that may be excluded from the WET program are:

a. Discharges of noncontact cooling waters with an IWC of less than 1% that are not treated with chemical additives.
b. Pump-outs of non-contaminated groundwater and pump-outs of petroleum contaminated groundwater which receive appropriate treatment and where BTEX limits are applied.

c. Hydrostatic tests at petroleum pipeline pump stations (excluding bulk oil storage facilities) if the permit is drafted in accordance with EPA Guidance.
d. Corrective Action Plan (CAP) permits which involve discharges to surface waters.

4. Stormwater Discharges

Discharges that contain or are believed to contain contaminated industrial stormwater are subject to WET requirements. Previously, WET requirements for industrial stormwater discharges were limited to monitoring only. Following a call with EPA on February 6, 2024, the decision was made that WET limits on stormwater discharges would be supported when determined to be appropriate. Currently, it is recommended that all stormwater discharges are evaluated for WET. This includes calculating the IWC, evaluating previous compliance data, and performing an accelerated RP analysis (See Section F for additional information).

C. Test Determinations

1. Sample Type

As is for any sample collection, the accuracy of WET test results relies on proper sampling and sample handling to maintain the condition and representativeness of the sample. Detailed instructions for sample collection, storage, and transport can be found in the EPA WET test methods, and do not need to be included in the permit directly. However, it is vital to require a sample collection type that provides the most representative sample of the discharge. Without proper sample collection, the samples, and therefore the tests, are invalid and cannot be used to evaluate an effluent. The two most used WET sampling methods in VPDES permits are grab samples and composite samples. Each sample type serves a different purpose when it comes to capturing the toxicity of an effluent.

It is important to note that regardless of the sample type, sampling should occur after all steps of treatment have concluded to get a sample that represents the final effluent that would enter the receiving stream. For facilities that disinfect with chlorine, the total residual chlorine (TRC) concentration of the sample should be measured within 15 minutes. TRC should again be measured as the sample is received at the laboratory prior to toxicity testing.

Grab Samples

Grab samples are discrete samples that are collected for a short time frame (less than 15 minutes) to represent the conditions at that time. Grab samples are useful for intermittent discharges, where compositing is difficult or impossible. For facilities with a highly variable effluent, grab samples are more likely to represent the peak toxicity of the effluent without allowing for dilution. In addition to being more representative of the discharge, a grab sample would be more appropriate for discharges to receiving waters where there is little or no mixing or dilution, tidal waters, or high velocity waters, as organisms in the receiving water would be subject to longer exposure to higher concentrations of effluent. The time that a grab sample is collected should be noted in the permit to require a sample that represents the highest potential for toxicity in the effluent. For example, an industrial discharge should sample when the concentration of process wastewater is highest, or a municipal discharge should sample when there are large contributions from industrial users.

Composite Samples

Composite samples consist of grab samples taken at a minimum frequency of one per hour and combined in proportion to flow. The number of grab samples should be determined by the variability of the composition and flow of the discharge. Composite samples average the

characteristics of the effluent over the sampling period, which increases the possibility that a spike in toxicity would be captured but would also dilute the toxicity with the remaining composition of the sample. This makes composite samples more useful when the goal is to evaluate short-term chronic effects where the prolonged exposure of peak toxicity concentrations is less of a concern, or for discharges that are not variable. Flow-weighted composites, instead of time-weighted composites, may be useful in situations where the flow is variable such as municipal discharges, or in some cases, stormwater discharges.

2. Discharge Frequency

The permit writer should consider if the discharge is continuous or intermittent to require applicable sampling requirements. The determination of sampling requirements is facility specific, and should be considered as such. The flow monitoring requirements can be applied to WET sampling requirements if there is not a strong need for one type of sampling over another. It is important to note that what is representative of the discharge is not necessarily representative of the potential toxicity of the discharge.

a. Continuous Discharges

Continuous discharges occur constantly or near constantly. EPA recommends the sampling requirements be based on retention time, with estimated retention times of less than 14 days having a recommended sampling schedule of a minimum of four grab or four composite samples collected over a 24-hour period and used for separate toxicity tests. For example, four grab samples could be taken at a frequency of once every six hours or four successive 6-hour composite samples. For continuous discharges with detention times (the time it takes for the influent to make its way to the discharge) of longer than 14 days or with less than 10% WET variability over a 24-hour period regardless of retention time, EPA recommends a single grab sample collected for a single WET test as sufficiently representative of the effluent.

b. Intermittent Discharges

Intermittent Discharges are more periodic, occurring at frequencies such as several hours per day, month, or year. For the purposes of Virginia DEQ's WET Guidance, intermittent is defined as having a continuous discharge for less than four consecutive days. EPA suggests that intermittent discharges are sampled with grab samples collected midway through the discharge period. Refer to Part III of the permit for stormwater discharge sampling requirements. Virginia DEQ's WET Guidance asserts that chronic toxicity testing may be discontinued for facilities with intermittent discharges, due to the short exposure duration resulting from intermittent discharges.

3. Test Type and Species

a. Test Type

Following the characterization of the effluent through comprehensive WET testing, a determination may be made to select one test type to best represent the potential toxic impact of the discharge in the receiving water. To do so, the scope of each test type, as well as the utility of the data generated, needs to be fully understood.

i. Acute Toxicity Tests

All facilities that are subject to WET requirements need to be assessed for acute toxicity. The statistical endpoint measured by an acute toxicity test is expressed as the effluent concentration that is lethal to 50% of the test organisms (LC_{50}) and the No Observed Adverse Effect Concentration (NOAEC).

(a) LC_{50} Test

The LC_{50} test statistically estimates the concentration of the sample that is lethal to 50% of the test organisms. It can be run as a 48-hour static test, or a 96-hour static renewal test. A minimum of 5 concentrations of the sample is set up in a geometrically derived dilution series along with controls. Dilutions may need to be added at the lower end of the series to achieve a calculable LC_{50}.

(b) NOAEC Test

The NOAEC test is recommended when the acute IWC (IWC_a) is greater than 33%. The test determines the highest effluent concentration that is not significantly different from the control. This is interpreted as the highest percent concentration where there is no significant difference when compared to the controls and below which there is no statistically significant adverse effect. This test can be run as a single dilution with replicates, usually 100% effluent and controls, or as a multi-dilution test, with a 48-hour duration. The single dilution test may only be used when there is a WET limitation, and only when approved by DEQ Central Office and EPA. The LC_{50} can also be calculated from this test.

The rationale for using the NOAEC test when the IWC_a is greater than 33% is due to the requirement to meet EPA's Criteria Maximum Concentration (CMC) of 0.3 TU_a which is to be met at the end-of-pipe. The CMC is used to adjust the LC_{50} point estimate of 50% mortality to an LC_1, or a test with virtually no mortality. The equivalent LC_{50} concentration is 333.333% effluent, which is impossible to test. Testing with the highest concentration that is possible to test (100%) would still allow for a test that was compliant with the test endpoint to have 50% mortality, which is not protective of the acute criterion of "no discharge of toxic chemicals in toxic amounts." The TSD (page 35) states that the CMC of 0.3 includes 91% of observed LC_1 to LC_{50} ratios in acute tests. As a result, a dilution ratio of less than approximately three parts receiving water to one part effluent (3:1), the resulting wasteload allocation (WLA) will be lower than the minimum level of acute toxicity than the LC_{50} test can measure. Hence, the NOAEC test is more accurate, in that it statistically determines whether the 100% effluent is significantly different than the controls.

ii. Chronic Toxicity Tests

A facility should monitor for chronic toxicity if the chronic IWC (IWC_c) is greater than or equal to 1%, and the discharge is continuous. An IWC_c of less than 1% present little to no effects of chronic toxicity. A chronic test is performed with a minimum of 5 effluent dilutions and the controls for a duration of 6-8 days. The statistics compare each dilution to the controls to see if there is a significant difference. The statistical endpoints for chronic toxicity tests are typically expressed as the no observed effect concentration (NOEC) or the inhibition concentration (IC). The inhibition concentration is typically expressed as the IC_{25}, or the concentration of effluent that is lethal or sublethal to 25% of test organisms.

(a) (NOEC)

The NOEC is the highest concentration of toxicant that organisms can be exposed to in which the values for the observed responses are not

statistically different from the controls, and below which there is no statistically significant adverse effect.

(b) (IC_{25})
The IC_{25} is the Inhibition Concentration (IC) of toxicant that causes a given percent reduction (25%) in effect as compared to the controls. The IC_{25} is calculated by the linear interpolation method and is a point estimate.

b. Test Species

EPA's TSD recommends that three species are tested, one from each tropic level, to fully assess the impact the effluent has on the biology of the receiving water. EPA generally recommends that freshwater test species be used in toxicity testing when the receiving water salinity is less than 1.0 ppt and that an estuarine or marine test species be used when the receiving water salinity equals or exceeds 1.0 ppt. There should be additional consideration about which species to use dependent on the salinity of the discharge itself if the species selected may not survive in testing due to salinity. Below are the tests and the species used to determine acute and chronic toxicity in Virginia.

Acute Tests			
Freshwater			
Test Method Number	**Organism Type**	**Organism Name**	**Duration and Endpoint**
2002.0	Invertebrate	*Ceriodaphnia dubia* (Water Flea, daphnid)	48-Hour Static Acute – LC_{50}, NOAEC
2000.0	Vertebrate	*Pimephales promelas* (Fathead Minnow)	48-Hour Static Acute, LC_{50}, NOAEC 96-Hour Static Renewal Acute – LC_{50}
2019.0	Vertebrate	*Oncorhynchus mykiss* (Rainbow trout)	48-Hour Static Acute, LC_{50}, NOAEC 96-Hour Static Renewal Acute – LC_{50}
Marine/Estuarine			
Test Method Number	**Organism Type**	**Organism Name**	**Duration and Endpoint**
2007.0	Invertebrate	*Americamysis bahia* (Opossum Shrimp)	48-Hour Static Acute, LC_{50}, NOAEC 96-Hour Static Renewal Acute – LC_{50}
2004.0	Vertebrate	*Cyprinodon variegatus* (Sheepshead Minnow)	48-Hour Static Acute, LC_{50}, NOAEC 96-Hour Static Renewal Acute – LC_{50}

Chronic Tests			
Freshwater			
Test Method Number	**Organism Type**	**Organism Name**	**Duration and Endpoint**
1002.0	Invertebrate	*Ceriodaphnia dubia* (Water Flea, daphnid)	Chronic Static Renewal 3-Brood Survival and Reproduction Test
1000.0	Vertebrate	*Pimephales promelas* (Fathead Minnow)	Chronic Static Renewal 7-Day Survival and Growth Test

1003.0	Plant	*Selenastrum capricornutum* (Green alga)	Chronic Static Renewal 96-Hour Cell Density, Biomass, Chlorophyll Content, Absorbance
Marine/Estuarine			
Test Method Number	**Organism Type**	**Organism Name**	**Duration and Endpoint**
2007.0	Invertebrate	*Americamysis bahia* (Opossum Shrimp)	Chronic Static Renewal 7-Day Survival, Growth, and Fecundity Test
2004.0	Vertebrate	*Cyprinodon variegatus* (Sheepshead Minnow)	Chronic Static Renewal 7-Day Survival and Growth Test
1009.0	Plant	*Champia parvula* (Red macroalga)	Chronic Static Renewal 7-Day Cystocarp Production Test

Previously, the determination had been made that facilities could demonstrate one of their test species as the "most sensitive species" and could continue testing with one species. The EPA does not recommend this approach, and a minimum of two species should be required for each type of toxicity testing for WET monitoring. The inclusion of multiple species for toxicity testing is purposeful to address the variability of the effluent and the various effects it has on different organisms in the receiving water, and limiting the number of species limits our understanding of the potential impacts. It is strongly recommended that each facility tests with multiple species, as each species is expected to have different sensitivities to different types of toxicity.

4. Test Frequency

Test frequency is determined on a case-by-case basis, with the major considerations being the variability of the effluent and the potential for impacts to the receiving water. Each of these factors can be assessed by characterizing the effluent.

When characterizing the effluent, multiple factors need to be considered to adequately determine the test frequency that has the highest probability of capturing toxicity in the effluent. Examples of the types of information relating to these factors are listed below.

- Existing controls on point and nonpoint sources of pollution
  - Industry type: Primary, secondary, raw materials used, products produced, best management practices, control equipment, treatment efficiency, etc.
  - Publicly owned treatment work type: Pretreatment, industrial loadings, unit processes, treatment efficiencies, chlorination/ammonia, metals, problems, etc.
- Variability of the pollutant or pollutant parameter in the effluent
  - Compliance history
  - Existing chemical data from discharge monitoring reports and applications.
- Sensitivity of the species to toxicity testing
  - Adopted State water quality criteria, or EPA criteria.
  - Any available in-stream survey data applied under independent application of water quality standards.
  - Receiving water type and designated/existing uses
- Dilution of the effluent in the receiving water
  - Dilution calculations.

In addition to reasonable potential, another consideration is the variability of the effluent. There is a possibility that the amount of toxicity in an effluent can vary based on time of year, weather events, treatment process, and other conditions. It is important to select a monitoring frequency that captures the "worst case" conditions to accurately assess the potential for instream impact. The most frequent testing required is typically monthly and is required for effluents that have high variability and a high potential for toxicity and should only be required if there are ongoing toxicity issues or other conditions that require assessment. Quarterly monitoring is believed to capture most variations in both effluent and environmental conditions. It is for this reason that quarterly monitoring is required for new discharges and should be used to characterize the effluent. Once an effluent is characterized, the decision can be made to reduce the monitoring to semi-annual or annual, if there is confidence in the characterization of the effluent and the reasonable potential is low.

5. Endpoint Determination

The permit writer should specify in the permit the statistical test endpoint for each WET test. It is the current procedure of Virginia DEQ to not require EPA's Test of Significant Toxicity (TST) statistical approach, which evaluates whether the biological response measured by the test is significantly different than the control. The procedure for calculating the applicable test endpoint can be found in Section F, Reasonable Potential Analysis.

6. Test Dilution Water and Dilution Series

a. Test Dilution Water

Typically, Virginia DEQ requires that reconstituted (standard) laboratory water is used in WET tests. However, EPA toxicity test methods authorize the use of receiving water as the dilution water for testing, depending on the purpose of the test.

If the purpose of the testing is to estimate the absolute toxicity of the effluent, standard laboratory water is typically used. Absolute toxicity refers to the toxicity of the effluent alone, without any influence of the receiving water. In some cases, the receiving water can decrease, increase, or otherwise affect the toxicity of the effluent. These effects may or may not be measurable or testable in the receiving water, so knowing the unaffected toxicity of the effluent may be helpful in determining direct impact on surrogate organisms. The toxicity test methods outline how laboratories may make the reconstituted fresh or saltwater, with respect to the approximated salinity and hardness.

If the purpose of the testing is to directly observe the effects of the effluent in the receiving water, a grab sample of receiving water that is outside the influence of the outfall (upstream) should be used for the dilution water. If receiving water is used for the test dilution water, an additional control test using laboratory water should be included. In this case, the receiving water should be tested to ensure that it is not independently toxic to the test organisms, and it is representative of the water conditions at the point of discharge.

b. Dilution Series

The dilutions used in a toxicity test are calculated to ensure that the test best captures the toxicity of the effluent. The dilutions generally consist of two concentrations that are greater than the IWC, the IWC itself, and two concentrations that are less than the IWC. These concentrations are calculated using the WETLIM Program, and are facility, and therefore IWC, specific. Instructions for how to generate this can be found in Section F, Reasonable Potential Analysis.

7. Other Toxicity Testing

WET tests can also measure the aggregate toxic effect of a reference toxicant or an ambient sample from receiving water. In these tests, organisms of surrogate species for the biology of the receiving stream are held in test chambers and exposed to different concentrations of a sample. Observations are then made and recorded on data sheets for predetermined exposure periods. At the conclusion of the test period, the responses of test organisms are recorded, and data is generated to represent the effects of the effluent.

D. WET Permitting

This section describes how to determine which requirements to include in VPDES permits. Considerations that should be included in the VPDES permit or fact sheet include, but are not limited to the following:

- Type of Effluent Sample(s), as discussed in Section C.1
- IWC Evaluation
- Test Acceptability Criteria (TAC) and Other Criteria for Valid WET Testing (found in the WET Test Methods)
- Monitoring Frequency, as discussed in Section C.4
- Accelerated Toxicity Requirements, as discussed in D.6.a
- Toxicity Identification Evaluation (TIE) or Toxicity Reduction Evaluation (TRE) Requirements, as discussed in Section D.6.d
- Compliance Schedule(s), as discussed in Section D.6.c

Determinations on these and all other considerations should be clearly explained and documented in the permit fact sheet.

1. New Discharges, Issuances, or Facilities with Changing Operating Conditions

Facilities with WET testing data that is not representative of the discharge, or nonexistent altogether, should have requirements to characterize the new discharge to ensure the WET testing data is representative of the potential toxicity. Data collected prior to modifications to the treatment process, pretreatment, or pollution prevention program should be evaluated to determine if it is still representative of the discharge.

a. <u>New Discharges or Issuances</u>

For facilities that do not have prior WET data, the permit application should contain all necessary information to determine if the facility is subject to WET requirements. When there are no data to evaluate, a more detailed review of the pollutants contained or believed to be contained in the effluent should be performed to determine if toxicity is suspected. If the facility is subject to WET requirements, an initial toxicity determination will need to occur to characterize the effluent and determine the approach that best captures the RP of the effluent. To do so, quarterly acute and chronic testing with the respective selected species should be required until four consecutive tests are received. A sufficient number and diversity of test species should be selected for each test to fully evaluate the potential impact on the biology of the receiving water. Following the receipt of the four consecutive quarters of monitoring data, the data should be evaluated following the instructions in Section F of this manual. Following this evaluation, the WET requirements may be revised as necessary.

b. Facilities with Changing Operating Conditions

For facilities that have previously submitted WET data, but have since changed operating conditions, the data should be evaluated to determine if it is still representative of the discharge. Sufficient changes to the facility include process changes, facility upgrades, or other changes that will affect the composition of the effluent. Normal variances due to seasonal use of chemical additives, equipment uses, routine testing, or other situations attributable to facility operation are not sufficient to invalidate WET data. The frequency of variances should be considered under such situations to adequately assess the reasonable potential for reoccurrence. For example, pilot testing of a new treatment condition may cause toxicity, and the argument could be made that the result would not be valid due to the pilot testing being discontinued. This can only be true if pilot testing, even of a different nature, is not a routine condition of facility operation. If pilot testing is a common occurrence throughout the plant, the tests are considered part of typical operation and will not support data invalidation.

Plant expansions or the addition of new industrial users may or may not constitute sufficient change to reclassify the effluent. In these situations, any existing limits should remain in the permit until such time that operations stabilize, and then toxicity should be re-evaluated to determine if the limit should be adapted or removed. **Any decision to reclassify an effluent, invalidate WET data, or remove or adapt a WET limit should be coordinated with Central Office and documented in the fact sheet.**

If sufficient changes have occurred to invalidate previous WET test data, an additional initial toxicity determination will be required to characterize the "new" effluent. To do so, quarterly acute and chronic testing with the respective selected species should be required until four consecutive tests are received. A sufficient number and diversity of test species should be selected for each test to fully evaluate the potential impact on the biology of the receiving water. Following the receipt of the four consecutive quarters of monitoring data, the data should be evaluated following the instructions in Section F of this manual. After this evaluation, the WET requirements may be revised as necessary.

2. Instream Waste Concentration Evaluation

The IWC is the concentration of effluent in the receiving water after mixing or dilution. It is the inverse of the receiving water concentration (RWC), or dilution factor, which refers to the amount of dilution available in the receiving water. The IWC is calculated by dividing the design flow in MGD by the sum of the design flow and the critical low flow of the receiving water in MGD. To get the IWC in proper units, multiply by 100 to get the percentage of effluent. The 1Q10 and the 7Q10 are used to calculate the IWC_a and the IWC_c, respectively. The IWC is calculated using the WETLIM program and is used to calculate the applicable wasteload allocations (WLAs). The IWC is used to determine other test conditions such as endpoint and should be considered when determining reasonable potential.

3. Test Report Submittal

It is recommended that permittees send the full test report by email, even if they have a WET limit on their DMR. It is important that test reports are reviewed as soon as possible, so that any toxicity measured can be addressed as soon as possible. It is requested that permittees submit WET test reports as soon as they receive them from the WET lab, preferably within 48 hours. WET Monitoring requirements should not be required on the DMR, as permittees should not wait until the DMR date to submit the WET data. WET Monitoring compliance should be evaluated through a compliance schedule event (CSE) in CEDS, see Section E.3.a. for more information. This allows

permit writers, compliance staff, and permittees the necessary flexibility to submit, review, and record WET test reports as they are received.

4. Fact Sheet Language

The fact sheet should contain the rationale for each of the determinations made for the WET requirements. The OneDEQ fact sheet template includes headings and sample language for most conditions, but a review should be completed to ensure that the fact sheet thoroughly explains each requirement. The fact sheet attachments should also contain the WETLIM Program output, STATs output, recommended dilutions, test summary table, and any other supporting information.

5. Permit Language

The permit should outline the specific requirements for each outfall, including the test determinations explained in the fact sheet. The OneDEQ template includes sample language for most conditions, but sections or formatting may need to be adjusted due to additional outfalls, flow tiers, or special conditions.

6. Special Conditions in VPDES Permits

Some WET Conditions have special conditions included to better assess toxicity. Some of these conditions are listed below.

a. Accelerated Toxicity Testing

Per EPA Guidance, if a submitted valid WET test result indicates noncompliance with a VPDES WET limit, exceedance of a WLA, or an excursion of applicable WQS, permit conditions should specify follow-up or accelerated testing requirements. Accelerated WET monitoring requirements are common NPDES permitting requirements that vary depending on the permitting authority. For example, a requirement could be conducting more frequent WET testing over a short period, like every two weeks, to determine if toxicity is considered persistent. If the results do not show toxicity, the original monitoring schedule can recommence. If the results do show toxicity, a toxicity reduction evaluation (TRE) is recommended as a follow-up requirement, or the permit can be reopened to include a limit.

The number of toxicity tests and the duration of the accelerated monitoring should be designed to determine the persistence of the toxicity. The EPA recommendation for this number and duration is at least six additional toxicity tests to be conducted at 14-day intervals. This recommendation of a minimum of six additional toxicity tests is based on the probability of encountering at least one exceedance of permit requirements assuming that the effluent is toxic, but at an unknown level of toxic impact on aquatic life.

b. Sample Adjustments

Virginia's WET Guidance outlines five common sample adjustments that may be approved for WET testing. Supporting information must be provided by the permittee prior to approval for sample adjustments. For each sample adjustment, it is strongly recommended that the permittee runs parallel tests to demonstrate the sample adjustment does impact toxicity. In addition to the adjustments affecting toxicity, the adjustments should still result in a test that is still considered representative of toxicity in the receiving water. **Central Office concurrence is required before final sample adjustment approval can be transmitted to the permittee.**

i. Dissolved Oxygen (DO)

The dissolved oxygen (DO) concentration in the sample (and dilution water) should be at or below saturation prior to use. The DO saturation point should be determined from the table in the applicable WET test methods. If the sample (or dilution water) is supersaturated, the DO level must be reduced by aeration, shaking, or stirring until the DO stabilizes at an acceptable level. Samples (or dilution water) that have a DO less than 4.0 mg/L for warm and saltwater species, or less than 6.0 mg/L for cold water species must be aerated to increase the DO to acceptable levels prior to use in a test. Tests that are set up with either the sample or dilution water greater than 100% saturation or less than 4.0 mg/L (or less than 6.0 mg/L for cold water species) may be considered not acceptable.

ii. pH

Tests for compliance should be performed on the sample without pH adjustment, to better assess the effects of the effluent on the organisms. If the effluent is out of the pH 6-9 range, it is recommended that the lab check with the permittee to see if they want a parallel test set up with pH adjusted effluent and controls. This would enable the permittee to see if there are toxicants present without the effects of the "out of range" sample pH. Compliance will be determined from the unadjusted samples test result.

iii. Chlorine

Tests for compliance should be performed on the sample "as is", unless noted in the VPDES permit to dechlorinate, or if the VPDES permit has a schedule for the facility to complete dechlorination. The chlorine residual should be reported for all effluent samples. Again, it may be to the permittee's benefit to run a parallel test to see if chlorine is the toxicant.

iv. Solids

Samples that contain debris or organisms may be filtered through a sieve having 60 µm mesh openings prior to use.

v. Ultraviolet Irradiation

Samples containing filamentous bacteria or fungi may be exposed to UV light prior to use.

Test variations other than sample adjustments described above require Central Office and EPA coordination.

c. Schedules of Compliance

Schedules of Compliance should only be included if there are sufficient facility-specific conditions that provide the rationale for extenuating circumstances. Historically, 40 CFR 122.47, which requires compliance with state WQS as soon as possible, has been cited to recommend against schedules of compliance.

The fact sheet outlines the limit triggers narratively and numerically, so both DEQ staff and permittees can be aware of when a limit has been or may be triggered. Any actions to influence the limit calculations (additional testing, toxicity reductions, etc.) should occur immediately after the test with the toxic value is received. These actions are the responsibility of the permittee. If the toxicity isn't reduced or eliminated in a statistically significant way that allows a limit to not be triggered, the limit should be included at

reissuance. If there is not enough time remaining in the permit term, <1 year, a schedule of compliance may be included with the limit to allow for the toxicity reduction effort to conclude. Unless there are sufficient additional results provided to alter the results of the STATs evaluation, a limit should be included, even if toxicity reduction efforts have not concluded.

d. Toxicity Identification and Toxicity Reduction Evaluations

Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs) enable permittees to identify and reduce toxicity found in their effluent. These evaluations can be performed voluntarily or as a requirement of the permit to provide more insight into the type and severity of toxicity, as well as possible methods to reduce or eliminate toxicity. It is recommended that these are required when data suggests frequent or persistent toxicity, or where the cause of toxicity is unclear. TIEs and TREs can also be included in permits for facilities that has reoccurring noncompliance. EPA's TIE and TRE testing manual can be found at https://www.epa.gov/npdes/permit-limits-whole-effluent-toxicity-wet. The methods for these evaluations can be found here:

- TIE Phase I – Characterization of Physical/Chemical Nature of Toxic Constituents
- TIE Phase II – Identification of Non-Polar Organic, Ammonia, or Metal Toxicants
- TIE Phase III – Confirmation of Suspected Toxicants
- Marine TIE
- Chronic TIE
- Industrial TRE
- Municipal TRE

The permit should identify when or if a TIE and/or TRE is required, but permittees may elect to perform a TIE or TRE at any point. The TRE results can then be evaluated by DEQ and may lead to a WET limit, a chemical-specific limit, or compliance requirements.

Some TREs can be resolved by an internal evaluation on procedures, policy, and management practices, and in those cases a TIE may not be required. EPA recommends the following requirements when a TRE is triggered:

- Notice of TRE study implementation to be submitted to the NPDES permitting authority within 10 days of activation of this TRE trigger.
- A TRE schedule and TRE action plan to be submitted to the NPDES permitting authority within 60 days of the initiation of the TRE.
- The initial term of the TRE should be no longer than 24 months as follows: The "TRE initiation date" should be the date the toxicity test that confirms toxicity is initiated and the "TRE termination date" is the date corrective actions to resolve toxicity are to be identified and be no more than 24 months from the TRE initiation date. There are circumstances that could extend this recommended schedule, including intermittent toxicity or seasonal toxicity.
- A quarterly TRE progress report should be submitted with the discharge monitoring report (DMR) to the NPDES permitting authority at the end of each quarter, based on the TRE initiation date. The progress report should list all activities and findings related to resolving toxicity, including all WET and chemical test data. The data summaries of the TRE also should be provided in a tabulated format with explanations of the procedures used and the recorded findings from the study.
- Any exceedance of an NPDES WET monitoring trigger or permit limit during the implementation of a TRE should be reported within 5 working days to the NPDES

permitting authority. A final TRE report should be submitted to the NPDES permitting authority within 45 days of the TRE termination date and should summarize the TRE activities and findings, propose the corrective action(s) to be taken, and propose a schedule to complete any identified corrective action(s).

- The minimum monitoring frequency for the affected test species should be noted in the TRE work plan. The NPDES permitting authority, however, might recommend additional toxicity testing, which might include streamlined toxicity tests using a single test concentration of the sample compared against the control to find toxic samples for further investigation as part of the iterative process used in a TRE. This iterative process could include using toxicity tests and chemical analysis of portions of effluent treated in the TRE and identified to be toxic.
- All samples used for toxicity testing during the TRE should be analyzed for any toxicant identified as being a potential source of toxicity. If later toxicity testing determines the toxicant to be a probable source of toxicity, the analysis may be discontinued when all the findings and analytical results are clearly documented in the quarterly TRE progress report. The objective of this testing is to ascertain whether the same level of toxicity occurs when the suspected toxicant level varies, indicating the potential for more than one source of toxicity. This information might lead to finding additional toxicants or confirming or eliminating the suspected toxicant and possibly its source.
- Where toxicity is intermittent, the NPDES permitting authority may include additional requirements based on PJ.
- TRE triggers and the actions that follow are the initial recommended responses to the confirmation of a demonstrated toxicity above the NPDES WET limit or WET numeric monitoring trigger.

E. WET Compliance

1. Introduction

Chapter 8 in the EPA Office of Compliance's NPDES Compliance Inspection Manual describes the objectives for compliance monitoring activities, such as inspections, audits, and records review, for WET data. These objectives may include:

- Documenting the presence or absence of effluent toxicity based on valid WET data;
- Assessing compliance with the conditions and limits in the NPDES permit;
- Assessing a permittee's laboratory WET test performance, including reference toxicant testing and other WET QA/QC requirements;
- Evaluating the quality of self-monitoring data; and
- Assessing the adequacy of self-monitoring procedures.

Based on these evaluations, regional staff may recommend to enforcement personnel and/or the permit writer that the permittee be required to perform a TRE or TIE. Inspectors are encouraged to coordinate with the permit writer if they identify language in a permit that could be clarified and/or strengthened.

The NPDES Compliance Inspection Manual provides examples of procedures and records that might be reviewed during an inspection, including:

- The VPDES permit;
- WET test results from the last 3 years;
- Effluent sample collection and chain-of-custody procedures for WET testing; and

- Permittee sampling logs that should include the date, time, type of sample taken, and the sampler's name.

Regional staff also should review the following:

- WET test data interpretations
- Calculations
- WET test concentration response relationship (CRR) based on multiple concentration WET tests
- Whether the WET tests meet all of EPA's mandatory TAC specific to each EPA toxicity test method
- The percent minimum significant difference (PMSD) evaluation of WET test variability

Many of the considerations for evaluating WET data when conducting an RP analysis for evaluating whether WET permit limits are needed are applicable to evaluating WET data for compliance purposes. This section of the manual provides an in-depth discussion of reviewing and evaluating WET data and factors, such as mandatory TAC that impact the quality of WET data.

2. WET Test Review

WET Tests should be reviewed as soon as possible following their receipt. The test should be reviewed for validity before being reviewed for toxicity.

a. Validity Review

The test validity is reviewed by the lab performing the test and the permittee, so a full review should only be performed if requested, or if invalidity is suspected. EPA has provided a guide for reviewing the test acceptability criteria (TAC), which has been summarized into DEQ's Acute and Chronic Review List, effective September 1, 2017. This list can be found in the WET folder on SharePoint. For tests where no invalidity is suspected, an accelerated test review should be performed to ensure that the correct test was performed and to evaluate the results. An accelerated test review list can also be found on SharePoint at Whole Effluent Toxicity Accelerated Test Review.docx.

b. Toxicity Review

Following the validity review, the test should be reviewed for toxicity. A test that reports value(s) of >1.0 TU does demonstrate some toxicity, but it does not equate a toxic result. A test result is considered toxic if the result is greater than the facility specific WLA associated with the test. For test results of 1.0 TU, it can be assumed that the test is not toxic, and no comparison to the WLA is required. For results greater than 1.0 TU, the result should be compared to the WLA from WETLIM associated with the permit and specific outfall. If the result is greater than the WLA, the result is considered toxic, and it may trigger a limit at reissuance. It is recommended that the permittee provides any information they have on the suspected or known cause of the toxicity to be used in the RP analysis.

Permittees may request an accelerated RP analysis at any time, including after they submit a toxic test result. It is recommended that if a test exceeds the WLA, even without a request by the permittee, an accelerated RP analysis is performed to determine if a limit will be triggered at reissuance. The procedures for this can be found in Section F, Reasonable Potential Analysis.

It is important to note that a rationale for the cause of the toxicity does not provide grounds to exclude it from the RP analysis. **Results may only be excluded if the test is deemed**

invalid, or there is sufficient evidence to show that the test is not representative of the effluent. Any decision to exclude a test from the analysis should be coordinated with Central Office and documented in the fact sheet.

It is recommended that the summary table below is maintained in the permit folder as tests are reviewed to reduce the amount of time spent searching and compiling WET data at reissuance. The table should include the test start date, test type, test species, monitoring period, and data summary. The table should be representative of the data submitted to DEQ, the examples below may or may not be representative of the data. It is recommended that, in addition to the results required for the permit, the percent survival in 100 percent effluent be recorded. While some labs may not report this number on the data summary sheet, it can be determined from the test bench sheets.

Summary of Chronic Toxicity Testing

Monitoring Period	Test Date	Chronic 3-Brood Static Renewal Survival and Reproduction *Ceriodaphnia dubia*		48-Hour LC_{50} (%)	Survival in 100% Effluent (%)
		Survival (TU_c)	Reproduction (TU_c)		
1st Annual (January 1-December 31, 20XX)	2/13/20XX	1.0	1.0	>100	100
2nd Annual (January 1-December 31, 20XX)	5/13/20XX	1.0	1.0	>100	100

Summary of Acute Toxicity Testing

Monitoring Period	Test Date	48-Hour Static *Ceriodaphnia dubia*			Survival in 100% Effluent (%)
		NOAEC %	48-Hour LC_{50}	TU_a	
1st Annual (January 1-December 31, 20XX)	2/13/20XX	>100%	>100	1.0	100
2nd Annual (January 1-December 31, 20XX)	5/13/20XX	>100%	>100	1.0	100

The table should be kept up to date and should be formatted to be inserted into the fact sheet for the reissued permit. It is important to note that the test date above references the first date of the test, which is found on the test report.

3. Data Management

WET Data is tracked in CEDS and in ECM in addition to the data summary table compiled and maintained for reissuance.

a. CEDS

WET Monitoring is tracked in CEDS through compliance schedule events (CSE). As permittees fulfill the requirements of the test report submittal, the respective CSE should be updated with the received date. The test report should then be reviewed as outlined in

Section E, WET Compliance. Following the review of the CSE should be updated with the reviewed and completed date. It is recommended that the contact tab on the VPDES permitting page in CEDS is reviewed to ensure that there is a designated facility WET contact, and it is up to date. Some WET Monitoring CSEs are outfall specific, and those CSEs will be found on the outfall compliance schedule events on the CSEs tab.

b. ECM

Following the recording of the data, the test report should be uploaded into the Enterprise Content Management (ECM) system. If there are different monitoring periods for tests that were submitted together, they can either be uploaded separately or as a joint document. Any correspondence should be compiled into the same file as the test report. The relevant regional office should be selected, followed by Water for the Division/Media, and VPDES Individual for the Program. The document date should be the date the test was received by the regional office. The file name should follow the following convention: 20XX WET Monitoring-Xth Annual/Semi-Annual/Quarterly/Monthly Acute and Chronic/Acute/Chronic Cd/Pp/Cd and Pp. The retention schedule is 440-005 Water Quality, the file series is 006002 VPDES Individual and General Permits – Records and Reports, and the document type is TMP Data/Reports/Reviews. The keywords are 20XX WET, and the Case ID is the permit number.

F. Reasonable Potential Analysis

1. Introduction

The WET Program seeks to identify and limit the possible negative effects of a facility's effluent on the receiving water. This is done by evaluating a facility's effluent, treatment process, waste stream contributors, and other factors to determine if there is the reasonable potential for toxicity. Reasonable Potential (RP) is the determination that an effluent is projected or calculated to cause, have the potential to cause, or contribute to instream toxicity. Facilities do not need testing results to demonstrate reasonable potential, although testing results that show toxicity do demonstrate reasonable potential. Meeting the applicability requirements listed in Section B demonstrates that the facility needs to be evaluated for RP.

2. Reasonable Potential Without WET Data

After a facility is determined to be subject to WET requirements, the effluent needs to be characterized to evaluate RP. To do so, any facility that has not previously performed toxicity testing, or any facility that has had changes in their process or facility that prompt the effluent to be reassessed, shall be required to perform a minimum of four consecutive quarterly acute and chronic toxicity tests with a minimum of two species. Such testing shall assess the overall toxicity of the effluent, the species-specific impacts of the effluent, and the scale of toxicity present. Following the receipt of four consecutive quarterly test reports, the data can be evaluated for reasonable potential using the RP Analysis Procedures outlined below. Following this analysis, the facility may have their test type, frequency, and required species revised. To fully understand the test data and the main program concerns, the following information concerning facility type should be considered.

a. For municipal discharges, the applicability criteria are concerned with the variability of the effluent, as these effluents originate from several sources. The large number of contributors increases the amount of possible aggregate effects, as there is an increased potential for more diverse pollutants to be present. Hence, the basis of these criteria

concern design flow rates, with pretreatment programs, types of contributors, and compliance issues of the facility. To best address these facilities, both chronic and acute toxicity testing should be required with at least two species and on a testing frequency that adequately assesses seasonal variations.

b. For industrial discharges, the applicability criteria are less concerned with variation of pollutant types, and more concerned with the concentration of known pollutants. Hence, the basis of these criteria concerns the Standard Industrial Classification (SIC) code(s), the IWC, and the manufacturing and treatment processes. To best assess these facilities, acute and chronic testing should be required with at least two species and on a testing frequency that adequately assesses peak processing for the facility. If the effluent is thoroughly understood, the facility may move to either acute or chronic testing.

c. For stormwater discharges, the applicability criteria are based on the potential for the stormwater to be contaminated. This can include the criteria for the industrial or municipal discharges, if applicable. To best assess these facilities, acute toxicity testing should be required with at least two species and on a testing frequency that adequately allows for sampling in concurrence with storm events that are believed to create a discharge that is representative of the potential toxicity of the effluent. Evaluating stormwater discharges for reasonable potential may not require as thorough of an assessment as municipal and industrial discharges. An accelerated RP analysis can be performed where only the factors that are related to the specific discharge should be considered, including but not limited to discharge frequency, volume, pollutant composition, and variability.

3. Reasonable Potential Evaluations with WET Data

Following the initial assessment of RP and the receipt of test results, a more informed RP analysis can be performed utilizing the test data. The steps for an RP analysis for a discharge to freshwater are:

Step 1: WETLIM Analysis

Current facility and receiving water data should be inputted into DEQ's WETLIM program found at https://rconnect.deq.virginia.gov/WETLIM/. This program will calculate the acute and chronic WLAs, as well as proposed test endpoints and dilution series. The program will also calculate a site-specific acute to chronic ratio (ACR) or coefficient of variation (CV) if necessary.

Acute to Chronic Ratio

The acute to chronic ratio is the ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor to estimate chronic toxicity based on acute toxicity data, or for estimating chronic toxicity based on acute toxicity data. We develop this ratio to ensure that a WET limit, if required, is protective of both acute and chronic toxicity. This requires a consideration of both the acute and chronic WLA, since only considering one would require making assumptions about the unknown relationship of the chronic and acute toxicity of the effluent. To avoid this, a site-specific ACR should be calculated where possible.

The ACR relates acute and chronic toxicity as follows: ACR = LC_{50}/NOEC or ACR = LC_{50}/IC_{25}. The ACR can be calculated using test data from the same species run on the same dates. Separate acute and chronic tests should be conducted, and acute data extrapolated from chronic tests should not be used to develop an ACR. The ACR can be calculated using the WETLIM Program, linked above. If more than one ACR is calculated (for more than one species), the lowest ACR value should be used in the calculations.

Where the discharge is continuous and the IWC > 1%, a limit calculated when only acute data was provided should be based purely on the WLA_a and be in TU_a units. Chronic monitoring should be required so a full evaluation can be performed, and the limit should be recalculated following the receipt of the chronic data. The chronic monitoring requirements can be required before the acute limit is established in the permit, within a schedule of compliance, or as a separate WET requirement. The limit will still be included, even if data from the chronic monitoring period does not show sufficient toxicity to retrigger a limit.

Coefficient of Variation

The Coefficient of Variation is a standard statistical measure of the relative variation of a distribution of a set of data, defined as the standard deviation divided by the mean. It is also called the relative standard deviation (RSV). The CV can be calculated using the WETLIM Program, linked above. There must be at least 10 data points to calculate a site-specific CV, or the default value of 0.6 will be used.

The WETLIM output should be included in the Appendix to the fact sheet that corresponds to the WET section.

Step 2: STATs Analysis

Using the WLAs calculated by WETLIM, use STATs to determine if a limit is necessary. This should be run at every reissuance with the data from the previous permit term. Historical data, or data from before the previous permit term, should only be included if there is a facility-specific rationale for calculating with an expanded data set. STATs should be run with at least four data points but can be run with as few as one. It is important to note that running STATs with greater than 10 data points should prompt the possibility of a calculation of a site-specific CV, as described above. A sufficiently low WLA will trigger a limit in STATs inappropriately so the STATs evaluation may be excluded, given that a justification is provided in the fact sheet.

The facility name should be entered, and the chemical name should be either acute or chronic and the species (i.e., Chronic C. dubia). For an acute limit evaluation, only the WLA_a should be entered into STATs, the WLA_c should be left blank. For a chronic limit evaluation, the $WLA_{a,c}$ and the WLA_c should be entered into the respective boxes. The units are TU, Q.L. is 1.0, and the number of samples per month is always 1. Test results for each outfall, species, and test type should be evaluated separately.

The data input should be the TU value from each test that has the most toxicity. For example, if a chronic *Ceriodaphnia dubia* test report had a 1.0 TU for survival, but a 2.3 TU for reproduction, the 2.3 should be the value inputted for that test. The 1.0 should not also be inputted, only one value should be inputted per test. Every valid test that was received during the permit term should be entered. When evaluating chronic data, the STATs output may say that a limit was triggered based on acute toxicity. In this case, it is important to note that the value that STATs is evaluating for the WLA_a is actually the $WLA_{a,c}$, which is derived from the WLA_c and the ACR, and is not equal to the WLA_a.

The STATs output should be included in the Appendix to the fact sheet that corresponds to the WET section.

Step 3: Determine Reissued Test Requirements

When considering which WET requirements would be most appropriate following a reasonable potential analysis, there are three important considerations for variability.

(1) Effluent Variability: Caused by changes in the composition of the effluent. Virtually all effluents vary in composition over time. Sampling measurements should be tailored to the toxic effect of concern (acute or chronic) and the need to design testing that accounts for effluent variability.

(2) Exposure Variability: Caused by changes in flow rates of both effluent and receiving water. There also are variable receiving water parameters that may be independent of flow, such as background toxicant levels, pH, salinity, tides, suspended solids, hardness, dissolved oxygen, and temperature, that can be important in assessing impact. This can be assessed by assuming a steady state exposure condition (worst case) using a critical receiving water flow or condition and a typical effluent flow.

(3) Species sensitivity: Differences are caused by the differences in response to toxicants between species. Often, differences of several orders of magnitude exist for a given individual toxicant between the least sensitive and most sensitive species. Since the measured toxicity of an effluent will be caused by unknown toxic constituents, the relative sensitivities of various test species will also be unknown. Therefore, proper effluent toxicity analysis requires an assessment of a range of sensitivities of different species to the effluent. The only way to assess the range of sensitivities is to test several different species from different taxonomic groups, as in the development of the national ambient water quality criteria. To provide sufficient information for permitting decisions, EPA recommends a minimum number of three species, representing three different phyla (e.g. a fish, invertebrate, and plant species) be used to test an effluent for toxicity.

4. Marine/Estuarine Procedures

Due to of the difference in mixing characteristics, the waste load allocations for discharges to estuarine waters are different from those for discharges to flowing streams. Once the WLA has been determined, however, the procedures and calculations are the same as in Steps 2 and 3 above.

a. Acute Evaluation
For marine and estuarine facilities with no available dilution data, the WLA_a should be set at twice the acute water quality criteria, or 0.6 TU_a. Otherwise, the acute dilution value should be converted to the respective IWC_a by the following equation:

$$WLA_a = 0.3(Acute\ Water\ Quality\ Criterion) * Acute\ dilution$$

This TU_a value will serve as the WLA_a, as needed for test review and RP analysis.

b. Chronic Evaluation
For marine and estuarine facilities with no available dilution data, the WLA_c should be set at 50 TU_c, assuming a 50:1 dilution ratio. Otherwise, the WLA_c can be determined as follows:

$$WLA_c = 1.0\ (Chronic\ Water\ Quality\ Criterion) * Chronic\ dilution$$

This TU_c value will serve as the WLA_c, as needed for test review and RP analysis.

5. Following Draft Permit Concurrence

Once owner concurrence has been received on the draft, the CSE(s) for monitoring or limit(s) will need to be added to the facility page in CEDS. This may also be done before the public notice comment period ends. The special condition for the CSE is "WET Acute Test" or "WET Chronic Test," and the due date should correspond to the dates provided in the fact sheet. For a limit, refer to the following table for the correct parameter code:

Test Duration and Organism	Reporting Endpoint	CEDS Code	EPA Code	Units Code	Units
Acute 48-Hour Static *C. dubia*	NOAEC	704	TDA3B	23	Percent
Acute 48-Hour Static *P. promelas*	NOAEC	705	TDA6C	23	Percent
Acute 48-Hour Static *A. bahia*	NOAEC	707	TDA3Z	23	Percent
Acute 48-Hour Static *C. variegatus*	NOAEC	708	TDA6A	23	Percent
Acute 48-Hour Static *C. dubia*	LC_{50} as TUa	711	TSA3B	2F	TU_a
Acute 48-Hour Static *P. promelas*	LC_{50} as TUa	712	TSA6C	2F	TU_a
Acute 48-Hour Static *O. mykiss*	LC_{50} as TUa	713	TSA6I	2F	TU_a
Acute 48-Hour Static Renewal *P. promelas*	LC_{50} as TUa	714	TSN6C	2F	TU_a
Acute 48-Hour Static Renewal *O. mykiss*	LC_{50} as TUa	715	TSN6I	2F	TU_a
Acute 48-Hour Static *A. bahia*	LC_{50} as TUa	717	TSA3Z	2F	TU_a
Acute 48-Hour Static *C. variegatus*	LC_{50} as TUa	718	TSA6A	2F	TU_a
Chronic 3-Brood Static Renewal *C. dubia*	NOEC as TU_c	720	TTP3B	2G	TU_c
Chronic 7-day Static Renewal *P. promelas*	NOEC as TU_c	721	TTP6C	2G	TU_c
Chronic 7-day Static Renewal *A. bahia*	NOEC as TU_c	723	TTP3Z	2G	TU_c
Chronic 7-day Static Renewal *C. variegatus*	NOEC as TU_c	724	TTP6A	2G	TU_c

SECTION MN-1

MUNICIPAL VPDES DRAFTING

Table of Contents

A. Sampling

1. Introduction

All VPDES permits require a sampling and analysis program to demonstrate compliance with the effluent limitations specified in Part I.A of the permit. The minimum sampling program schedules for sewage discharges in this section have been approved by the Department and EPA. Certain permits may have basin-specific or parameter-specific monitoring frequencies based on Board/EPA agreements (i.e. Chesapeake Bay tributary strategies). These schedules may also be modified for sewage treatment plants operated under a Department approved upgrade. Design flow and type of disinfection determines which sampling program schedule in the following table applies. Based on the nature of the discharge (i.e. batch treatment process), a permit writer may exercise discretion and determine that sampling requirements are more or less stringent than necessary for a facility and use another frequency. **Document the rationale for this alternate frequency in the Fact Sheet.**

2. Sample Types

a. All influent samples are collected preceding all treatment units; however, samples may be taken following bar screening.

b. All effluent samples are to be taken at a point following all treatment processes or as otherwise indicated in the permit.

c. Grab samples from the final effluent are required for total residual chlorine, bacteria, pH, D.O., oil and grease, cyanide, acid and base/neutral extractable organics, volatile organics, pesticides/PCBs, phenols, xylenes and dissolved metals. Note that per 40 CFR Part 136, for dissolved metals, samples should be filtered within 15 minutes of collection before adding preservative.

d. Immersion stabilization is required for temperature measurements.

e. When D.O. sampling is required, ensure daily sampling and immediate (in-situ) analysis.

f. At facilities where continuous chlorine monitoring is used, the values at the required frequency should be taken at consistent time intervals to avoid "shopping" for values that meet permit limits.

g. Composite samples consist of grab samples taken at a minimum frequency of one per hour and combined in proportion to flow. Greater frequency of grab sampling is required where abnormal variation in waste strength occurs. Automatic samplers are considered a viable sampling method.

3. Sampling Schedule

The following page contains the sample type and frequency recommendations for Municipal Treatment Plants. Most of the information in the table are from the 9VAC25-790 Sewage Collection and Treatment Regulation.

4. Sampling Schedule Table

PLANT SIZE	>2.0 MGD	1.0-2.0 MGD	0.101-0.999 MGD	0.0401-0.1 MGD	0.0011-0.04 MGD
Flow	Totalizing, Indicating & Recording (continuous)	Totalizing, Indicating & Recording (continuous)	Totalizing, Indicating & Recording (continuous)	Totalizing, Indicating & Recording (continuous)	Estimate (1/Day)
BOD_5, TSS[1], TKN, Ammonia (NH3)	24-HC 5-7 Days/ Week	24-HC 5 Days/ Week	8-HC 3 Days/ Week	4-HC 1/ Week	Grab 1/month
Total Nitrogen[2] Total Phosphorus[2]	24-HC 1/ Week	24-HC 1/ Week	8-HC 1/ 2 Weeks	4-HC 1/ Month	Grab 1/month
BOD_5 Ammonia Controlling [3]	24-HC 1/ Week	24-HC 1/ Week	8-HC 1/ 2 Weeks	4-HC 1/ Month	Grab 1/month
TRC, Contact tank	Grab 1/2Hrs	4/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	Grab 1/Day
Chlorine Effluent	Grab 1/2Hrs	4/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	Grab 1/Day
Bacteria[4] Chlorine Disinfection	4/mo (weekly) 10am-4pm	4/mo (weekly) 10am-4pm	4/mo (weekly) 10am-4pm	4/mo (weekly) 10am-4pm	4/mo (weekly) 10am-4pm
Bacteria Alternate Disinfection	Grab 1/Day 10am-4pm	Grab 5 Days/Week 10am-4pm	Grab 3 Days/Week 10am-4pm	Grab 2 Days/Week 10am-4pm	Grab 1/Week 10am-4pm
pH, DO	Grab 1/Day	Grab 1/Day	Grab 1/Day	Grab 1/Day	Grab 1/Day
WQS Parameters Toxics (other than NH3)	1/8H, or 24 HC or 1/Month	1/8H, or 24 HC or Grab 1/Month	1/8H, or 8HC or Grab 1/Month	1/8H, or 4HC or Grab 1/Month	Grab 1/Month

[1] Applicable when TSS limits required for special standards or regulations (e.g., 9VAC25-260-310, Special Standards and requirements; 9VAC25-415, Policy for Potomac Embayments). Otherwise 1/month is acceptable and should not be reduced further (this includes a sediment TMDL and the Chesapeake Bay TMDL)

[2] Applicable for the parameter that is limited in the individual VPDES permit. Annual average TN and TP limitations included in the permits in the Chesapeake Bay watershed should include sample types and frequencies consistent with those included in the watershed general permit. See monitoring requirements 9VAC25-820-70 E.

[3] This BOD sampling frequency is applicable when ammonia limits control treatment levels for BOD, provided the NH3 sampling frequencies in the BOD_5, TSS[1], TKN, NH3 row of this table are applied.

[4] Sampling frequencies are acceptable provided TRC sampling frequencies in this table are applied. If the facility has discontinuous discharge and 4 monthly samples are difficult to obtain, use a monthly single sample maximum of 235 CFU/100 ml instead of monthly geometric mean of 126 CFU/100ml.

NOTE: Bacteria frequencies also apply to facilities identified in an EPA approved TMDL and the TMDL contains a bacteria waste load allocation for that facility.

5. Monitoring Reductions for Reissuances

a. Qualification Criteria

Per GM98-2005, reduced monitoring may be provided to certain facilities based on their performance and compliance history. The procedures outlined in this section represent the updated recommendations. Permit writers should evaluate with each reissuance whether a facility qualifies for reduced monitoring. Monitoring frequency reductions are not considered effluent limitations under section 402(o) of the Clean Water Act, and therefore anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies. Some facilities and parameters (e.g., chemicals for disinfection (chlorine) and dechlorination) are not eligible for reduced monitoring to ensure protection of aquatic life and human health. For further details see subdivision A.5.d. (Special Considerations).

The following should be considered when facilities are evaluated for reduced monitoring:

1) Seasonal limits should not be eligible for reduced monitoring. Seasonally tiered limits already reflect relief from an annual limit.

2) To qualify for consideration of reduced monitoring requirements, the facility should not have been issued three or more Warning Letters, two or more NOVs, or be under any Consent Orders, Consent Decrees, or related enforcement actions during the past three years.

3) If the facility has received fewer than three Warning Letters or two NOVs during the past three years, reduced monitoring can be considered only for parameters that did not incur effluent violations specified in WLs or NOVs.

4) If the facility has received a Warning Letter or NOV for effluent violations of a WET limit during the past two years, it should not be considered for reduced monitoring.

5) If a facility has multiple and independent outfalls, and one outfall was subject to compliance or enforcement action(s), the rest of the outfalls are not eligible for reduced monitoring.

6) Parameters sampled once per month or less frequently should not be considered for additional monitoring reductions.

7) If any part of the sewerage system, including collection lines owned by a third party, has been subject to multiple compliance or enforcement actions (more than two, including WLs) in the past three years, the facility is not eligible for reduced monitoring.

8) If an upgraded facility replaces a facility that was under an enforcement action, the new facility can be considered for monitoring reduction after it produces three years of effluent data.

9) If the facility has had other operational excursions such as exceeding the 95% flow level, but has not yet been issued an enforcement action, it can still qualify for monitoring reduction.

b. Calculation of Monitoring Reductions

For each eligible parameter, calculate the four-year composite average of representative data at each outfall. For a POTW that has just added large significant industrial users or new development, data before the new connections may no longer be representative of the facility's effluent. In this case, three years of data after the user connects would need to be assessed before reduced monitoring could be considered. In the same manner, a significant user may have closed two years ago and only the last two years of data are representative. Permit writers should avoid using long periods of record to reduce or increase the value of the past four years of effluent data. (Note: D.O., pH, temperature and bacteria are evaluated differently, as described at the end of this section). The ratio of the composite long-term average divided by the permit limit (X100), and the resulting percentage provides the potential monitoring frequency reduction.

Monitoring Frequency "Floor": Current federal NPDES regulations do not establish a monitoring frequency "floor" but do establish a reporting frequency floor of once per year. The monitoring frequency from which reductions could be made in this manual is considered to be the level of the monitoring in the existing effective VPDES permit. It is important to recognize that the EPA guidance from which Table 1 was taken asserts that there is no loss of statistical confidence in determining whether a permit limit is being violated at reduced monitoring frequencies. Also, the EPA guidance does not advocate for any reductions for parameters that are currently monitored only once per quarter.

It is important to recognize that permittees who receive monitoring frequency reductions are still expected to take all appropriate measures to control both the average level of pollutants of concern in their discharge (mean) as well as the variability of such parameters in the discharge (variance), regardless of any reductions in monitoring frequencies granted from the baseline levels.

Monitoring Frequency Reduction Based on Actual Performance Percentage of Permit Limit

Ratio of Composite Long-Term Average to Monthly Average Limit X 100

Baseline Monitoring Frequency	75-66%	65-50%	49-25%	<25%
7/wk	5/wk	4/wk	3/wk	1/wk
6/wk	4/wk	3/wk	2/wk	1/wk
5/wk	4/wk	3/wk	2/wk	1/wk
4/wk	3/wk	2/wk	1/wk	1/wk
3/wk	3/wk	2/wk	1/wk	1/wk
2/wk	2/wk	1/wk	2/mo	1/mo
1/wk	1/wk	1/wk	2/mo	1/2mo

1) New permittees and upgraded treatment facilities should generate three years of data before being eligible for consideration for reduced monitoring. Existing permittees' data submitted during the permit term should be evaluated at permit reissuance to determine if the level of reduced monitoring is still appropriate.

2) Facilities which satisfy the qualification criteria but are not experiencing discharges of 75% or less of their permitted levels of water quality-based parameters should not be eligible for reductions in monitoring/reporting frequencies.

3) Dissolved Oxygen: Where the post-aeration system is passive (i.e., cascade steps), reduction of monitoring frequency can be considered on a case-by-case basis. Reduced monitoring should not be allowed when minimum or average D.O.s fall within 0.5 mg/L or 1.0 mg/L, respectively, of the permit limit.

4) pH: Where pH is not directly adjusted by chemical addition, reduction of monitoring frequency can be considered on a case-by-case basis. Reduced monitoring should not be allowed where minimum or maximum pHs fall within 0.5 units of the permit limits.

5) Temperature: Reduction of monitoring frequency may be considered on a case-by-case basis.

6) Bacteria: Reduction of monitoring frequency when using chlorine disinfection can be considered on a case-by-case basis (i.e. if the chlorine contact tank is designed in accordance with the SCAT regulation and operating correctly) but not less than

4 weekly samples in one calendar month per quarter for majors and not less than 4 weekly samples in one calendar month per year or one sample quarterly (single sample maximum NOT geometric mean) for minors. Chlorine contact tank monitoring cannot be reduced.

All bacteria sampling should be conducted between the hours of 10:00 a.m. and 4:00 p.m.

Example Reduced Monitoring Schedule for Bacteria

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Major			4 Weekly Samples Quarterly			4 weekly samples Quarterly			4 weekly samples Quarterly			4 weekly samples Quarterly
Minor Reduced Monitoring Scenario #1			Quarterly Use Single Sample Max as Limit Not Geometric Mean			Quarterly Use Single Sample Max as Limit Not Geometric Mean			Quarterly Use Single Sample Max as Limit Not Geometric Mean			Quarterly Use Single Sample Max as Limit Not Geometric Mean
Minor Reduced Monitoring Scenario #2	4 Weekly Samples/month annually (Any month during the year)											

Monitoring reductions for bacteria for facilities using alternate disinfection (everything except chlorination) may be granted on a case-by-case basis in non-PWS and non-shellfish waters depending on past performance and if the UV system utilizes dose pacing with appropriate alarms and redundancies to provide assurance that the design dose, and subsequent disinfection, is being achieved. The O & M Manual should be modified to include a schedule for recording pertinent UV operational data. All reduced monitoring for alternate disinfection should be coordinated with Central Office (Erica Duncan) and documented in the Fact Sheet.

The permit writer should obtain the following information from the permittee or DEQ records:

1. Does the facility UV system use dose pacing with appropriate alarms?
2. Does the facility have any of the following alarms: failure to achieve dose alarm, high/low flow alarm, low UV intensity alarm, transmittance alarm, and flow out of range alarms? Monitoring and recording (e.g., SCADA) may be considered.
3. Does the facility have any performance issues or concerns with the UV treatment system?
4. How often is the facility UV system maintained?
5. Does the facility have an O&M protocol in place for the UV system?

c. Reinstating Higher Monitoring:

Permittees are expected to maintain high performance levels after being granted reduced monitoring. If the permittee receives notices of violation related to any of the

effluent limitations for which reduced monitoring was granted, reinstate the baseline frequencies for all parameters that previously had reduced monitoring.

d. Special Considerations:

1) **Discontinuous data:** Monitoring cannot be reduced using the methodology described above if effluent data have not been continuously reported over the period of time being considered. Effluent averages from interrupted or discontinuous data sets may not be representative of long-term performance. Monitoring frequencies for discharges that are intermittent or short-term, such as seasonal discharges, and highly variable batch processes cannot be assessed or reduced using the methods described in these procedures.

2) **Exceptions:** It may be appropriate to maintain higher monitoring levels in individual situations where there may be a particular interest in human health, endangered species, or a sensitive aquatic environment. An example would be a water body that has water quality problems and it has been determined which point and nonpoint sources are particularly critical from the standpoint of protection of aquatic resources (e.g., endangered species) or human health (e.g., drinking water source). Discharges that involve addition of chemicals such as polymers for flocculation may change character rapidly and might not continue to reflect the quality demonstrated in earlier monitoring. The permit writer may decide not to reduce monitoring of critical point sources in these instances. The permit writer should always apply Professional Judgement in setting monitoring frequencies.

3) **Limits below Levels of Detection**: We do not recommend reductions in monitoring frequencies in cases where stringent water-quality based effluent limits (WQBELs) are below levels of quantitation (e.g., TRC) (the level at which a constituent present in a wastewater sample can be reliably detected and quantified). Permittees with these types of limits will normally be deemed to be in compliance when monitored levels are below the level of quantitation; however, by definition, it is not scientifically possible (until analytical methods improve) to certify that the WQBELs are actually being achieved. Thus, DEQ feels it would be inappropriate to develop procedures recommending reductions from established monitoring frequencies for these types of limits.

4) **Use of Daily Maximum Values**: These procedures do not provide a specific methodology for considering daily maximum permit values when considering monitoring/reporting reductions. Consider such situations on a case-by-case basis. There may be concerns over instances where, for example, there are acutely toxic conditions in a receiving water due to violations of daily maximum permit limitations. In such cases, higher monitoring frequencies may be required. In addition, it is important to recognize that dischargers who frequently violate daily maximum permit limitations will likely be unable to achieve high levels of performance in monthly average limits and effectively would not be eligible to participate in this program on that basis. In addition, such facilities may also trigger enforcement criteria.

5) **Water Reclamation and Reuse**: If a VPDES permitted municipal WWTF will also be authorized to do water reclamation reuse, reclaimed water produced by the WWTF may be eligible for limited monitoring reductions at reissuance depending on (i) the type of reclaimed water to be produced (e.g., Level 1 or Level 2), or (ii) the relationship of the reclamation system to the WWTF that provides source to the reclamation system. For example, the reclamation system and WWTF may be

one in the same with no difference in treatment (referred to as a conjunctive system), the reclamation system may share one more unit treatment processes with the WWTF but provides other additional treatment independent of the WWTF, or the reclamation system does not shares any unit treatment processes with the WWTF (referred to as an independent system).

There are no provisions to allow monitoring reductions for most reclaimed water standards in 9VAC25-740-10 et seq. with the exception of bacterial sampling frequency reductions for Level 1 reclaimed water specified in 9VAC25-740-80.A.4 and established per Subdivision III.G.6.d (1) of GM 10-2001, Rev. 1 (9/10/18). Because the procedures in the current guidance to evaluate bacteria monitoring frequency reductions did not go into effect until 9/10/18, similar monitoring frequency reductions for Level 1 reclaimed water granted prior to 9/10/18 should remain valid unless there is cause, such as but not limited to, compliance and enforcement issues related to the reclamation system, to warrant re-evaluation. Bacteria sampling frequency reductions requested after 9/10/18 must be evaluated per Subdivision III.G.6.d (1) of GM 10-2001, Rev. 1 and cannot go below the minimum frequency specified in 9VAC25-740-80.A.4.a.

For a VPDES permitted reclamation systems that will produce Level 2 reclaimed water, partially or completely independent of the WWTF that will provide source water to the reclamation system, there are procedures to allow only *bacteria* monitoring waivers for the Level 2 reclaimed water in Subdivision III.G.6.d (2) of GM 10-2001, Rev. 1.

For a VPDES permitted conjunctive system that will produce Level 2 reclaimed water and provide the same treatment to both the effluent and the reclaimed water, monitoring frequency reductions determined according to this section (MN-1) of the VPDES Permit Manual for the effluent may also be applied to the Level 2 reclaimed water for the same monitoring parameters. This is based on the fact that there is no difference between the treatment, composition and character of the effluent and the Level 2 reclaimed water, and neither are intended for public contact.

For a VPDES permitted conjunctive system that will produce Level 1 reclaimed water and provide the same treatment to both the effluent and the reclaimed water, most monitoring for the reclaimed water, excluding bacterial sampling frequency, cannot be reduced for reuses listed in 9VAC25-740-90.A of that water.

For a VPDES permitted conjunctive system that will reclaim wastewater (municipal or industrial) for unlisted reuses that are approved on a case-by-case basis in accordance with 9VAC25-740-90.B or C, and the reclaimed water produced by the conjunctive system must comply with Level 1 reclaimed water standards and monitoring requirements, or other standards and monitoring requirements developed in accordance with 9VAC25-740-70.D and E; the RO may allow monitoring reductions for the reclaimed water, excluding bacterial sampling frequency for Level 1 reclaimed water, where the RO in consultation with VDH has determined that a monitoring reduction of one or more reclaimed water standards will not increase the risk of the proposed reuse to public health and the environment. Where the conjunctive system, in this case, will have Level 1 bacteria standards and monitoring requirements, bacterial sampling frequency reductions must be evaluated per Subdivision III.G.6.d (1) of GM 10-2001, Rev. 1 and cannot go below the minimum frequency specified in 9VAC25-740-80.A.4.a.

6. Reporting

The results of Part I.A monitoring are reported on the DMR. DMRs are submitted via myDEQ Portal by the 10th of each month for reporting the previous month's monitoring activities. Reports of monitoring required by special conditions may be submitted as separate documents.

B. Secondary Treatment Standards

1. Influent Monitoring, Percent Removal, and Effluent Limitations

For municipal treatment facilities, 40 CFR Part 133 specifies technology-based limits for the minimum level of treatment that must be met through the application of secondary treatment. Exhibit MN-1 below summarizes the standards:

Exhibit MN-1 Secondary Treatment Standards

Parameter	30-day average	7-day average
BOD_5	30 mg/L (or 25 mg/L $CBOD_5$)	45 mg/L (or 40 mg/L $CBOD_5$)
TSS	30 mg/L	45 mg/L
BOD_5 and TSS removal (concentration)	85% (min)	--
pH	Within the limits of 6.0-9.0 S.U.	

Exhibit MN-2 summarizes influent monitoring and percent removal secondary treatment standards for all municipal plants:

Exhibit MN-2 Influent Monitoring and Percent Removal

	BOD_5, $CBOD_5$ and TSS Influent	BOD_5, $CBOD_5$ and TSS % Removal
Parameter Codes	625 TSS, Influent 354 BOD_5, Influent 892 $CBOD_5$, Influent	064 TSS, Percent Removal 979 BOD_5, Percent Removal 980 $CBOD_5$, Percent Removal
Sample Frequency	Same as effluent	Same as reporting frequency
Sample Type	Grab	CALC
Conc Avg Stat	Monthly Average	NA
Conc Min Stat	NA	Monthly Average Minimum
Limit (Conc Ave)	NL	NA
Limit (Conc Min)	NA	85
Units	mg/L	%
Reporting Frequency	Annual, Semi-Annual, or Quarterly	Annual, Semi-Annual, or Quarterly
Monitoring Location	Raw Sewage Influent	Percent Removal

Based on the facility's design flow, the following influent monitoring frequencies apply:

Design Flow	Reporting Frequency
≥ 1.0 MGD	1 per Quarter
0.0401 – 0.999 MGD	1 per 6 Months
0.0011 – 0.040 MGD	1 per Year

Regardless of design flow the permit may include annual reporting for (1) any corresponding BOD_5, $CBOD_5$ or TSS limit of 10 mg/L or less; (2) any facility with a technology-based TN of 8 mg/L or less or a technology-based TP limit of 1 mg/L or less; and (3) any facility with effluent filters or other forms of tertiary treatment. In no case shall the monitoring frequency be less than 1 month/year. For seasonal BOD_5 and TSS, the month(s) that the percent removal requirement is calculated will be compared to the seasonal requirement effective during that month.

Influent and effluent samples are not required to be collected on the same day; however, they are required to be collected at the sampling frequency specified in the permit. § 133.101.(k) defines "Percent removal" as "A percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period."
The permittee must average all influent data, then all effluent data, and calculate the percentage removal. Please note that the sampling frequency varies (e.g.3d/week once per month annually), however, the reporting frequency is either quarterly, semi-annual, or annual.

If the permittee collects additional influent samples in accordance with Part II.A of the permit, they would use all influent data for each month and calculate the percent removal for that month and report the lowest percent removal for that reporting period (quarterly, semi-annual, or annual). For example, in the case of annual reporting, if influent data was collected in March and July, the permittee would calculate the percent removal for each month (since they have influent and effluent data), then report the minimum percent removal on the DMR that is due on January 10th for that annual reporting period. The permittee may also include comments in the DMR Comment field to provide necessary clarifications as needed.

CEDS Entry

Exhibit MN-3 summarizes CEDS entry rules for the incorporation of the monitoring and reporting requirements in the VPDES permits.

Exhibit MN-3 CEDS Entry Rules

	BOD_5, $CBOD_5$ and TSS Influent	**BOD_5, $CBOD_5$ and TSS Percent Removal**
Parameter Codes	625 TSS, Influent 354 BOD_5, Influent 892 $CBOD_5$, Influent	064 TSS, PERCENT REMOVAL. 979 BOD_5, PERCENT REMOVAL 980 $CBOD_5$, PERCENT REMOVAL
Sample Frequency	Same as effluent	Same as reporting frequency
Sample Type	Grab	CALC
Conc Avg Stat	MONTHLY AVERAGE	MONTHLY AVERAGE MINIMUM
Limit	NL	85
Units	mg/L	%
Reporting Frequency	1 PER YEAR, 1 PER 6 MONTHS, 1 PER QUARTER	1 PER YEAR, 1 PER 6 MONTHS, 1 PER QUARTER
Monitoring Location	Raw Sewage Influent	Percent Removal

C. Equivalent to Secondary Standards

1. Influent Monitoring, Percent Removal, and Effluent Limitations

Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD_5 and TSS but might not consistently achieve the secondary treatment standards for these parameters.

The equivalent to secondary treatment standards, as specified in § 133.105 are shown in Exhibit MN-4 below.

Exhibit MN-4 Equivalent to Secondary Treatment Standards

Parameter	30-day average	7-day average
BOD_5	Not to exceed 45 mg/L (or not to exceed 40 mg/L $CBOD_{5)}$	Not to exceed 65 mg/L (or not to exceed 60 mg/L $CBOD_{5)}$
TSS	Not to exceed 45 mg/L	Not to exceed 65 mg/L
BOD_5 and TSS removal (concentration)	Not less than 65% (min)	--
pH	Within the limits of 6.0-9.0 S.U.	

To be eligible for discharge limitations based on equivalent to secondary standards, a POTW must meet ***all three*** of the following criteria:

a. Criterion #1 - Consistently Exceeds Secondary Treatment Standards: The first criterion that must be satisfied to qualify for the equivalent to secondary standards is demonstrating that the BOD5 and TSS effluent concentrations consistently achievable through proper operation and maintenance of the treatment works exceed the secondary treatment standards set forth in §§ 133.102(a) and (b). The regulations at § 133.101(f) define *"effluent concentrations consistently achievable through proper operation and maintenance"* as

   1) (f)(1): For a given pollutant parameter, the 95th percentile value for the 30-day average effluent quality achieved by a treatment works in a period of at least 2 years, excluding values attributable to upsets, bypasses, operational errors, or other unusual conditions.

   2) (f)(2): A 7-day average value equal to 1.5 times the value derived under paragraph (f)(1).

      Some facilities might meet this criterion only for the BOD_5 limitations or only for the TSS limitations. EPA believes that it is acceptable for the permit writer to adjust the limitations for only one parameter (BOD_5 or TSS) if the effluent concentration of only one of the parameters is demonstrated to consistently exceed the secondary treatment standards.

b. Criterion #2 - Principal Treatment Process: The second criterion that a facility must meet to be eligible for equivalent to secondary standards is that its principal treatment process must be a trickling filter or waste stabilization pond (i.e., the largest percentage of BOD and TSS removal is from a trickling filter or waste stabilization pond system).

c. Criterion #3 - Provides Significant Biological Treatment: The third criterion for applying equivalent to secondary standards is that the treatment works provides significant biological treatment of municipal wastewater. The regulations at § 133.101(k) define significant biological treatment as using an aerobic or anaerobic biological treatment process in a treatment works to consistently achieve a 30-day average of at least 65 percent removal of BOD5.

2. Adjustments to Equivalent to Secondary Standards

In addition to providing secondary treatment standards and equivalent to secondary treatment standards, the federal regulations allow states to make adjustments to the standards and to apply those adjusted standards on a case-by-case basis.

a) Adjusted TSS Requirements for Waste Stabilization Ponds

In accordance with regulations adopted by EPA in 1977 and revised in 1984, states can adjust the maximum allowable TSS concentration for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. The regulation, found at § 133.103(c), defines "SS concentrations achievable with waste stabilization ponds" as the effluent concentration achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality for BOD5 specified in § 133.105(a)(1) (45 milligrams per liter [mg/L] as a 30-day average). To qualify for an adjustment up to as high as the maximum concentration allowed, a facility must use a waste stabilization pond as its principal process for secondary treatment and its operations and maintenance data must indicate that it cannot achieve the equivalent to secondary standards.

To comply with the Revised Secondary Treatment Regulation for Equivalent to Secondary Treatment and the flow chart on page 13 of Section III, apply TSS limitations as follows:

TSS limitations for waste stabilization ponds can be 60 mg/l or 78 mg/l monthly average depending on the outfall location.

Outfalls Located	Permit Limitation
East of Blue Ridge Mountains	60 mg/L monthly average
West of Blue Ridge Mountains	78 mg/L monthly average
Eastern slope counties Loudoun, Fauquier, Rappahannock, Madison, Greene, Albemarle, Nelson, Amherst, Bedford, Franklin, and Patrick	Case by case application of 60 mg/L or 78 mg/L limits

3. Flow Chart: Equivalent to Secondary Treatment Standards

The flow chart in this section is to be used to determine permit limits for existing facilities under the Secondary Treatment Regulation discussion of equivalent to secondary treatment (40 CFR 133.105). Equivalent to secondary treatment only applies to sewage treatment plants and specifically trickling filters and waste stabilization ponds (facultative basins without supplemental aeration). See Section III for more information.

The flow chart is broken into three organizational structures:

a. Can the facility meet conventional secondary treatment limits?
b. Are there any special considerations to be addressed in order to set treatment limits?
c. Does the facility qualify for equivalent to secondary treatment?

The permit writer should encourage the continued use of existing trickling filters and waste stabilization ponds where appropriate, through the application of appropriate equivalent to secondary limits. However, the permit writer must be sure that these facilities are capable of meeting the proposed effluent limits without causing water quality impacts before the permit limits can be adjusted. If one cannot determine this, equivalent to secondary limits cannot be used in the permit.

A yes/no decision question and statement system has been devised in the form of a flow chart so that various facility conditions can be worked through. By answering questions or following directive statements the chart will indicate the appropriate permit decisions. To illustrate how the flow chart works see the following examples.

Example 1

A .060 MGD waste stabilization pond is consistently maintaining a treatment quality of 40 mg/l-BOD and 60 mg/l-TSS. The high BOD and TSS is a result of the facility's receipt of a .010 MGD industrial discharge. Investigation of the applicable industrial category reveals that BCT, BPT, or a new source (whichever is applicable) limits for the industry would be less stringent than conventional secondary treatment limits or equivalent to secondary limits if the industry was a direct discharger.

a. Referring to the chart on page **Error! Bookmark not defined.**6 of Section MN-1, the starting point is "Permit Reissuance or Modification for Existing Facilities". Moving through the boxed decision questions the first question is, "Can the facility meet conventional secondary limits?". Reviewing the given data of 40 mg/l-BOD and 60 mg/l-TSS the answer to this question is "no".

b. Moving in the "no" direction the next box asks the question, "Is the inability of the facility to meet its 30-day average requirements for BOD, CBOD and/or TSS due to the receipt of an industrial discharge?". Again, reviewing the given data, the facility receives an industrial discharge and thus the answer to this question is "yes".

c. In the "yes" direction the next question is listed under the heading "special considerations". This question asks, "Would the effluent limits (BOD, CBOD, TSS) given to the industry under the Act be less stringent than secondary or equivalent to secondary limits if the industrial category discharged directly to a receiving stream?". Since limits for the industry as a direct discharger are less stringent than secondary treatment limits or equivalent to secondary treatment limits, the answer to this question is "yes".

d. Again, moving in the "yes" direction, the next question is "Does the flow or loading of the discharge, attributed to the industrial category exceed 10 percent of the design flow or loading of the publicly owned treatment works?". Since the industrial discharge rate (.010 MGD) is 16 percent of the waste stabilization pond design flow of .060, the answer is "Yes".

e. Moving again in the "yes" direction the next box makes the statement, "Adjust applicable limits proportionately. (Make assurances for water quality standards)". After this is completed, the permit processing should proceed.

Example 2

A .060 MGD waste stabilization pond maintaining a treatment quality of 40 mg/l-BOD and 60 mg/l-TSS. No industrial discharge is received by the locality.

a. Starting at the top of the flow chart, the answer to the first question is "no" since the facility consistently reported data of 40 mg/l-BOD, 60 mg/l-TSS and does not meet conventional secondary limits.

b. The answer to the second question is also "no" since the facility does not receive an industrial discharge.

c. Moving in the "no" direction the answer to the question "Is the facility a waste stabilization pond?" is "yes" due to the fact that the facility is a waste stabilization pond.

d. Assume for the next question that the waste stabilization pond is the principal treatment process. As such, the answer to the question is "yes".

e. Moving in the "yes" direction ask the next question "Does the data indicate that the TSS values of 30-day < 45 mg/l, 7-day < 65 mg/l, and 30-day average percent removal 65 percent cannot be achieved?". For this example, the given facility information states the reported value of 60 mg/l-TSS. Thus the 45 mg/l-TSS cannot be achieved and the answer to the question is "yes".

f. Moving in the "yes" direction the next box assigns appropriate TSS limits of 60 mg/l or 78 mg/l. The decision of which limits to use rests with the permit writer. The next box asks the question, "Is BOD > 30 mg/l?". The reported value for BOD is 40 mg/l. Since the value is > 30 mg/l the answer to the question is "yes".

g. The statement in the next box reads, "Go to equivalent to secondary limitations". Without the use of an arrow move to the first box located under the heading "EQUIV. TO SECONDARY".

h. The first question in this section asks, "Is a trickling filter or waste stabilization pond used as the principal process?". The answer is "yes".

i. The second question asks, "For BOD and/or TSS, does the 95th percentile value for the monthly average effluent quality achieved in a period of at least two years exceed 30 mg/l?". Since the values for TSS have already been dealt with in the example, this question is dealing only with BOD. Reviewing the given data, the BOD value is 40 mg/l. Since 40 mg/l-BOD is greater than 30 mg/l, the answer to the question is "yes".

j. Moving in the "yes" direction the next question asks, "Do these values represent at least 65 percent removal of BOD on a constant basis?". For the purposes of this example the answer to this question is "yes".

k. The next question is a loop designed to make sure water quality standards are met. To do this, check the facility file for calculations relating to the wasteload allocation plan and/or 303(e)/208 plans. These should have been done in the original issuance of the permit.

l. Once this part is completed and the answer to the original statement is "yes", move in the "yes" direction. The next statement is an anti-backsliding statement. It is designed for those facilities which can maintain effluent quality better than allowable limits for equivalent to secondary yet cannot meet conventional secondary limits. Specifically, if a facility is capable of meeting 40 mg/l-BOD and 40 mg/l-TSS on a consistent basis, the permit would reflect those limits rather than 45 mg/l-BOD, 45 mg/l-TSS as defined by equivalent to secondary. If this statement does not apply, move to the next box where equivalent to secondary limits are listed.

m. When setting permit limits, take into consideration any waste stabilization pond or trickling filter systems where significant geographical, climatic, or seasonal factors can cause significant differences in reporting during the year. In instances such as these, tiered limits should be set to reflect such differences. After the permit limits have been determined, continue with the issuance process.

Example 3

A .060 MGD waste stabilization pond maintaining a treatment of 40 mg/L-BOD and 29 mg/L-TSS. No industrial discharge is received by this facility.

a. Again, starting at the top of the flow chart the first question asks, "Can the facility meet conventional secondary limits?". A review of the given data shows 40 mg/L-BOD and 29 mg/L-TSS. Since 29 mg/L-TSS already meets conventional secondary limits, set the limits at 30 mg/L-TSS. The data stated 40 mg/L-BOD is greater than the 30 mg/l-BOD required for conventional secondary limits and the answer for this part is "no".

b. Continue with 40 mg/L-BOD to the next question. The facility does not receive an industrial discharge and thus the answer to this question is "no".

c. Since the facility is a waste stabilization pond, the answer to the next question is "yes".

d. From here, assume that the waste stabilization pond is the principal process used for secondary treatment, then the answer to the next question will also be "yes".

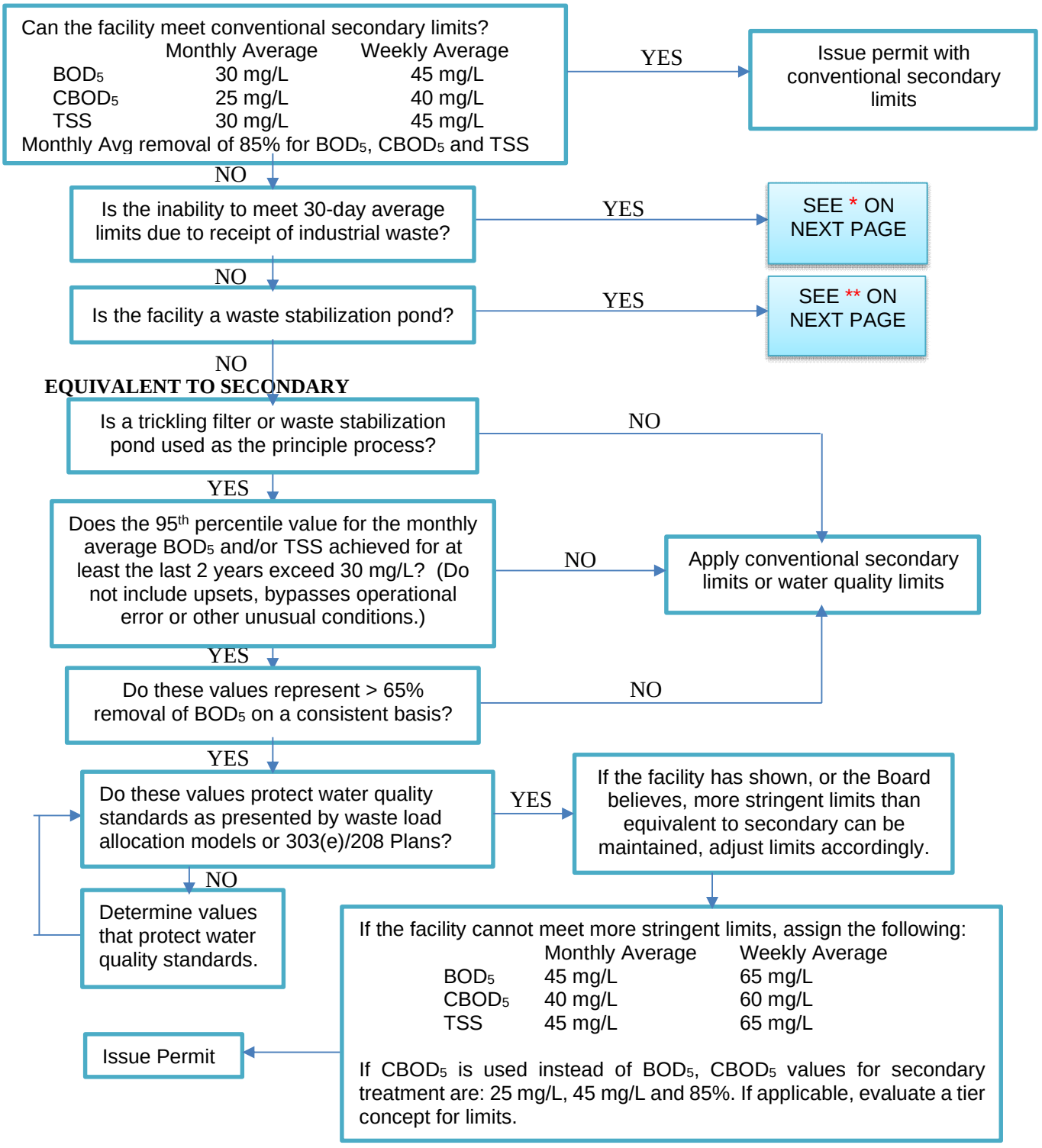
e. Moving in the "yes" direction the next question concerns TSS. Since limits for 30 mg/l were assigned earlier in the flow chart, there is no need to consider this question and a "no" answer is sufficient.

f. In the "no" direction the next question asks, "Is BOD > 30 mg/L?" The stated BOD of 40 mg/L is greater than 30 mg/L and the answer is "yes". Continuing in the "yes" direction the next box states, "go to equivalent to secondary limitations".

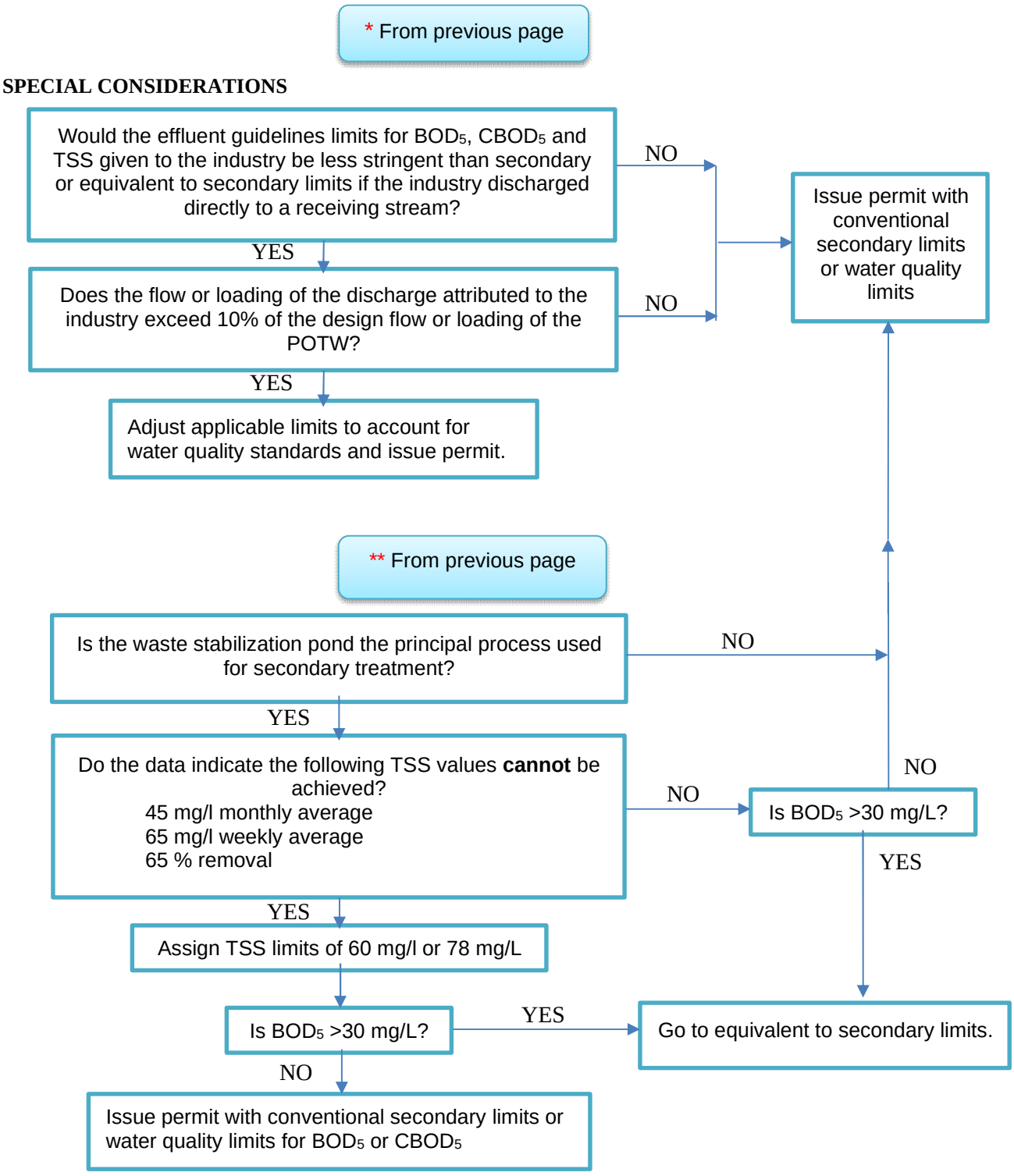
g. As in Example 2, move to the first box located under the heading "EQUIVALENT TO SECONDARY'. Since the data 40 mg/L-BOD is the same as that in Example 2, refer to the corresponding point in Example 2 and determine the BOD limits by completing the flow chart.

h. As before, once appropriate limits are determined, continue to process the permit.

PERMIT FOR REISSUANCE OR MODIFICATION FOR EXISTING FACILITY



Flow Chart: Equivalent to Secondary Treatment Regulation (cont'd)



D. Adjustments to Concentration Limits

Part 133 allows a permit writer to make further adjustments when calculating effluent limitations derived from secondary treatment standards or equivalent to secondary standards based on several special considerations. The permit writer should determine whether any of the special considerations outlined in this section apply and, as appropriate, make any further adjustments to the concentration limitations or percent removal requirements. The calculated limitations, after making such adjustments, are the final technology-based effluent limitations for the POTW.

1. Substitutions of $CBOD_5$ for BOD_5

In 1984, EPA promulgated rule revisions allowing for the substitution of $CBOD_5$ for BOD_5 when implementing federal secondary and equivalent to secondary standards. The federal register promulgating these rule revisions[1] explained the rationale for the changes:

"The Agency is allowing substitution of the $CBOD_5$ parameter for the BOD_5 parameter, because it believes that this parameter is a better reflection of the understood meaning of secondary treatment in terms of measuring the removal of carbonaceous organic materials by secondary treatment for certain POTWs. In addition, the Agency believes that implementation of $CBOD_5$ test procedures should eliminate the counter-productive operating practices that were noted above since incidental nitrification will no longer affect test results."

The rule revisions pertain to the implementation of both secondary standards for BOD_5, and equivalent to secondary standards for BOD_5. These rules and their implementation are discussed in more detail below.

Wastewater contains carbonaceous oxygen demanding substances and nitrogenous oxygen demanding substances. A $CBOD_5$ test measures the 5-day carbonaceous biochemical oxygen demand while the BOD_5 test measures both carbonaceous biochemical oxygen demand and nitrogenous biochemical oxygen demand. During nitrification, nitrifying bacteria use a large amount of oxygen to consume nitrogenous oxygen demanding substances (unoxidized nitrogen and ammonia-nitrogen) and convert these to oxidized nitrate.

EPA recognizes that the $CBOD_5$ test can provide accurate information on treatment plant performance in many cases and, in Part 133, allows permit writers to use $CBOD_5$ limitations in place of BOD_5 limitations to minimize false indications of poor facility performance as a result of nitrogenous oxygen demand.

Please contact the Office of VPDES Permit if substitutions are requested for water-quality based BOD_5/$CBOD_5$ effluent limitations.

While federal regulations do not specifically address the substitution of CBOD for BOD when establishing permit limits, DEQ believes that it is appropriate to do so due to the same rationale presented by EPA when developing their rule allowing the substitution.

a. Secondary Standards

Under federal regulations a permit writer may substitute $CBOD_5$ for BOD_5 when applying federal secondary standards. This substitution should take place if a permittee requests the substitution. The monitoring requirements included in permits to determine compliance with the $CBOD_5$ limits must be for $CBOD_5$ in order to conform

[1] Federal Register/Vol.49, No. 184/Sept. 20, 1984

to federal and state requirements. This substitution may be applied seasonally or year-round.

The federal regulations state that the resulting $CBOD_5$ limits may not be less stringent than the following:

25 mg/L as a 30-day average
40 mg/L as a 7-day average

b. Equivalent to Secondary Standards

Federal regulations and guidance also allow permit writers to substitute $CBOD_5$ for BOD_5 when applying federal equivalent to secondary standards. However, the applicable regulation (40 CFR 133.102) only allows this substitution "(w)here data are available to establish CBOD5 limitations …".

In order to substitute $CBOD_5$ for BOD_5 when applying federal equivalent to secondary standards, the permittee should request the substitution, and submit parallel $CBOD_5$ and BOD_5 effluent data. The data should be collected during periods of cool weather and while the facility is achieving at least the 45 mg/L (monthly average), 65 mg/L (weekly average), and 85% removal (monthly average) BOD_5 limits[2]. The permit writer will analyze the data to determine the relationship between the $CBOD_5$ and BOD_5 data and develop a conversion factor to be used to establish appropriate $CBOD_5$ limitations. The substitution may be applied seasonally or year-round. The permittee should provide a minimum of one year's worth of data. For influent monitoring/percent removal, the permittee should submit data collected throughout all seasons within a one-year period.

The federal regulations state that the resulting $CBOD_5$ limits may not be less stringent than the following:

No greater than 40 mg/L as a 30-day average.
No greater than 60 mg/L as a 7-day average.

c. Implementation

When including technology-based $CBOD_5$ limits, the use of a $CBOD_5/BOD_5$ conversation factor is necessary when a permit currently contains BOD5 limits to implement the design criteria and the permittee requests the substitution of CBOD5 limits. The two options for calculating and assigning a conversion factor are:

1) Default Conversation Factor ($CBOD_5$:BOD_5): Based on the ratios of the $CBOD_5$ to BOD_5 concentrations used in the implementation of federal secondary standards.

   a) 0.8 for the 30-day average limit, derived from the federal substitution relationship of 25 mg/L $CBOD_5$ to 30 mg/L BOD_5

   b) 0.9 for the 7-day average limit, derived from the Federal substitution relationship of 40 mg/L $CBOD_5$ to 45 mg/L BOD_5

2) Site-specific Conversion Factor: If the permit wishes a site-specific conversion factor to be utilized, a parallel monitoring study may be performed to quantify the $CBOD_5/BOD_5$ concentration relationship. The derivation of this conversion factor should generally follow the same process used by EPA for deriving the conversion factor related to the federal equivalent to secondary standards. This includes the

[2] These requirements are based on the data collection and analysis process EPA used to determine the CBOD5 limits for secondary standards. The process is explained in Federal Register/Vol.49, No. 184/Sept. 20, 1984, p.37000.

proposal and acceptance of a facility/outfall specific $CBOD_5$ limit with a future approved facility plan.

2. **Substitution of COD or TOC for BOD_5/$CBOD_5$** - Chemical oxygen demand (COD) and total organic carbon (TOC) laboratory tests can provide an accurate measure of the organic content of wastewater in a shorter time frame than a BOD_5 test (i.e., several hours versus five days). The regulations at § 133.104(b) allow a permit writer to set limitations for COD or TOC instead of BOD_5 if a long-term BOD_5:COD or BOD_5:TOC correlation has been demonstrated.

   While federal regulations do not explicitly address the substitution of COD for $CBOD_5$ when establishing permit limits, the EPA has confirmed its appropriateness. The permittee should provide a minimum of one year's worth of influent or effluent data (depending on whether the substitution is requested for influent or effluent monitoring). Once COD and BOD data have been collected over time, the average $CBOD_5$/BOD_5 result is divided by the average COD/TOC result to determine the ratio or conversion factor.. The COD/TOC results are then multiplied by this factor to estimate the BOD_5/$CBOD_5$ concentration. This substitution may be applied seasonally or year-round.

   > Prior to approving requests for the substitution of COD or TOC for BOD_5, please contact the Office of VPDES Permits.

   In order to approve a BOD_5/$CBOD_5$:COD or BOD_5/$CBOD_5$:TOC correlation ratio, the correlation study must demonstrate a statistically significant and a strong correlation exists between the two parameters.

   Please see Section 4.4.2 (pg. 148) of EPAs Handbook on Sampling and Sample Preservation of Water and Wastewater.

   If the request is approved, the permit should contain the following footnote in Part I.A of the permit:

   a. Influent monitoring:

      At least X% removal for [BOD_5/$CBOD_5$] and must be obtained for this effluent. Influent shall be sampled XXXX for one month [quarterly, semi-annually, annually]. See Part I.XX for additional requirements related to demonstration of secondary treatment. For [BOD_5/$CBOD_5$], percent removal may be based on either influent [BOD_5/$CBOD_5$] or influent [COD/TOC] data using the approved [BOD_5/$CBOD_5$]: [COD/TOC] ratio of XX, respectively. If the ratio is used, it is to be noted on the DMR for the monitoring period. The monthly average [BOD_5/$CBOD_5$] and TSS influent concentrations and percent removal shall be reported on the DMR by the 10th day of the month following sampling.

   b. Effluent monitoring:

      Effluent monitoring for [BOD_5/$CBOD_5$], may be based on either effluent [BOD_5/$CBOD_5$] or effluent [COD/TOC] data using the approved [BOD_5/$CBOD_5$]: [COD/TOC] ratio of XX, respectively. If the ratio is used, it is to be noted on the DMR for the monitoring period.

E. Plant Expansion/Upgrade Procedures

1. Permittee Requested Expansion of a Complying Facility

When the permittee requests a permit modification to allow for plant expansion, employ the following permitting procedure only if the facility is in compliance with its VPDES permit.

Issue the permit with an interim limitations page for the facility at the present design flow. Interim limits are Part I.A.1. The introductory language for Part I A 1 should read as follows:

A. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the permit's effective date and lasting until the commencement of discharge from the ____ MGD facility or until the permit's expiration date, whichever occurs first, the permittee is authorized to discharge from outfall 001. This discharge shall be limited and monitored as specified below:

Include a final effluent limitations page for use when the project has been completed. Final limits are Part I.A.2. and are triggered either by commencement of discharge from the upgraded/expanded facility or issuance of a CTO (Choose one of the two below). Insert other outfalls and/or design flows as needed. The introductory language for Part I.A.2 should read as follows:

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Upon the **[commencement of discharge from [or] issuance of a Certificate to Operate for]** the ___ MGD treatment facilities, the following effluent limitations and design flow shall become effective at outfall 001 and remain in effect until the permit's expiration date. This discharge shall be limited and monitored by the permittee as specified below:

2. Board Required Upgrade for a Non-Complying Facility

When a facility has been unable to meet existing effluent limitations, the permit should be written with the required limits effective immediately, without a compliance schedule. Any non-compliance issues should be referred to Enforcement. Any upgrade will be handled through an enforcement order.

Where limitations are being added for a parameter not previously limited or an existing limit is being made more stringent, the permittee should be provided a Schedule of Compliance to meet the new requirements. Interim limits are Part I.A.1. and should reflect limitations prior to the attainment of the new or more stringent limits. Final limits are Part I.A.2. and should reflect the upgraded requirements. Insert other outfalls and/or design flows as needed. In these cases, the introductory language for the interim and final limits pages should read as follows:

A. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the permit's effective date and lasting until **[commencement of discharge or issuance of a Certificate to Operate]** from the **[upgraded and/or expanded**] facility in accordance with the Schedule of Compliance in Part I.C., the permittee is authorized to discharge from outfall 001. This discharge shall be limited and monitored as specified below:

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. Upon **[commencement of discharge or issuance of a Certificate to Operate]** from the ____ MGD upgraded facility, the following effluent limitations shall become effective at outfall 001 and remain in effect until the permit's expiration date. This discharge shall be limited and monitored by the permittee as specified below:

3. Board Required Expansion/Upgrade for a Non-complying Facility

Where a facility is required to expand due to insufficient capacity and the facility has been issued an order to expand by Enforcement, upon reissuance the permit should be written to reflect the required limits effective immediately, without a compliance schedule. Any non-compliance issues should be referred to Enforcement. The expansion will be handled through an enforcement order.

Where a facility is required to expand due to insufficient capacity and the facility has NOT been issued an order to expand by Enforcement, include Part I pages with interim limits corresponding to the existing limitations and final limits reflecting the limitations of the expanded facility along with a Schedule of Compliance for the required expansion.

Where a facility is required to upgrade for new or more stringent limitations and the permittee requests a facility expansion, the effluent limitations pages should contain interim limits that correspond to the existing requirements of the permit, final limitations that reflect the required upgrade, and alternate final limitations that reflect the upgraded requirements along with the expansion. Insert other outfalls and/or design flows as needed. Permits for these upgraded plants that are in the process of expanding capacity should contain the Part I.A.1 Interim Limits and Part I.A.2 Final Limits language given above and the following final limits for the period between the upgrade and the completion of the expansion:

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Upon commencement of discharge from the **[insert current design flow]** ___ MGD upgraded facility, the following effluent limitations shall become effective at outfall 001 and remain in effect until [**the issuance of a Certificate to Operate or commencement of discharge from the (insert expanded design rate) ____ MGD facility**] or until the permit's expiration date, whichever comes first. This discharge shall be limited and monitored by the permittee as specified below:

4. Schedule of Compliance for Required Expansion/Upgrade

See the OneDEQ VPDES Permit template for the special condition language.

5. Plant Expansion - Chlorine Pages

Chlorine permit pages may need to be modified to accommodate changes in flow due to plant expansion. The following chlorine language is provided for plant expansion. Only those portions of the chlorine special conditions that are subject to change are shown below. The rest of the chlorine language is to be written as presented earlier in this Section. For expansion situations needing alternative language other than described below, contact Office of VPDES Permits for assistance.

a. If dechlorination is required and plant expansion causes an increase in sampling frequency with no change in the detectable/nondetectable status, use the following format for #1 on the chlorine pages.

(1) Beginning with the permit's effective date and continuing until the commencement of discharge from the (**insert expanded flow rate**) facility, or until the permit's expiration date, whichever comes first, no more than [**10% of total no. of monthly samples***] of all samples for TRC taken after the chlorine contact tank and prior to dechlorination shall be less than [**1.0 or 1.5 mg/L****] for any one calendar month [CEDS Parameter Code #157]. The permittee shall monitor the TRC at the outlet of the chlorine contact tank prior to dechlorination [**1/**___] by grab sample.

a. Upon commencement of discharge from the [**insert expanded flow rate**] facility and continuing until the permit's expiration date, no more than [**10% of total no. of monthly samples***] of all samples for TRC taken after the chlorine contact tank and prior to dechlorination shall be less than [**1.0 or 1.5 mg/L****] for any one calendar month. [CEDS Parameter Code #157]. The permittee shall monitor the TRC at the outlet of the chlorine contact tank prior to dechlorination [**1/**___] by grab sample.

(2) No TRC sample collected prior to dechlorination shall be less than 0.6 mg/L. [CEDS Parameter Code #213]

(3) These TRC concentrations may be lowered where the permittee has demonstrated adequate disinfection.

* Number to be calculated and inserted by permit writer.
** 1.5 for PWS and shellfish waters, 1.0 for other waters.

b. If the expansion results in dechlorination being required and the final TRC/CPO levels change numerically but remain detectable, use the following format.

The hourly average concentration of TRC in the final effluent after dechlorination shall not exceed [**insert initial water quality-based number**] for the [**insert initial flow rate**] facility and [**insert expansion water quality-based number**] for the [**insert expanded flow rate**] facility.

c. If the expansion results in increased sampling frequency for bacteria, use the following format.

If an alternative to chlorination as a disinfection method is chosen, the bacteria parameter shall be limited and monitored by the permittee as specified below:

(1) For the [**insert current design flow**] flow facility:

E.coli / enterococci (*choose one)* [CEDS Parameter Code #120 or #140)] bacteria per 100 mL of water shall not exceed the following:

	Discharge Limitation	**Monitoring Requirements**	
	Monthly Average	**Frequency**	**Sample Type**
E. coli/Enterococci N/100 mL	126/35 (Geometric Mean)	XX	Grab
		Between 10 a.m. and 4 p.m.	

(2) For the [**insert expansion design flow**] flow facility:

E.coli / enterococci (*choose one)* bacteria per 100 mL of water shall not exceed the following:

	Discharge Limitation	**Monitoring Requirements**	
	Monthly Average	**Frequency**	**Sample Type**
E. coli/Enterococci N/100 mL	126/35 (Geometric Mean)	XX	Grab
		Between 10 a.m. and 4 p.m.	

d. Use an appropriately labeled separate and complete chlorine special condition for each flow tier.

6. Flow Used for Municipal Facility Limit Development

See Section H below**.**

F. Swamp and Marsh Waters

In a swamp environment, mixing is very limited. Due to the generally wide expanse of shallow, standing water, the effluent tends to displace ambient water so that initial mixing processes occur in an area where no significant dilution is available. There is very little turbulence and ambient mixing is mostly due to concentration gradients. Thus, it takes place very, very slowly.

Tidal marshes are periodically flooded at high tide but usually do not have standing water during the entire tidal cycle. Mixing in this situation is intermittent and complicated and is not amenable to analysis.

No mixing zones should be allowed in these situations unless the discharger provides actual physical/chemical data to demonstrate acceptable conditions. This means that the effluent itself should meet all applicable criteria prior to discharge. Due to the generally poor mixing and possibly high instream waste concentrations in portions of the receiving streams where these procedures will be applied, it is necessary that these "self-sustaining" effluent limits be utilized. TRC and other toxics should be treated as “end of pipe” limits.

In keeping with the preceding discussion, the following effluent limits for discharges from municipal treatment facilities into swamp and marsh waters where the discharge cannot be easily modeled are recommended. These limits have been found to be representative of "self-sustaining" effluents. In effect, this means that the effluent will not normally violate the stream standards even if the stream consists of 100% effluent.

Parameter	Monthly Average	Weekly Average
$CBOD_5$	10 mg/L	15 mg/L
TSS	10 mg/L	15 mg/L
TKN	3.0 mg/L	4.5 mg/L
D.O.	5.0 mg/L (minimum)	

These procedures were condensed from a March 9, 1987, SWCB memo entitled "Advisory Notification of Effluent Limits for Swamp and Marsh Waters". Contact Office of VPDES Permits for additional information concerning these limits if you have questions or concerns.

G. Certificates to Construct (CTC) and Certificates to Operate (CTO)

All CTCs and CTOs are processed by the regional offices. Grant funded projects do not have a separate procedure for CTC and CTO issuance. There are no wastewater engineering programs at DEQ to review preliminary engineering reports, plans, specifications, design documents or inspections of final projects. The water permit program managers must rely on the design engineer certification. Accordingly, we will not be asking for or receiving plans/specs for grant-funded projects for our review and processing.

On all projects, the application forms for either a CTCs or CTOs must be completed by the owner and the design engineer. The forms and instructions are on DEQ' website. These forms are then submitted to the water permit manager in the appropriate DEQ region. The form is reviewed for completion and sent to the regional permitting manager for approval and returned to the owner and design engineer. See section L for suggested transmittal letters for the forms.

H. Design Flow and Operational Flow

Position on Flow Used for Municipal Facility Limit Development

This position is intended to clarify the appropriate flow used in the development of permit limits for municipal wastewater treatment facilities (POTWs and PVOTWs), and expectations with regard to the use of flow tiers for these facilities.

Background

WPMs considered the topic of the appropriate flow tier(s) to be used in evaluating reasonable potential and establishing effluent limits for municipal wastewater treatment plants. Some facilities have actual flows that are substantially lower than their design flow. For example, a facility in NRO has asked for a lower flow tier to get relief on zinc limits (lower flow allows additional dilution). Their actual flows average approximately 0.09 MGD. The design flow is 0.9 MGD[3].

Standard agency practice and policy has been to use design flow. Of approximately 558 municipal permits in Virginia, all but 16 permits have used the design flow as a basis for evaluation. For those 16 facilities, "operational" flow tiers have been used in the reasonable potential evaluation and setting of effluent limits. Operational flow tiers are established at values lower than the facility design flow at levels requested by the permittee.

EPA has indicated that states have flexibility[4] to use design flow or other appropriate flows in setting water quality-based effluent limits for municipal facilities (81 FR 31356; May 18, 2016). As noted, DEQ has traditionally used design flow based on regulation (9VAC25-31-230 B; 40 CFR 122.45(b)(1)) and guidance[5] and for the reasons stated below.

Design flow is the applicability basis for many permitting-related programs and requirements, including:

1. It is the basis of design as documented in CTCs and CTOs;
2. It is the defining threshold in the VPDES program for classifying a major facility;

[3] The term design flow is not explicitly defined in the regulations, but it is a term widely used and applied in the context of municipal sewage treatment plants.

[4] In a 2016 proposal to clarify that only limits based on technology standards must be based on design flow, EPA stated that "Although this proposal would clarify this flexibility for POTWs, it is not intended to preclude or restrict a permitting authority from using the POTW design flow for the purpose of developing WQBELs." Final action on this proposal was deferred (84 FR 3332; 2/12/19).

[5] See GM-2011, pg. 27. Also see, *EPA NPDES Permit Writers' Manual*, September 2010, pg. 5-7.

3. It is the basis of many Chesapeake Bay Program requirements, including classification of facilities (e.g. significant/nonsignificant), application of the 'Tech Reg' requirements (9VAC25-40), and the basis of WLAs;
4. Pretreatment and WET program applicability thresholds are triggered by design flow;
5. The NPDES/VPDES regulations require the use of design flow for POTWs when evaluating production-based limits, which is interpreted to apply to the ELG parameters BOD and TSS. Therefore, the use of design flow is a clear requirement for certain programs/regulations.[6]

Recommended Position

All future POTW permitting decisions are to use facility design flow, or a flow that is based on treatment capacity and is also associated with a CTC/CTO. This flow is to be used to evaluate all parameters governed by the VPDES individual permit.

Past permitting decisions that incorporated an operational flow tier may be allowed to remain in the current permit. The decision to continue to allow existing operational flow tiers to remain in place shall be evaluated with each permit cycle. If continued, only one operation flow tier is to be recognized. All other operational flow tiers, or tiers not continued, are to be removed upon permit reissuance. No new operational flow tier-based permits will be issued.

Basis

1. 9VAC25-31-230 B provides, under the heading "Production-based Limits" that "In the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow." It is logical and appropriate to apply what has been interpreted to focus on the ELG parameters BOD and TSS to all pollutants.
2. The use of design flow is protective of water quality and has been standard agency practice in part to ensure that POTWs have flexibility to address growth and other factors such as wet weather that can vary significantly.
3. Use of a flow other than design flow would complicate the permitting process by using different flows to evaluate different pollutants. For instance, BOD, TSS and ammonia (based on the developing ammonia guidance for the new criteria) use design flow, as does TN/TP under the ChesBay Program. Certain toxics may consider using an operational flow tier. This creates a very complicated regulatory/permitting landscape.
4. DEQ does not want to create an incentive for municipal wastewater treatment facilities to take existing treatment equipment offline to reduce rated flow.
5. Allowing continuation of the limited number of existing permits that include flow tiers is reasonable based on the following factors:
    a. These permits remain protective of water quality (i.e., limits have been developed to address specific flow tiers and such limits are applied based on the level of facility operation).
    b. These permits are generally older and some earlier documents suggested that flow tiers could be considered (e.g., the Application Addendum asks about other discharge flow tiers and a prior version asks, "Is your facility's design flow considerably greater than your current flow?)

[6] 9VAC25-31-230 B "Production-based Limits. 1. In the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow." (See also, 40 CFR 122.45 (b)).

c. Existing permits that include an operational flow tier typically include tiered (i.e., alternative) limits, with one set of limits based on design flow as provided for in 9VAC25-31-230 B 1.

It should be noted that as a result of our general agency practice many facilities have taken measures to comply with permit requirements that use design flow as a basis. Actions/measures have included: installing additional treatment, relocation of outfalls to larger receiving waters, conducting WER or BLM studies and translator studies. The costs borne by these facilities to meet permit limits have often been considerable, thus, changing our approach would potentially raise an issue of inequitable treatment.

I. Special Standards for pH

If the WQS for pH in the receiving stream is outside of the 6.0 S.U – 9.0 S.U. range (FEG secondary treatment standards, 40CFR 125.3 and 133), the limitations applied should be the more conservative of the upper and lower bounds. For example, if the WQS for pH in the receiving stream is 6.5 S.U – 9.5 S.U and the secondary treatment regulation applies or DEQ is applying secondary treatment regulation requirements to non-POTWs facility as best judgement, a minimum pH limit of 6.5 SU and a maximum pH limit of 9.0 SU should be imposed. Similarly, if the WQS for pH is between 3.7 and 8.0 S.U., the limitations applied should be 6.0 S.U to 8.0 S.U (the more conservative of the upper and lower bounds).

SECTION IN-1

INDUSTRIAL PERMIT DRAFTING

Table of Contents

A. NPDES Permit Rating Worksheet

EPA's NPDES Permit Rating Worksheet is completed for every industrial facility whenever a permit is issued, reissued, modified or coverage under a general permit for an industrial facility is proposed. The completion of this worksheet will establish whether or not the industrial facility is considered a major discharger. The worksheet does not need to be completed if the permit meets all of the three following conditions:

- The permit is being reissued or modified;
- The rating on the new worksheet has been done previously; and
- No changes to the plant processes or the permit have occurred that would change the previous rating.

1. Documentation

The completed worksheet is part of the official file on the facility. If the rating should change for a facility, the RO should notify the Office of VPDES Permits of the change and the major/minor status of the permit will be determined. When a major is identified by the rating system, a copy of the rating worksheet should be forwarded to the Office of VPDES Permits. If a major facility is changed and no longer qualifies as a major, the RO should forward a copy of that worksheet to the Office of VPDES Permits so that a current list of major dischargers can be maintained.

2. Worksheet Supplemental Instructions

The worksheet should be totally completed. Skipping one or more Factors listed in the worksheet will negate the validity of the final score. A blank worksheet form can be found on page 3 of this Section and is also available on DEQnet.

a. Factor 1 - the SIC code must be entered in the Primary SIC code Blocks. The PCS SIC Code can be left blank. Confirm that the SIC Code on the application is correct, both in terms of the industrial activity at the facility and in terms of the 1987 SIC Code Book. Enter as many as four secondary SIC codes if they apply to the facility. The most important SIC codes will be the ones that represent the primary activity at the facility and the one that has the highest total toxicity number in Appendix A of the Worksheet instructions. Enter the industrial subcategory code which corresponds to this latter SIC code. The most important part of Factor 1 is that if the facility does not have any process waste discharges it gets a 0 rating and 0 points in this factor. If the facility has only stormwater discharges, check the "No Process Waste Streams" box.

b. Factor 2 - in this factor there are two options for determining a score. The use of the Section B method is preferable to the Section A method. For Section B, the percent instream waste concentration (IWC) is calculated by dividing the maximum 30-day average effluent flow by the sum of the 7Q10 flow of the receiving stream and the maximum 30-day average flow and then multiplying by 100.

$$\text{IWC} = \frac{\text{Max 30 day average flow}}{\text{7Q10} + \text{Max 30 day average flow}} \text{ x } 100$$

Use the chart in Figure 1 of the Worksheet instructions to determine the effluent type. If the 7Q10 is not available, the Section A method may be used with maximum 30-day

average flow reported on the application. If the maximum 30-day average flow is not available, use the maximum daily flow.

c. Factor 3 - asks for information on conventional pollutants. If possible, the information should come from the permit being drafted for issuance, reissuance, or modification. The permit limits used for the rating must be converted to lbs/day before assigning points. When an industrial facility also has a Watershed General Permit addressing nutrients, use the individual permit information to rate the facility.

d. Factor 4 - asks if there are any public water supplies within 50 miles downstream of the discharge. This information should be available from the river basin maps in the Water Quality Standards Regulation. It is important to note that if the facility has no process waste discharges the rating and points are 0 for this factor. If the facility has only stormwater discharges, check the "No Process Waste Streams" box.

e. Factor 5 - applies to nonconventional and toxic pollutants, not pH or temperature. Part B of this factor will be answered based on available instream monitoring data. The answer for Part C will depend on if the facility has WET monitoring, and if they do, whether or not they have failed enough acute and chronic toxicity tests. If there are any questions on the response to this part, call the Office of VPDES Permits for guidance.

f. Factor 6 - Part A asks for the Headquarters Priority Permit Indicator (HPRI) code, which are found in the instructions. If Part A applies, check the appropriate box in Part B and check the "NO" box in Part C.

g. Total Score - if the total score is 80 or higher, the facility is considered a major. Currently, facilities which score less than 80 on the rating sheet are not being considered for discretionary major designation.

NPDES PERMIT RATING WORKSHEET

☐ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status change
☐ Deletion

VPDES NO.:
Facility Name:
City:
Receiving Water:

Is this facility a steam electric power plant (SIC=4911) with <u>one or more</u> of the following characteristics?
1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

☐ YES; score is 600 (stop here) ☐ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ YES; score is 700 (stop here)
☐ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code:
Primary SIC Code: Other SIC Codes:
Industrial Subcategory Code: (Code 000 if no subcategory)

(Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one.)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
☐No process waste streams	0	0	☐ 3.	3	15	☐ 7.	7	35
☐ 1.	1	5	☐ 4.	4	20	☐ 8.	8	40
☐ 2.	2	10	☐ 5.	5	25	☐ 9.	9	45
			☐ 6.	6	30	☐10.	10	50

Code Number Checked:

Total Points Factor 1:

FACTOR 2: Flow/Stream Flow Volume (*Complete either Section A or Section B; Check only one. See instructions.)*

Section A ☐ Wastewater Flow Only Considered

Wastewater Type		Code	Points
Type I: Flow < 5 MGD	☒	11	0
Flow 5 to 10 MGD	☐	12	10
Flow > 10 to 50 MGD	☒	13	20
Flow > 50 MGD	☐	14	30
Type II: Flow < 1 MGD	☐	21	10
Flow 1 to 5 MGD	☐	22	20
Flow > 5 to 10 MGD	☐	23	30
Flow > 10 MGD	☐	24	50
Type III: Flow < 1 MGD	☐	31	0
Flow 1 to 5 MGD	☐	32	10
Flow > 5 to 10 MGD	☐	33	20
Flow > 10 MGD	☐	34	30

Section B ☐Wastewater and Stream Flow Considered

Wastewater Type	Percent of instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	☐	41	0
	10 % to < 50 %	☐	42	10
	> 50 %	☐	43	20
Type II:	< 10 %	☐	51	0
	10 % to <50 %	☐	52	20
	> 50 %	☐	53	30

Code Checked from Section A or B:

Total Points Factor 2:

FACTOR 3: Conventional Pollutants *(Only when limited by the permit)*

A. Oxygen Demanding Pollutant: (check one) ☐ BOD ☐ COD ☐ Other:

			Code	*Points*
Permit Limits: (check one)	☐	< 100 lbs/day	1	0
	☐	100 to 1000 lbs/day	2	5
	☐	> 1000 to 3000 lbs/day	3	15
	☐	> 3000 lbs/day	4	20

Code Checked:

Points Scored:

B. Total Suspended Solids (TSS)

			Code	*Points*
Permit Limits: (check one)	☐	< 100 lbs/day	1	0
	☐	100 to 1000 lbs/day	2	5
	☐	> 1000 to 5000 lbs/day	3	15
	☐	> 5000 lbs/day	4	20

Code Checked:

Points Scored:

C. Nitrogen Pollutant: (check one) ☐ Ammonia ☐ Other:

		Nitrogen Equivalent	*Code*	*Points*
Permit Limits: (check one)	☐	< 300 lbs/day	1	0
	☐	300 to 1000 lbs/day	2	5
	☐	> 1000 to 3000 lbs/day	3	15
	☐	> 3000 lbs/day	4	20

Code Checked:

Points Scored:

Total Points Factor 3:

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

☐ YES (If yes, check toxicity potential number below)

☐ NO (If no, go to Factor 5)

Determine the *human health* toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column ☐ check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
■ No process waste streams	0	0	☐ 3.	3	0	☐ 7.	7	15
☐ 1.	1	0	☐ 4.	4	0	☐ 8.	8	20
☐ 2.	2	0	☐ 5.	5	5	☐ 9.	9	25
			☐ 6.	6	10	☐ 10.	10	30

Code Number Checked:

Total Points Factor 4:_

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge:

		Code	Points
☐	Yes (Temp)	1	10
☐	No	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

		Code	Points
☐	Yes	1	0
☐	No	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

		Code	Points
☐	Yes	1	10
☐	No	2	0

Code Number Checked: A B C

Points Factor 5: A + B + C = _____ TOTAL

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2):
Enter the multiplication factor that corresponds to the flow code:

Check appropriate facility HPRI Code (from PCS):

	HPRI#	*Code*	*HPRI Score*
☐	1	1	20
☐	2	2	0
☐	3	3	30
☐	4	4	0
☐	5	5	20

HPRI code checked:

Flow Code	*Multiplication Factor*
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

Base Score: (HPRI Score) ___ X (Multiplication Factor) = (TOTAL POINTS)

B. Additional Points ☐ NEP Program
For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
☐ Yes	1	10
☐ No	2	0

C. Additional Points ☐ Great Lakes Area of Concern
For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see Instructions)

	Code	Points
☐ Yes	1	10
☐ No	2	0

Code Number Checked: A ___ B ___ C ___

Points Factor 6: A __ + B __ + C __ = ___ TOTAL

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	_____
2	Flows/Streamflow Volume	_____
3	Conventional Pollutants	_____
4	Public Health Impacts	_____
5	Water Quality Factors	_____
6	Proximity to Near Coastal Waters	_____
	TOTAL (Factors 1 through 6)	_____

S1. Is the total score equal to or greater than 80? ☐ Yes (Facility is a major) ☐ No

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☐ No

☐ Yes (Add 500 points to the above score and provide reason below:

Reason:

NEW SCORE:
OLD SCORE:

_____
Permit Reviewer's Name

_____
Phone Number

_____
Date

B. INSTRUCTIONS FOR COMPLETING THE NPDES PERMIT RATING WORKSHEET

General Information

From the permit, enter the VPDES number, facility name, city, and the receiving water name.

Answer the next two questions regarding steam electric facilities and stormwater permits. An answer of "yes" to either of these questions automatically makes this facility a major. A steam electric major will be automatically assigned a score of 600 and stormwater major will be assigned a score of 700. If either of the "yes" boxes are checked, there is no need to go further.

FACTOR 1: Toxic Pollutant Potential

Determine what SIC codes are assigned to the facility covered by the permit. This will usually be in Form 2C. Be sure that the SIC codes are those contained in the latest SIC code book published in 1987. If the facility has more than one outfall, there will be a Section II for each outfall. When multiple SIC codes are assigned, select the one that appears to represent the primary activity at the facility and enter it in the primary SIC code box. Then enter up to three other SIC codes in the indicated boxes, selecting those that appear most significant if more than four have been reported (this will be rare).

Use the primary SIC code to search Appendix A of these instructions to determine if there are industrial subcategories for that SIC code. If not, there will be a single entry in Appendix A for that SIC code or no entry at all. If there are subcategories (indicated by multiple entries for one SIC Code), select the subcategory that best corresponds to this facility. Use the CFR part and subpart number to help you identify the appropriate subcategory. Continue this procedure for each of the other SIC codes recorded. Select the industrial subcategory for the SIC code that has the highest toxicity group. Enter the industrial subcategory code on the rating sheet (use 000 if there is no subcategory) and check the appropriate TOTAL toxicity potential number. **Note that regardless of the facility's SIC code, if the facility discharges no process waste stream to a receiving water, the points scored are 0**.

Enter the appropriate code number and points scored for Factor 1 in the shaded area.

FACTOR 2: Flow/Stream Flow Volume

This factor consists of two methods, A and B. Section A or Section B should be completed, but not both. Section A takes into account only the quantity and type of wastewater discharge from the facility. Section B scores the facility for not only the quantity and type of wastewater discharged, but also its relationship to the receiving stream low flow.

Determine the wastewater type (I, II, or III) based on the relative volumes of noncontact cooling waters, process wastewaters, and other wastewaters in the total combined discharge from the facility.

a. Type I: Noncontact cooling waters are once-through cooling only and do not include blowdown from cooling towers and recirculating cooling systems.

b. Type II: Process wastewaters include wastewaters resulting from most manufacturing processes, contact cooling water, and contaminated surface run-off.

c. Type III: Other wastewaters include boiler blowdown, blowdown from cooling towers and recirculating cooling systems, sanitary wastewater, and uncontaminated surface runoff.

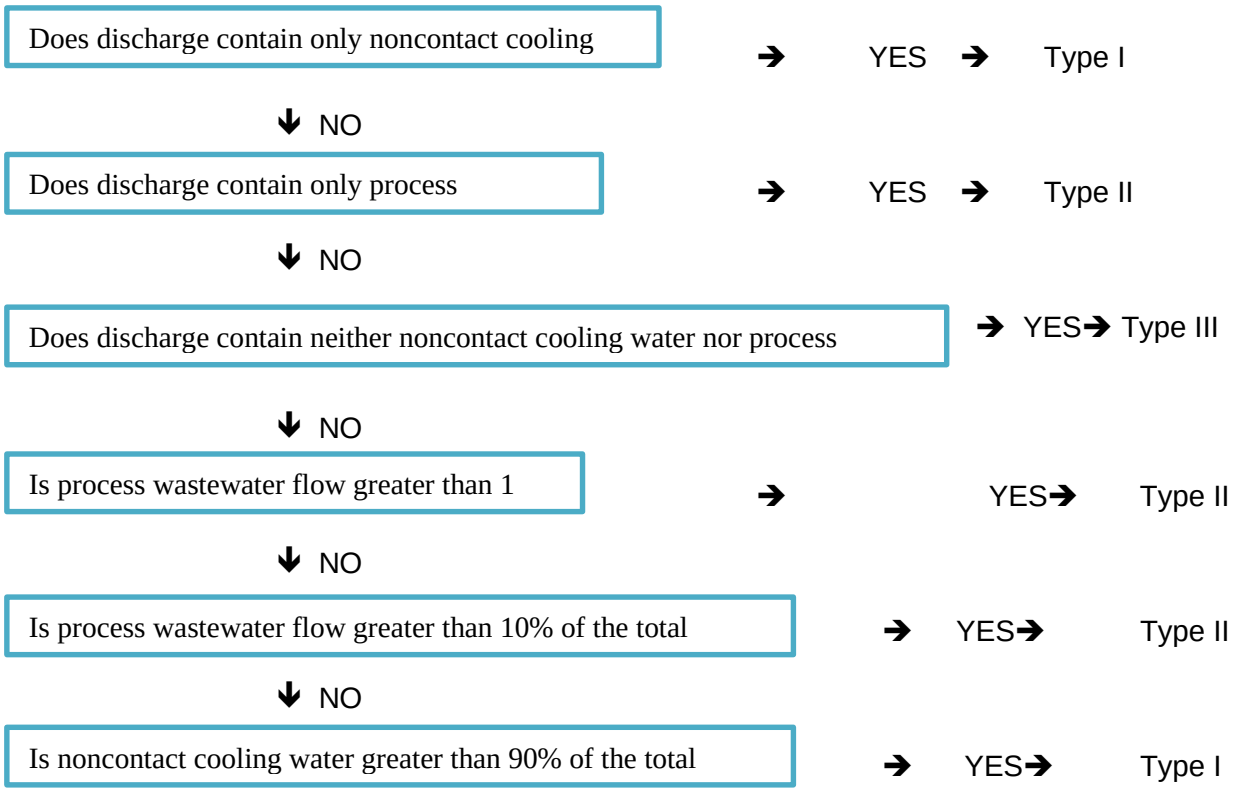
The relative volumes of different wastewaters discharged can usually be determined from the permit application. Use Figure 1 to determine the wastewater type. If the entire discharge is noncontact cooling water, it is Type I. If it is all process wastewater, it is Type II. If it is neither noncontact cooling water nor process wastewater, it is Type III. If the flow contains more than 1.0 MGD of process wastewater or more than 10 percent process wastewater, it is Type II. If the flow is predominantly noncontact cooling water (more than 90 percent) and contains less than 1.0 MGD of process wastewaters, it is Type I.

Once the wastewater type has been determined, compute the total volume of wastewater discharged for all outfalls. This is the sum of the daily average discharges for each outfall shown in the permit application.

On the worksheet under the type of wastewater selected, check the appropriate flow range. Although a facility may discharge some of any or all of the three types of wastewater, only one flow range and type should be checked representing the composite of all flows. Record the two-digit flow code checked in the code box and the associated points in the total points box in the shaded area under Section A.

For a few selected facilities, the volume of wastewater discharged may be large relative to the low flow of the receiving water. Section B of the rating work sheet allows the reviewer to calculate rating points based on the relative amounts and types of wastewater and receiving stream flows. The reviewer should identify the type of wastewater discharged from the facility based on the procedure described above and in Figure 1. The other piece of information that will be necessary to complete Section B is the receiving stream's low flow (i.e., the 7Q10 flow or the state standard). Check off the box that most closely describes the circumstances at this facility and enter the appropriate code and points in the shaded box under Section B.

Exhibit IN-1-1. Wastewater Type Selection Flow Diagram



FACTOR 3: Conventional Pollutants

Data on conventional pollutants are obtained from the VPDES permit. Review the permit to see what traditional pollutants (i.e., oxygen demanding, TSS, and Ammonia) are limited. Conventional pollutant loads are to be computed only when they are limited by the permit. Use the current permit limits if the permit contains two or more sets of limits for each outfall.

Add the daily average load for the oxygen-demanding pollutant and identify on the work sheet what this parameter is (e.g., BOD, COD, TOC, UOD, etc.). If the permit is limited for more than one oxygen-demanding pollutant, use the one that provides the highest load. Most effluent limits specify loads in kilograms or pounds per day. However, they may sometimes be given in concentration units (usually mg/1) or in loads per production unit, such as kg BOD/1000 kg of product. In such cases, the discharge must be converted to loads in terms of pounds per day using standard conversion factors and flow and/or production data from the application or the discharge monitoring reports (DMRs).

Once the load has been determined, check the appropriate box, and enter the code number checked and the points scored in the shaded area. Continue this for TSS and Ammonia if these pollutants are limited.

FACTOR 4: Public Health Impact

Determine if there is a public drinking water supply within 50 miles downstream of the facility. (A drinking water intake may include infiltration galleries or other methods of conveyance that ultimately get its water from the receiving stream of the VPDES facility). If this condition is

true, answer "yes" to the question posed on the rating work sheet. Determine the human health toxicity potential from Appendix A in a similar manner as outlined in Factor 1 of this instruction sheet. Once the toxicity number has been identified, enter the code number and the points scored in the shaded area.

If there are no drinking water utilities within 50 miles downstream of this facility, answer "no" to this question and continue to Factor 5.

FACTOR 5: Water Quality Factors

Determine if the discharge is subject to water quality limiting factors. This will be true if the discharge is to a stream designated as water quality limiting by the State agency or for which waste-load allocations have been established. This will also be true if some of the effluent limits in the permit are based on water quality conditions in the receiving stream rather than on effluent guidelines (technology-based, the usual case). Making this determination may be somewhat difficult. Sources to review for the necessary information are the Fact Sheet, 305(b)/303(d) Water Quality Assessment Integrated Reports submitted to EPA biennially. etc.

Some facilities may have had whole effluent toxicity studies performed within the last two years. If this is true and the results of those tests indicated that the effluent from this facility shows toxicity, answer "yes" to the question in Section C of this factor.

After answering questions A, B, and C, enter the appropriate code and points in the shaded area.

FACTOR 6: Proximity to Near Coastal Waters

Facilities may receive additional points if their discharge is to a water that is considered a "near coastal water." The following are the definitions of each code:

Code	Description
1.	ɔ403(c) direct ocean discharger: dischargers seaward of the inner baseline of territorial seas. These facilities were identified in the ɔ403(c) Report to Congress.
2.	Discharger in Coastal county not in a major estuary drainage area and not a ɔ403(c) discharger.
3.	Discharger into a major estuary or estuary drainage area.
4.	Discharger in a non-coastal county, some part of which is in an estuary drainage area, discharging into fresh non-tidal waters.
5.	Great Lakes discharger: dischargers that are located in a county that physically borders the Great Lakes except where the discharge is diverted into another basin (e.g., Mississippi River).

The reviewer should enter the two-digit flow code found in the section of the worksheet known as Factor 2. If the facility is not a near coastal facility, skip this factor entirely and continue to the score summary.

Identify the appropriate multiplication factor based on the Factor 2 flow code. Enter the HPRI score and the multiplication factor in the appropriate blanks and perform the multiplication. Enter the HPRI code checked and the points scored for Section A in the shaded area.

Facilities will receive additional points if they are discharging to an estuary that is listed in the National Estuary Protection (NEP) program (see Appendix B) or the Chesapeake Bay (HPRI Code 3). Alternatively, facilities can receive additional points if they discharge to one of the Great Lakes Areas of Concern. To receive points under the Great Lakes Area of Concern section, the facility must be discharging at least one of the pollutants of concern for each of the geographic locations (see Appendix C). Points may be scored for either Section B or Section C of this factor, but not both.

Score Summary

Enter the total points scored under each of the six factors considered in this rating work sheet. Add the scores together and if the sum is greater than or equal to 80, the facility is considered a major. If a facility has scored less than 80 points and the reviewer feels that the facility should still be considered a major, the reviewer may make the facility a discretionary major by adding 500 points to the total score of each of the factors. Each EPA Region is allocated a certain number of discretionary majors. This number is a flat 50 or 10% of the actual majors plus 40, whichever is higher. Example: If Region I had 300 actual majors, the number of allocated discretionary majors would be 70 (i.e., (300 X .1) + 40 = 70). Should the reviewer wish to make this facility a discretionary major, it is strongly urged that the reasoning for this decision be provided on the rating work sheet.

To assist reviewers in ascertaining the candidates for discretionary addition, Appendix D provides some guidelines for ranking specific industrial categories.

NPDES RATING WORKSHEET APPENDIX A

SIC CODE/CFR CROSS REFERENCE AND TOTAL AND HUMAN HEALTH TOXICITY NUMBERS

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
211	BEEF CATTLE FEEDLOTS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
212	BEEF CATTLE, EXCEPT FEEDLOTS		NR	BEEF CATTLE NOT IN FEEDLOTS	1	1	99
213	HOGS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
213	HOGS		NR	HOGS NOT IN FEEDLOTS	1	1	99
214	SHEEP AND GOATS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
214	SHEEP AND GOATS		NR	SHEEP AND GOATS NOT IN FEEDLOTS	1	1	99
219	GENERAL LIVESTOCK, NEC		NR	GENERAL LIVESTOCK FARMS	1	1	99
241	DAIRY FARMS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
241	DAIRY FARMS		NR	DAIRY CATTLE NOT CONFINED	1	1	99
251	BROILER, FRYER AND ROASTER CHICKENS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
252	CHICKEN EGGS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
253	TURKEY AND TURKEY EGGS	412	A	ALL FEEDLOTS EXCEPT DUCKS	1	1	0
254	POULTRY HATCHERIES		NR	HATCHERIES WITHOUT POULTRY FEEDING	1	1	99
259	POULTRY AND EGGS, NEC	412	B	DUCKS	1	1	0
259	POULTRY AND EGGS, NEC		NR	OTHER POULTRY FARMS	1	1	99
271	FUR-BEARING ANIMALS AND RABBITS		NR		1	1	99
272	HORSES AND OTHER EQUINES		NR		1	1	99
273	ANIMAL AQUACULTURE		NR		1	1	99
279	ANIMAL SPECIALTIES, NEC		NR		1	1	99
291	GENERAL FARMS PRIMARILY LIVESTOCK		NR		1	1	99
721	CROP PLANTING & PROTECTION		NR	CROP DUSTING & SPRAYING	6	6	99
721	CROP PLANTING & PROTECTION		NR	CROP PLANTING/CULTIVATION	1	1	99
921	FISH HATCHERIES AND PRESERVES		NR		1	1	99
1011	IRON ORES	440	A	IRON ORE	7	7	0
1021	COPPER ORES	440	J	Cu, Pb, Zn, Ag, Au, Mo Ores	8	10	0
1031	LEAD AND ZINC ORES	440	J	Cu, Pb, Zn, Ag, Au, Mo Ores	8	10	0
1041	GOLD ORES	440	J	Cu, Pb, Zn, Ag, Au, Mo Ores	8	10	1
1041	GOLD ORES	440	M	GOLD PLACER MINES	8	9	2
1044	SILVER ORES	440	J	Cu, Pb, Zn, Ag, Au, Mo Ores	8	10	0
1099	BAUXITE & OTHER ALUMINUM ORES	440	S	ALUMINUM ORE	5	10	0
1061	FERROALLOY ORES, EXCEPT VANADIUM	440	F	TUNGSTEN ORE	1	6	1
1061	FERROALLOY ORES, EXCEPT VANADIUM	440	G	NICKEL ORES	8	8	2
1061	FERROALLOY ORES, EXCEPT VANADIUM	440	J	Cu, Pb, Zn, Ag, Au, Mo Ores	7	7	3
1061	FERROALLOY ORES, EXCEPT VANADIUM		NR	FERROALLOY ORES, NEC	8	8	99
1081	METAL MINING SERVICES		NR	EXPLORATION/DEVELOPMENT	8	8	99
1099	MERCURY ORES	440	D	MERCURY ORES	8	8	0
1094	URANIUM-RADIUM-VANADIUM ORES	440	C	URANIUM-RADIUM-VANADIUM ORES	8	9	1
1094	URANIUM-RADIUM-VANADIUM ORES	440	H	VANADIUM ORE	8	8	2
1099	METAL ORES, NEC	440	E	TITANIUM ORES	1	4	1
1099	METAL ORES, NEC	440	I	ANTIMONY ORE	8	8	2
1099	METAL ORES, NEC	440	K	PLATINUM ORES	8	8	3
1099	METAL ORES, NEC		NR	METAL ORE, NEC	8	8	99
1231	ANTHRACITE MINING	434	B	COAL PREPARATION PLANTS	6	6	4
1231	ANTHRACITE MINING	434	C	ACID OR FERRUGINOUS MINE DRAINAGE	5	5	1
1231	ANTHRACITE MINING	434	D	ALKALINE MINE DRAINAGE	5	5	2
1231	ANTHRACITE MINING	434	E	POST MINING AREAS	5	5	5
1241	ANTHRACITE MINING SERVICES		NR		5	5	99
1221	BITUMINOUS COAL AND LIGNITE	434	B	COAL PREPARATION PLANTS	6	5	3
1221	BITUMINOUS COAL AND LIGNITE	434	C	ACID OR FERRUGINOUS MINE DRAINAGE	5	5	1
1221	BITUMINOUS COAL AND LIGNITE	434	D	ALKALINE MINE DRAINAGE	5	5	2
1221	BITUMINOUS COAL AND LIGNITE	434	E	POST MINING AREAS	5	5	4
1222	BITUMINOUS COAL AND LIGNITE	434	B	COAL PREPARATION PLANTS	6	6	5
1222	BITUMINOUS COAL AND LIGNITE	434	C	ACID OR FERRUGINOUS MINE DRAINAGE	5	5	6
1222	BITUMINOUS COAL AND LIGNITE	434	D	ALKALINE MINE DRAINAGE	5	5	7
1222	BITUMINOUS COAL AND LIGNITE	434	E	POST MINING AREAS	5	5	8

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
1241	BITUMINOUS COAL AND LIGNITE MINING SVS		NR		5	5	99
1311	CRUDE PETROLEUM AND NATURAL GAS	435	A	OFFSHORE	1	1	1
1311	CRUDE PETROLEUM AND NATURAL GAS	435	C	ONSHORE	1	1	2
1311	CRUDE PETROLEUM AND NATURAL GAS	435	D	COASTAL	1	1	3
1311	CRUDE PETROLEUM AND NATURAL GAS	435	E	AGRICULTURAL & WILDLIFE WATER USE	1	1	4
1311	CRUDE PETROLEUM AND NATURAL GAS	435	F	STRIPPER	5	5	5
1321	NATURAL GAS LIQUIDS		NR		1	1	99
1381	DRILLING OIL AND GAS WELLS	435	C	ONSHORE	1	1	0
1382	OIL AND GAS FIELD EXPLORATION SVS		NR		1	1	99
1389	OIL AND GAS FIELD SERVICES, NEC		NR		1	1	99
1411	DIMENSION STONE	436	A	DIMENSION STONE	1	1	0
1422	CRUSHED AND BROKEN LIMESTONE	436	B	CRUSHED STONE	1	1	0
1423	CRUSHED AND BROKEN GRANITE	436	B	CRUSHED STONE	1	1	0
1429	CRUSHED AND BROKEN STONE, NEC	436	B	CRUSHED STONE	1	1	0
1442	CONSTRUCTION SAND AND GRAVEL	436	C	CONSTRUCTION SAND AND GRAVEL	1	1	0
1446	INDUSTRIAL SAND	436	D	INDUSTRIAL SAND	1	1	0
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	V	BENTONITE	1	1	0
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AA	FIRE CLAY	1	1	0
1459	CLAY, CERAMIC & REFRACTORY MATERIALS		NR	FULLER'S EARTH	1	1	99
1455	KAOLIN AND BALL CLAY	436	AG	KAOLIN	1	1	1
1455	KAOLIN AND BALL CLAY	436	AH	BALL CLAY	1	1	2
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AI	FELDSPAR	1	1	5
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AC	KYANITE	1	1	2
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AD	SHALE AND COMMON CLAY	1	1	3
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AE	APLITE	1	1	4
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	W	MAGNESITE	1	1	1
1459	CLAY, CERAMIC & REFRACTORY MATERIALS		NR	OTHER CLAY, CERAMIC & REFR MINERALS	1	1	99
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	J	BARITE	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	K	FLUORSPAR	1	1	0
1474	POTASH, SODA AND BORATE MINERALS	436	L	SALINES FROM BRINE LAKE	1	1	1
1474	POTASH, SODA AND BORATE MINERALS	436	M	POTASH	1	1	3
1474	POTASH, SODA AND BORATE MINERALS	436	N	BORAX	1	1	2
1474	POTASH, SODA AND BORATE MINERALS	436	O	SODIUM SULFATE	1	1	4
1474	POTASH, SODA AND BORATE MINERALS		NR	OTHER POTASH AND BORATE MINERALS, NR	1	1	99
1474	POTASH, SODA AND BORATE MINERALS	436	P	TRONA	1	1	5
1475	PHOSPHATE ROCK	436	R	PHOSPHATE ROCK	6	6	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	Q	ROCK SALT	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	S	FRASCH SULFER	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING	436	T	MINERAL PIGMENTS	1	1	1
1479	CHEMICAL & FERTILIZER MINERAL MINING	436	U	LITHIUM	1	1	2
1479	CHEMICAL & FERTILIZER MINERAL MINING		NR	OTHER CHEMICAL/FERTILIZER MINERALS	1	1	99
1481	NONMETALLIC MINERALS (EXCEPT FUELS) SERVICE		NR		1	1	99
1499	MISC NONMETALLIC MINERALS, NEC	436	E	GYPSUM	1	1	0
1499	MISC NONMETALLIC MINERALS, NEC	436	AJ	TALC, STEATITE, SOAPSTONE AND PYROPHYLLITE	1	1	0
1499	MISC NONMETALLIC MINERALS, NEC	436	G	ASBESTOS AND WOLLASTONITE	1	1	2

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1499	MISC NONMETALLIC MINERALS, NEC	436	F	ASPHALTIC MINERAL	1	1	1
1499	MISC NONMETALLIC MINERALS, NEC	436	I	MICA AND SERACITE	1	1	3
1499	MISC NONMETALLIC MINERALS, NEC	436	X	DIATOMITE	1	1	4
1499	MISC NONMETALLIC MINERALS, NEC	436	Y	JADE	1	1	5
1499	MISC NONMETALLIC MINERALS, NEC	436	AF	TRIPOLI	1	1	6
1499	MISC NONMETALLIC MINERALS, NEC	436	AK	GARNET	1	1	7
1499	MISC NONMETALLIC MINERALS, NEC	436	AL	GRAPHITE	1	1	8
1499	MISC NONMETALLIC MINERALS, NEC		NR	OTHER MISC NONMETALLIC MINERAL	1	1	99
2011	MEAT PACKING PLANTS	432	A	SIMPLE SLAUGHTERHOUSE	1	1	1
2011	MEAT PACKING PLANTS	432	B	COMPLEX SLAUGHTERHOUSE	1	1	2
2011	MEAT PACKING PLANTS	432	C	LOW-PROCESSING PACKING HOUSE	1	1	3
2011	MEAT PACKING PLANTS	432	D	HIGH-PROCESSING PACKING HOUSE	1	1	4
2013	SAUSAGES & OTHER PREPARED MEATS	432	E	SMALL PROCESSOR	1	1	1
2013	SAUSAGES & OTHER PREPARED MEATS	432	F	MEAT CUTTER	1	1	2
2013	SAUSAGES & OTHER PREPARED MEATS	432	G	SAUSAGE AND LUNCHEON MEATS PROCESSOR	1	1	3
2013	SAUSAGES & OTHER PREPARED MEATS	432	H	HAM PROCESSOR	1	1	4
2013	SAUSAGES & OTHER PREPARED MEATS	432	I	CANNED MEATS PROCESSOR	1	1	5
2015	POULTRY DRESSING PLANTS	432	B	COMPLEX SLAUGHTERHOUSE	1	1	2
2015	POULTRY DRESSING PLANTS	432	A	SIMPLE SLAUGHTERHOUSE	1	1	1
2015	POULTRY DRESSING PLANTS	432	C	LOW-PROCESSING PACKING HOUSE	1	1	3
2015	POULTRY DRESSING PLANTS	432	D	HIGH-PROCESSING PACKING HOUSE	1	1	4
2015	POULTRY AND EGG PROCESSING	432	E	SMALL PROCESSOR	1	1	1
2015	POULTRY AND EGG PROCESSING	432	F	MEAT CUTTER	1	1	2
2015	POULTRY AND EGG PROCESSING	432	G	SAUSAGE AND LUNCHEON MEATS PROCESSOR	1	1	3
2015	POULTRY AND EGG PROCESSING	432	H	HAM PROCESSOR	1	1	4
2015	POULTRY AND EGG PROCESSING	432	I	CANNED MEATS PROCESSOR	1	1	5
2021	CREAMERY BUTTER	405	D	BUTTER	1	1	0
2022	CHEESE, NATURAL AND PROCESSED	405	F	NATURAL AND PROCESSED CHEESE	1	1	0
2023	CONDENSED AND EVAPORATED MILK	405	I	CONDENSED MILK	1	1	1
2023	CONDENSED AND EVAPORATED MILK	405	J	DRY MILK	1	1	2
2023	CONDENSED AND EVAPORATED MILK	405	K	CONDENSED WHEY	1	1	3
2023	CONDENSED AND EVAPORATED MILK	405	L	DRY WHEY	1	1	4
2024	ICE CREAM AND FROZEN DESSERTS	405	H	ICE CREAM, FROZEN DESSERTS, NOVELTIES	1	1	0
2026	FLUID MILK	405	B	FLUID PRODUCTS	1	1	1
2026	FLUID MILK	405	C	CULTURED PRODUCTS	1	1	2
2026	FLUID MILK	405	E	COTTAGE CHEESE AND CULTURED CREAM CHEESE	1	1	3
2026	FLUID MILK	405	G	MIX FOR ICE CREAM, OTHER DESSERTS	1	1	4
2032	CANNED SPECIALTIES	407	H	CANNED AND MISC. SPECIALTIES	1	1	0
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	A	APPLE JUICE	1	1	1
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	B	APPLE PRODUCTS	1	1	2
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	C	CITRUS PRODUCTS	1	1	3
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	F	CANNED AND PRESERVED FRUITS	1	1	4
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	G	CANNED AND PRESERVED VEGETABLES	1	1	5
2033	CANNED FRUITS, VEGETABLES, PRESERVES	407	H	CANNED AND PRESERVED SPECIALTIES	1	1	6
2034	DRIED & DEHYDRATED FRUITS, VEGS	407	E	DEHYDRATED POTATO PRODUCTS	1	1	1
2034	DRIED & DEHYDRATED FRUITS, VEGS	407	F	CANNED AND PRESERVED FRUITS	1	1	2
2034	DRIED & DEHYDRATED FRUITS, VEGS	407	G	CANNED AND PRESERVED VEGETABLES	1	1	3
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	F	CANNED AND PRESERVED FRUITS	1	1	1
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	G	CANNED AND PRESERVED VEGETABLES	1	1	2
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	H	CANNED AND MISC. SPECIALTIES	1	1	3
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	A	APPLE JUICES	1	1	1
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	G	CANNED AND PRESERVED VEGETABLES	1	1	6

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2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	C	CITRUS PRODUCTS	1	1	3
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	D	FROZEN POTATO PRODUCTS	1	1	4
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	F	CANNED AND PRESERVED FRUITS	1	1	5
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	B	APPLE PRODUCTS	1	1	2
2038	FROZEN SPECIALTIES	407	H	CANNED AND MISC SPECIALTIES	1	1	1
2053	FROZEN BAKERY PRODUCTS	407	H	CANNED AND MISC SPECIALTIES	1	1	2
2041	FLOUR & OTHER GRAIN MILL PRODUCTS	406	B	CORN DRY MILLING	1	1	1
2041	FLOUR & OTHER GRAIN MILL PRODUCTS	406	C	NORMAL WHEAT FLOUR MILLING	1	1	2
2041	FLOUR & OTHER GRAIN MILL PRODUCTS	406	D	BULGUR WHEAT FLOUR MILLING	1	1	3
2043	CEREAL BREAKFAST FOODS	406	H	HOT CEREAL	1	1	1
2043	CEREAL BREAKFAST FOODS	406	I	READY-TO-EAT-CEREAL	1	1	2
2044	RICE MILLING	406	E	NORMAL RICE MILLING	1	1	1
2044	RICE MILLING	406	F	PARBOILED RICE PROCESSING	1	1	2
2045	PREPARED FLOUR MIXES & DOUGHS		NR		1	1	99
2046	WET CORN MILLING	406	A	CORN WET MILLING	1	1	1
2046	WET CORN MILLING	406	J	WHEAT STARCH AND GLUTEN	1	1	2
2047	DOG AND CAT FOOD	406	G	ANIMAL FEED	1	1	1
2048	ANIMAL FEED, EXCEPT DOG & CAT FOOD	406	G	ANIMAL FEED	1	1	0
2051	BREAD & OTHER BAKERY PRODUCTS, EXCEPT COOKIES & CRACKERS		NR		1	1	99
2052	COOKIES AND CRACKERS		NR		1	1	99
2061	CANE SUGAR, EXCEPT REFINING ONLY	409	D	LOUISIANA RAW CANE SUGAR PROCESSING	1	1	1
2061	CANE SUGAR, EXCEPT REFINING ONLY	409	E	FLORIDA & TEXAS RAW CANE SUGAR PROCESSING	1	1	2
2061	CANE SUGAR, EXCEPT REFINING ONLY	409	F	HILO-HANAKUA/HAWAII CANE SUGAR PROCESSING	1	1	3
2061	CANE SUGAR, EXCEPT REFINING ONLY	409	G	HAWAIIAN RAW CANE SUGAR PROCESSING	1	1	4
2061	CANE SUGAR, EXCEPT REFINING ONLY	409	H	PUERTO RICAN RAW CANE SUGAR PROCESSING	1	1	5
2062	CANE SUGAR REFINING	409	B	CRYSTALLINE CANE SUGAR REFINING	1	1	1
2062	CANE SUGAR REFINING	409	C	LIQUID CANE SUGAR REFINING	1	1	2
2063	BEET SUGAR	409	A	BEET SUGAR PROCESSING	1	1	0
2068	SALTED & ROASTED NUTS & SEEDS		NR		1	1	99
2064	CANDY & OTHER CONFECTIONARY PRODUCTS		NR		1	1	99
2066	CHOCOLATE AND COCOA PRODUCTS		NR		1	1	99
2067	CHEWING GUM		NR		1	1	99
2074	COTTONSEED OIL MILLS		NR		1	1	99
2075	SOYBEAN OIL MILLS		NR		1	1	99
2076	VEG. OIL MILLS, EXCEPT CORN, COTTONSEED		NR		1	1	99
2077	ANIMAL AND MARINE FATS AND OILS	408	O	FISH MEAL PROCESSING	1	1	0
2077	ANIMAL AND MARINE FATS AND OILS		NR		1	1	99
2079	SHORTENING, TABLE OILS, MARGARINE & OTHERS		NR		1	1	99
2082	MALT BEVERAGES		NR		1	1	99
2083	MALT		NR		1	1	99
2084	WINES, BRANDY AND BRANDY SPIRITS		NR		1	1	99
2085	DISTILLED, RECTIFIED AND BLENDED LIQUORS		NR		1	1	99
2086	BOTTLED & CANNED SOFT DRINKS & CARBONATED WATERS		NR		1	1	99
2087	FLAVORING EXTRACTS & FLAVORING SYRUPS, NEC		NR		1	1	99
2091	CANNED AND CURED FISH AND SEAFOODS	408	N	BREADED SHRIMP PROC/CONTIGUOUS STATES	1	1	12
2091	CANNED AND CURED FISH AND SEAFOODS	408	R	W COAST HAND-BUTCHERED SALMON PROCESSING	1	1	16
2091	CANNED AND CURED FISH AND SEAFOODS	408	B	CONVENTIONAL BLUE CRAB PROCESSING	1	1	1
2091	CANNED AND CURED FISH AND SEAFOODS	408	C	MECHANIZED BLUE CRAB PROCESSING	1	1	2
2091	CANNED AND CURED FISH AND SEAFOODS	408	D	NON-REMOTE ALASKAN CRAB MEAT PROCESSING	1	1	3

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2091	CANNED AND CURED FISH AND SEAFOODS	408	E	REMOTE ALASKAN CRAB MEAT PROCESSING	1	1	4
2091	CANNED AND CURED FISH AND SEAFOODS	408	F	NON-REMOTE ALASKAN CRAB/SECTION PROCESS	1	1	5
2091	CANNED AND CURED FISH AND SEAFOODS	408	G	REMOTE ALASKAN CRAB/SECTION PROCESSING	1	1	6
2091	CANNED AND CURED FISH AND SEAFOODS	408	H	DUNG & TANNER CRAB PROCESS/CONTIG STATES	1	1	7
2091	CANNED AND CURED FISH AND SEAFOODS	408	I	NON-REMOTE ALASKAN SHRIMP PROCESSING	1	1	8
2091	CANNED AND CURED FISH AND SEAFOODS	408	W	HAND-SHUCKED CLAM PROCESSING	1	1	21
2091	CANNED AND CURED FISH AND SEAFOODS	408	X	MECHANIZED CLAM PROCESSING	1	1	22
2091	CANNED AND CURED FISH AND SEAFOODS	408	K	NORTHERN SHRIMP PROCESSING/CONTIG STATES	1	1	10
2091	CANNED AND CURED FISH AND SEAFOODS	408	Y	PAC COAST HAND-SHUCKED OYSTER PROCESSING	1	1	23
2091	CANNED AND CURED FISH AND SEAFOODS	408	N	TUNA PROCESSING	1	1	13
2091	CANNED AND CURED FISH AND SEAFOODS	408	Z	AT/GLF COAST HAND-SHUCKED OYSTER PROCESS	1	1	24
2091	CANNED AND CURED FISH AND SEAFOODS	408	O	ALASKAN MECHANIZED SALMON PROCESSING	1	1	15
2091	CANNED AND CURED FISH AND SEAFOODS	408	AA	STEAMED AND CANNED OYSTER PROCESSING	1	1	25
2091	CANNED AND CURED FISH AND SEAFOODS	408	T	ALASKAN BOTTOM FISH PROCESSING	1	1	18
2091	CANNED AND CURED FISH AND SEAFOODS	408	AB	SARDINE PROCESSING	1	1	26
2091	CANNED AND CURED FISH AND SEAFOODS	408	V	NON-ALASKAN MECH BOTTOM FISH PROCESSING	1	1	20
2091	CANNED AND CURED FISH AND SEAFOODS	408	AC	ALASKAN SCALLOP PROCESSING	1	1	27
2091	CANNED AND CURED FISH AND SEAFOODS	408	L	SO NON-BREADED SHRIMP PROCESS/CNTG STS	1	1	11
2091	CANNED AND CURED FISH AND SEAFOODS	408	S	WEST COAST MECHANIZED SALMON PROCESSING	1	1	17
2091	CANNED AND CURED FISH AND SEAFOODS	408	U	NON-ALASKAN CONV BOTTOM FISH PROCESSING	1	1	19
2091	CANNED AND CURED FISH AND SEAFOODS	408	J	REMOTE ALASKAN SHRIMP PROCESSING	1	1	9
2091	CANNED AND CURED FISH AND SEAFOODS	408	P	ALASKAN HAND-BUTCHERED SALMON PROCESSING	1	1	14
2091	CANNED AND CURED FISH AND SEAFOODS	408	AD	NON-ALASKAN SCALLOP PROCESSING	1	1	28
2091	CANNED AND CURED FISH AND SEAFOODS	408	AE	ALASKAN HERRING FILLET PROCESSING	1	1	29
2091	CANNED AND CURED FISH AND SEAFOODS	408	AF	NON-ALASKAN HERRING FILLET PROCESSING	1	1	30
2091	CANNED AND CURED FISH AND SEAFOODS	408	AG	ABALONE PROCESSING	1	1	31
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	A	FARM RAISED CATFISH PROCESSING	1	1	1
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	Y	PAC COAST HAND-SHUCKED OYSTER PROCESSING	1	1	24
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	Z	AT/GLF COAST HAND-SHUCKED OYSTER PROCESS	1	1	25
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	C	MECHANIZED BLUE CRAB PROCESSING	1	1	3
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AB	SARDINE PROCESSING	1	1	26
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	E	REMOTE ALASKAN CRAB MEAT PROCESSING	1	1	5
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AC	ALASKAN SCALLOP PROCESSING	1	1	27

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2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	G	REMOTE ALA WHOLE CRAB/SECTION PROCESSING	1	1	7
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AD	NON-ALASKAN SCALLOP PROCESSING	1	1	28
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	I	NON-REMOTE ALASKAN SHRIMP PROCESSING	1	1	9
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AE	ALASKAN HERRING FILLET PROCESSING	1	1	29
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	K	NORTHERN SHRIMP PROCESSING/CONTIG STATES	1	1	11
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AF	NON-ALASKAN HERRING FILLET PROCESSING	1	1	30
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	M	BREADED SHRIMP PROC/CONTIGUOUS STATES	1	1	13
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AG	ABALONE PROCESSING	1	1	31
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	G	ALASKAN MECHANIZED SALMON PROCESSING	1	1	16
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	P	ALASKAN HAND-BUTCHERED SALMON PROCESSING	1	1	15
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	S	WEST COAST MECHANIZED SALMON PROCESSING	1	1	18
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	U	NON-ALASKAN CONV BOTTOM FISH PROCESSING	1	1	20
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	H	DUNG & TANNER CRAB PROCESS/CONTIG STATES	1	1	8
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	J	REMOTE ALASKAN SHRIMP PROCESSING	1	1	10
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	X	MECHANIZED CLAM PROCESSING	1	1	23
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	D	NON-REMOTE ALASKAN CRAB MEAT PROCESSING	1	1	4
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	F	NON-REMOTE WHOLE CRAB/SECTION PROCESSING	1	1	6
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	U	HAND-SHUCKED CLAM PROCESSING	1	1	22
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	B	CONVENTIONAL BLUE CRAB PROCESSING	1	1	2
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	L	NON-BREAD SHRIMP PROCESS/CONTIG STATES	1	1	12
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	N	TUNA PROCESSING	1	1	14
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	R	WEST COAST BUTCHERED SALMON PROCESSING	1	1	17
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	T	ALASKAN BOTTOM FISH PROCESSING	1	1	19
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	V	NON-ALASKAN MECH BOTTOM FISH PROCESSING	1	1	21
2095	ROASTED COFFEE		NR		1	1	99
2097	MANUFACTURED ICE		NR		1	1	99
2098	MACARONI, SPAGHETTI, VERMICELLI & NOODLES		NR		1	1	99
2099	FOOD PREPARATIONS, NEC		NR		1	1	99
2096	POTATO CHIPS, CORN CHIPS		NR		1	1	99
2066	CHOCOLATE & COCOA PRODUCTS		NR		1	1	99
2111	CIGARETTES		NR		1	1	99
2121	CIGARS		NR		1	1	99
2131	TOBACCO (CHEWING AND SMOKING) AND SNUFF		NR		1	1	99
2141	TOBACCO STEMMING AND REDRYING		NR		1	1	99
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	C	LOW WATER USE PROCESSING	2	9	1
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	C	LOW WATER USE PROCESSING	2	9	2
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	D	WOVEN FABRIC FINISHING	9	10	3
2221	BROAD WOVEN FABRIC MILLS, SYNTHETICS	410	D	WOVEN FABRIC FINISHING	9	10	3

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2221	BROAD WOVEN FABRIC MILLS, SYNTHETICS	410	C	LOW WATER USE PROCESSING	2	9	2
2221	BROAD WOVEN FABRIC MILLS, SYNTHETICS	410	C	LOW WATER USE PROCESSING	2	9	1
2231	BROAD WOVEN FABRIC MILLS, WOOL	410	B	WOOL FINISHING	9	10	2
2231	BROAD WOVEN FABRIC MILLS, WOOL	410	C	LOW WATER USE PROCESSING	2	9	1
2241	NARROW FABRICS AND OTHER SMALLWARES MILL	410	C	LOW WATER USE PROCESSING	2	9	1
2241	NARROW FABRICS AND OTHER SMALLWARES MILL	410	C	LOW WATER USE PROCESSING	2	9	2
2251	WOMEN'S FULL LENGTH & KNEE LENGTH HOSIERY	410	E	KNIT FABRIC FINISHING	9	10	0
2251	WOMEN'S FULL LENGTH & KNEE LENGTH HOSIERY		NR	NO FINISHING	1	1	99
2252	HOSIERY, NEC	410	E	KNIT FABRIC FINISHING	9	10	0
2252	HOSIERY, NEC		NR	NO FINISHING	1	1	99
2253	KNIT OUTERWEAR MILLS	410	E	KNIT FABRIC FINISHING	9	10	0
2253	KNIT OUTERWEAR MILLS		NR	NO FINISHING	1	1	99
2254	KNIT UNDERWEAR MILLS	410	E	KNIT FABRIC FINISHING	9	10	0
2254	KNIT UNDERWEAR MILLS		NR	NO FINISHING	1	1	99
2257	WEFT KNIT FABRIC MILLS	410	E	KNIT FABRIC FINISHING	9	10	0
2257	WEFT KNIT FABRIC MILLS		NR	NO FINISHING	1	1	99
2258	WARP KNIT FABRIC MILLS	410	E	KNIT FABRIC FINISHING	9	10	0
2258	WARP KNIT FABRIC MILLS		NR	NO FINISHING	1	1	99
2259	KNITTING MILLS, NEC	410	E	KNIT FABRIC FINISHING	9	10	0
2259	KNITTING MILLS, NEC		NR	NO FINISHING	1	1	99
2261	FINISHERS OF BROAD WOVEN COTTON	410	D	WOVEN FABRIC FINISHING	9	10	0
2262	FINISHERS OF BROAD WOVEN SYNTHETICS	410	D	WOVEN FABRIC FINISHING	9	10	0
2269	FINISHERS OF TEXTILES, NEC	410	D	WOVEN FABRIC FINISHING	9	10	1
2269	FINISHERS OF TEXTILES, NEC	410	G	STOCK & YARN FINISHING	7	9	2
2273	WOVEN CARPETS AND RUGS	410	C	LOW WATER USE PROCESSING	2	9	2
2273	WOVEN CARPETS AND RUGS	410	F	CARPET FINISHING	1	8	1
2273	TUFTED CARPETS AND RUGS	410	C	LOW WATER USE PROCESSING	2	9	1
2273	TUFTED CARPETS AND RUGS	410	F	CARPET FINISHING	1	8	2
2273	CARPETS AND RUGS, NEC	410	F	CARPET FINISHING	1	8	1
2273	CARPETS AND RUGS, NEC	410	C	LOW WATER USE PROCESSING	2	9	2
2281	YARN SPINNING MILLS: COTTON, MAN-MADE FIB	410	C	LOW WATER USE PROCESSING	2	9	2
2281	YARN SPINNING MILLS: COTTON, MAN-MADE FIB	410	C	LOW WATER USE PROCESSING	2	9	1
2282	YARN TEXTURIZING, THROWING, TWISTING & WINDING	410	C	LOW WATER USE PROCESSING	2	9	1
2282	YARN TEXTURIZING, THROWING, TWISTING & WINDING	410	C	LOW WATER USE PROCESSING	2	9	2
2284	YARN MILLS, WOOL, INCLUDING CARPET & RUG	410	C	LOW WATER USE PROCESSING	2	9	1
2281	YARN MILLS, WOOL, INCLUDING CARPET & RUG	410	C	LOW WATER USE PROCESSING	2	9	2
2282	YARN MILLS, WOOL, INCLUDING CARPET & RUG	410	C	LOW WATER USE PROCESSING	2	9	3
2284	YARN MILLS, WOOL, INCLUDING CARPET & RUG	410	C	STOCK & YARN FINISHING	7	9	4
2284	THREAD MILLS	410	C	LOW WATER USE PROCESSING	2	9	1
2284	THREAD MILLS	410	G	STOCK & YARN FINISHING	7	9	2
2299	FELT GOODS, EXC WOVEN FELTS AND HATS	410	I	FELTED FABRIC PROCESSING	1	5	0
2258	LACE GOODS	410	C	LOW WATER USE PROCESSING	2	9	1
2258	LACE GOODS	410	E	KNIT FABRIC FINISHING	9	10	2
2299	PADDINGS AND UPHOLSTERY FILLING		NR	PADDING AND UPHOLSTERY FILLING	1	1	99
2299	PROCESSED WASTE & RECOVERED FIBERS	410	C	LOW WATER USE PROCESSING	2	9	0
2295	COATED FABRICS, NOT RUBBERIZED	410	C	LOW WATER USE PROCESSING	2	9	0
2296	TIRE CORD AND FABRIC	410	C	LOW WATER USE PROCESSING	2	9	0
2297	NONWOVEN FABRICS	410	H	NONWOVEN MANUFACTURING	1	8	0
2298	CORDAGE AND TWINE	410	C	LOW WATER USE PROCESSING	2	9	0

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2299	TEXTILE GOODS NEC	410	A	WOOL SCOURING	10	10	1
2299	TEXTILE GOODS NEC	410	C	LOW WATER USE PROCESSING	2	9	2
2311	MEN'S & BOY'S SUITS & COATS		NR		1	1	99
2321	MEN'S & BOY'S SHIRTS (EXCEPT WORK)		NR		1	1	99
2322	MEN'S & BOY'S UNDERWEAR		NR		1	1	99
2323	MENS & BOY'S NECKWEAR		NR		1	1	99
2325	MEN'S & BOY'S SEPARATE TROUSERS		NR		1	1	99
2326	MEN'S & BOY'S WORK CLOTHING		NR		1	1	99
2329	MEN'S & BOY'S CLOTHING, NEC		NR		1	1	99
2331	WOMEN'S, MISSES & JUNIORS' BLOUSES & SHIRTS		NR		1	1	99
2335	WOMEN'S, MISSES' & JUNIORS' DRESSES		NR		1	1	99
2337	WOMEN'S, MISSES' & JUNIORS' SUITS, SKIRTS		NR		1	1	99
2339	WOMEN'S, MISSES' & JUNIORS OUTERWEAR, NEC		NR		1	1	99
2341	WOMEN'S, MISSES', CHILDREN'S & INFANTS' UNDERWEAR & NIGHTWEAR		NR		1	1	99
2342	BRASSIERS, GIRDLES & ALLIED GARMENTS		NR		1	1	99
2353	HATS, CAPS & MILLINERY		NR		1	1	99
2361	GIRL'S, CHILDREN'S & INFANT'S DRESSES		NR		1	1	99
2369	GIRL'S, CHILDREN'S & INFANT'S OUTERWEAR		NR		1	1	99
2371	FUR GOODS		NR		1	1	99
2381	DRESS & WORK GLOVES, EXCEPT KNIT & ALL-LEATHER		NR		1	1	99
2384	ROBES & DRESSING GOWNS		NR		1	1	99
2385	WATERPROOF OUTERWEAR		NR		1	1	99
2386	LEATHER & SHEEP-LINED CLOTHING		NR		1	1	99
2387	APPAREL BELTS		NR		1	1	99
2389	APPAREL & ACCESSORIES, NEC		NR		1	1	99
2391	CURTAINS & DRAPERIES		NR		1	1	99
2392	HOUSEFURNISHINGS, EXCEPT CURTAINS & DRAPERIES		NR		1	1	99
2393	TEXTILE BAGS		NR		1	1	99
2394	CANVAS & RELATED PRODUCTS		NR		1	1	99
2395	PLEATING, DECORATIVE & NOVELTY STITCHING		NR		1	1	99
2396	AUTOMOTIVE TRIMMINGS, APPAREL FINDINGS		NR		1	1	99
2397	SCHIFFLI MACHINE EMBRODERIES		NR		1	1	99
2399	FABRICATED TEXTILE PRODUCTS, NEC		NR		1	1	99
2411	LOGGING	429	I	WET STORAGE	1	1	1
2411	LOGGING	429	U	LOG WASHING	1	1	2
2411	LOGGING, NEC		NR		1	1	99
2411	SAWMILLS & PLANNING MILLS, GENERAL				3	3	1
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	A	BARKING	1	1	2
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	K	SAWMILLS AND PLANNING MILLS	1	1	3
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	L	FINISHING	1	1	4
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	A	BARKING	1	1	1
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	I	WET STORAGE	1	1	2
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	J	LOG WASHING	1	1	3
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	K	SAWMILLS AND PLANNING MILLS	1	1	4
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	L	FINISHING	1	1	5
2429	SPECIAL PRODUCT SAWMILLS NEC	429	I	WET STORAGE	1	1	1
2429	SPECIAL PRODUCT SAWMILLS NEC	429	J	LOG WASHING	1	1	2
2429	SPECIAL PRODUCT SAWMILLS NEC	429	K	SAWMILLS AND PLANNING MILLS	1	1	3
2429	SPECIAL PRODUCT SAWMILLS NEC	429	L	MILLWORK	1	1	4
2431	MILLWORK	429	K	SAWMILLS AND PLANNING MILLS	1	1	1
2431	MILLWORK	429	L	MILLWORK	1	1	2

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2434	WOOD KITCHEN CABINETS	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2434	WOOD KITCHEN CABINETS	429	P	WOOD FURN & FIXTURE PROD W/O WATER	1	1	2
2435	HARDWOOD VENEER AND PLYWOOD	429	A	BARKING	1	1	1
2435	HARDWOOD VENEER AND PLYWOOD	429	B	VENEER	1	1	3
2435	HARDWOOD VENEER AND PLYWOOD	429	C	PLYWOOD	1	1	2
2435	HARDWOOD VENEER AND PLYWOOD	429	I	WET STORAGE	1	1	4
2435	HARDWOOD VENEER AND PLYWOOD	429	J	LOG WASHING	1	1	5
2436	SOFTWOOD VENEER AND PLYWOOD	429	A	BARKING	1	1	1
2436	SOFTWOOD VENEER AND PLYWOOD	429	B	VENEER	1	1	3
2436	SOFTWOOD VENEER AND PLYWOOD	429	C	PLYWOOD	1	1	2
2436	SOFTWOOD VENEER AND PLYWOOD	429	I	WET STORAGE	1	1	4
2436	SOFTWOOD VENEER AND PLYWOOD	429	J	LOG WASHING	1	1	5
2439	STRUCTURAL WOOD MEMBERS, NEC		NR		1	1	99
2441	NAILED & LOCK CORNER WOOD BOXES & SHOOK		NR		1	1	99
2448	WOOD PALLETS AND SKIDS		NR		1	1	99
2449	WOOD CONTAINERS NEC	429	K	SAWMILLS AND PLANNING MILLS	1	1	0
2451	MOBILE HOMES		NR		1	1	99
2452	PREFABRICATED WOOD BUILDINGS AND COMPONENTS		NR		1	1	99
2491	WOOD PRESERVING	429	A	BARKING	10	10	4
2491	WOOD PRESERVING	429	J	LOG WASHING	10	10	6
2491	WOOD PRESERVING	429	G	WOOD PRESERVING-STEAM	10	10	1
2491	WOOD PRESERVING	429	H	WOOD PRESERVING-BOULTONING	10	10	2
2491	WOOD PRESERVING	429	I	WET STORAGE	10	10	5
2491	WOOD PRESERVING	429	F	WOOD PRESERVING	10	10	3
2493	RECONSTITUTED WOOD PRODUCTS	429	M	PARTICLEBOARD	3	3	0
2493	WOOD PRODUCTS NEC		NR		3	3	99
2499	WOOD PRODUCTS NEC	429	M	PARTICLEBOARD	1	1	1
2499	WOOD PRODUCTS NEC	429	A	BARKING	1	1	2
2499	WOOD PRODUCTS NEC	429	D	HARDBOARD - DRY PROCESS	1	1	3
2499	WOOD PRODUCTS NEC	429	E	HARDBOARD - WET PROCESS	1	7	4
2499	WOOD PRODUCTS NEC	429	I	WET STORAGE	1	1	5
2499	WOOD PRODUCTS NEC	429	J	LOG WASHING	1	1	6
2499	WOOD PRODUCTS NEC	429	L	FINISHING	1	1	7
2511	WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2511	WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2512	WOOD HOUSEHOLD FURNITURE, UPHOLSTERED	429	Q	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2512	WOOD HOUSEHOLD FURNITURE, UPHOLSTERED	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2514	METAL HOUSEHOLD FURNITURE	433	A	METAL FINISHING	1	9	1
2514	METAL HOUSEHOLD FURNITURE		NR	NO ELECTROPLATING	1	1	99
2515	MATTRESSES AND BEDSPRINGS		NR		1	1	99
2517	WOOD TV, RADIO, PHONOGRAPH & SEWING MACHINE CABINETS	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2517	WOOD TV, RADIO, PHONOGRAPH & SEWING MACHINE CABINETS	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2519	HOUSEHOLD FURNITURE, NEC	429	P	WOOD FURN & FIXTURE PROD W WATER	1	1	2
2519	HOUSEHOLD FURNITURE, NEC	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2521	WOOD OFFICE FURNITURE	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2521	WOOD OFFICE FURNITURE	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2522	METAL OFFICE FURNITURE	433	A	METAL FINISHING	1	9	0
2522	METAL OFFICE FURNITURE		NR	NO ELECTROPLATING	1	1	99
2531	PUBLIC BUILDING AND RELATED FURNITURE	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2531	PUBLIC BUILDING AND RELATED FURNITURE	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2

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2541	WOOD PARTITIONS, SHELVING, LOCKERS & OFFICE FIXTURES	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2541	WOOD PARTITIONS, SHELVING, LOCKERS & OFFICE FIXTURES	429	P	WOOD FURN & FIXTURE PROD W/O WATER	1	1	2
2542	METAL PARTITIONS, SHELVING, LOCKERS & OFFICE FIXTURES	433	A	METAL FINISHING	1	9	0
2542	METAL PARTITIONS, SHELVING, LOCKERS & OFFICE FIXTURES		NR	NO ELECTROPLATING	1	1	99
2591	DRAPERY HARDWARE & WINDOW BLINDS AND SHADES		NR		1	1	99
2522	FURNITURE AND FIXTURES, NEC	433	A	METAL FINISHING	1	9	1
2522	FURNITURE AND FIXTURES, NEC		NR	NO ELECTROPLATING	1	1	99
2542	FURNITURE AND FIXTURES, NEC	433	A	METAL FINISHING	1	9	2
2542	FURNITURE AND FIXTURES, NEC			NO ELECTROPLATING	1	1	3
2599	FURNITURE AND FIXTURES, NEC	429	O	WOOD FURNITURE & FIXTURE PROD W/O WATER	1	1	4
2599	FURNITURE AND FIXTURES, NEC	429	P	WOOD FURNITURE & FIXTURE PROD W/WATER	1	1	5
2611	PULP MILLS	430	A	UNBLEACHED KRAFT	10	10	1
2611	PULP MILLS	430	B	SEMI-CHEMICAL	1	5	2
2611	PULP MILLS	430	J	PAPER GRADE SULFITE (BLOW PIT WASH)	10	10	8
2611	PULP MILLS	430	D	UMBL KRAFT-NTRL SULFITE-SEMI-CHEM	10	10	3
2611	PULP MILLS	430	G	MARKET BLEACHED KRAFT	10	10	5
2611	PULP MILLS	430	H	BOARD, COARSE & KRAFT BLEACHED KRAFT	10	10	6
2611	PULP MILLS	430	I	FINE BLEACHED KRAFT	10	10	7
2611	PULP MILLS	430	F	DISSOLVING KRAFT	10	10	4
2611	PULP MILLS	430	K	DISSOLVING SULFITE PULP	10	10	9
2611	PULP MILLS	430	L	GROUNDWOOD CHEMI-MECHANICAL	2	4	10
2611	PULP MILLS	430	M	GROUNDWOOD THERMO-MECHANICAL	2	4	11
2611	PULP MILLS	430	N	GROUNDWOOD COARSE, MOLDED & NEWS PAPERS	2	4	12
2611	PULP MILLS	430	O	GROUNDWOOD FINE PAPERS	2	4	13
2611	PULP MILLS	430	P	SODA	4	5	14
2611	PULP MILLS	430	U	PAPER GRADE SULFITE (DRUM WASH)	8	8	15
2611	PULP MILLS	430	V	UNBLEACHED KRAFT & SEMI CHEMICAL	10	10	16
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	A	UNBLEACHED KRAFT	10	10	1
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	B	SEMI-CHEMICAL	1	5	2
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	D	UMBL KRAFT-NTRL SULFITE-SEMI-CHEM	10	10	3
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	F	DISSOLVING KRAFT	10	10	4
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	G	MARKET BLEACHED KRAFT	10	10	5
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	H	BOARD, COARSE & KRAFT BLEACHED KRAFT	10	10	6
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	I	FINE BLEACHED KRAFT	10	10	7
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	J	PAPER GRADE SULFITE (BLOW PIT WASH)	10	10	8
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	O	GROUNDWOOD FINE PAPERS	2	4	13
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	L	GROUNDWOOD CHEMI-MECHANICAL	2	4	10
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	M	GROUNDWOOD THERMO-MECHANICAL	2	4	11
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	N	GROUNDWOOD COARSE, MOLDED & NEWS PAPERS	2	4	12
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	K	DISSOLVING SULFITE PULP	10	10	9
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	P	SODA	4	5	14
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	U	PAPER GRADE SULFITE (DRUM WASH)	8	8	15
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	V	UNBLEACHED KRAFT AND SEMI-CHEMICAL	10	10	16
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	A	UNBLEACHED KRAFT	10	10	17
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	B	SEMI-CHEMICAL	1	5	18
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	D	UNBLEACHED KRAFT-NTRL SULFITE-SEMI-CHEM	10	10	19
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	U	PAPERGRADE SULFITE (DRUM WASH)	8	8	30

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2621	PAPER MILLS EXCEPT BUILDING PAPER	430	V	UNBLEACHED KRAFT & SEMI CHEMICAL	10	10	31
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	I	FINE BLEACHED KRAFT	10	10	21
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	X	NONINTEGRATED LIGHTWEIGHT PAPERS	1	2	32
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	L	GROUNDWOOD CHEMI-MECHANICAL	2	4	23
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	Y	NONINTEGRATED FILTER AND NONWOVEN PAPERS	1	5	33
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	N	GROUNDWOOD COARSE, MOLDED & NEWS PAPERS	2	4	25
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	P	SODA	4	5	27
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	R	NONINTEGRATED FINE PAPERS	1	5	29
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	H	BOARD, COARSE & TISSUE BLEACHED KRAFT	10	10	20
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	J	PAPER GRADE SULFITE (BLOW PIT WASH)	10	10	22
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	M	GROUNDWOOD THERMO-MECHANICAL	2	4	24
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	O	GROUNDWOOD FINE PAPERS	2	4	26
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	Q	DEINK	4	7	28
2611	PAPERBOARD MILLS	430	A	UNBLEACHED KRAFT	10	10	1
2611	PAPERBOARD MILLS	430	B	SEMI-CHEMICAL	1	5	2
2611	PAPERBOARD MILLS	430	D	UNBLEACHED KRAFT-NTRL SULFITE-SEMI-CHEM	10	10	3
2611	PAPERBOARD MILLS	430	H	BOARD, COARSE & TISSUE BLEACHED KRAFT	10	10	4
2611	PAPERBOARD MILLS	430	I	FINE BLEACHED KRAFT	10	10	5
2611	PAPERBOARD MILLS	430	J	PAPER GRADE SULFITE (BLOW PIT WASH)	5	8	6
2611	PAPERBOARD MILLS	430	L	GROUNDWOOD CHEMI-MECHANICAL	2	4	7
2611	PAPERBOARD MILLS	430	M	GROUNDWOOD THERMO-MECHANICAL	2	4	8
2631	PAPERBOARD MILLS	430	A	SEMI-CHEMICAL	1	5	19
2611	PAPERBOARD MILLS	430	N	GROUNDWOOD COARSE, MOLDED & NEWS PAPERS	2	4	9
2631	PAPERBOARD MILLS	430	D	UNBL KRAFT NTRL SULFITE SEMI-CHEM	10	10	20
2611	PAPERBOARD MILLS	430	P	SODA	4	5	11
2631	PAPERBOARD MILLS	430	E	PAPERBOARD FROM WASTEPAPER	2	6	21
2611	PAPERBOARD MILLS	430	R	NONINTEGRATED FINE PAPERS	1	5	13
2631	PAPERBOARD MILLS	430	H	BOARD, COARSE TISSUE BLEACHED KRAFT	10	10	22
2611	PAPERBOARD MILLS	430	V	UNBLEACHED KRAFT & SEMI-CHEMICAL	10	10	15
2631	PAPERBOARD MILLS	430	S	NONINTEGRATED TISSUE PAPERS	1	4	23
2611	PAPERBOARD MILLS	430	Y	NONINTEGRATED FILTER AND NONWOVEN PAPERS	1	5	17
2631	PAPERBOARD MILLS	430	V	UNBLEACHED KRAFT AND SEMI-CHEMICAL	10	10	24
2611	PAPERBOARD MILLS	430	O	GROUNDWOOD FINE PAPERS	2	4	10
2611	PAPERBOARD MILLS	430	U	PAPERGRADE SULFITE (DRUM WASH)	1	8	14
2611	PAPERBOARD MILLS	430	X	NONINTEGRATED LIGHTWEIGHT PAPERS	1	2	16
2631	PAPERBOARD MILLS	430	A	UNBLEACHED KRAFT	10	10	18
2611	PAPERBOARD MILLS	430	Q	DEINK	4	7	12
2631	PAPERBOARD MILLS	430	Z	NONINTEGRATED PAPERBOARD	1	4	25
2671	PAPER COATING AND GLAZING		NR	CONVERTED PAPER	1	1	99
2672	PAPER COATING AND GLAZING, NEC		NR	CONVERTED PAPER	1	1	99
2677	ENVELOPES		NR	CONVERTED PAPER	1	1	99
2674	UNCOATED BAGS, EXCEPT TEXTILE BAGS		NR	CONVERTED PAPER	1	1	99
2673	PLASTIC, FOIL & COATED BAGS, EXCEPT TEXTILE BAGS		NR	CONVERTED PAPER	1	1	99
2675	DIE-CUT PAPER, PAPERBOARD AND CARDBOARD		NR	CONVERTED PAPER	1	1	99
2679	PRESSED AND MOLDED PULP GOODS		NR	CONVERTED PAPER	1	1	99
2676	SANITARY PAPER PRODUCTS		NR	CONVERTED PAPER	1	1	99
2678	STATIONERY, TABLETS AND RELATED PRODUCTS		NR	CONVERTED PAPER	1	1	99

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2679	CONVERTED PAPER AND PAPERBOARD PRODUCTS		NR	CONVERTED PAPER	1	1	99
2657	FOLDING PAPERBOARD BOXES		NR	CONVERTED PAPER	1	1	99
2652	SET-UP PAPERBOARD BOXES		NR	CONVERTED PAPER	1	1	99
2653	CORRUGATED AND SOLID FIBER BOXES		NR	CONVERTED PAPER	1	1	99
2657	SANITARY FOOD CONTAINERS, FOLDING		NR	CONVERTED PAPER	1	1	99
2656	SANITARY FOOD CONTAINERS, EXCEPT FOLDING		NR	CONVERTED PAPER	1	1	99
2655	FIBER CANS, TUBES, DRUMS & SIMILAR PROD		NR	CONVERTED PAPER	1	1	99
2493	BUILDING PAPER & BUILDINGBOARD MILLS	429	M	PARTICLEBOARD	1	1	99
2621	BUILDING PAPER & BUILDINGBOARD MILLS	431	A	BUILDER'S PAPER AND ROOFING FELT	1	8	99
2711	NEWSPAPERS: PUBLISHING & PRINTING		NR		3	3	99
2721	PERIODICALS: PUBLISHING & PRINTING		NR		3	3	99
2731	BOOKS: PUBLISHING & PRINTING		NR		3	3	99
2732	BOOK PRINTING		NR		3	3	99
2741	MISCELLANEOUS PUBLISHING		NR		3	3	99
2759	COMMERCIAL PRINTING, LETTERPRESS & SCREEN		NR		3	3	99
2752	COMMERCIAL PRINTING, LITHOGRAPHIC		NR		3	3	99
2796	ENGRAVING & PLATE PRINTING		NR		3	3	99
2759	ENGRAVING & PLATE PRINTING		NR		3	3	99
2796	COMMERCIAL PRINTING, GRAVURE		NR		3	3	99
2754	COMMERCIAL PRINTING, GRAVURE		NR		3	3	99
2761	MANIFOLD BUSINESS FORMS		NR		3	3	99
2771	GREETING CARD PUBLISHING		NR		3	3	99
2782	BLANKBOOKS, LOSSELEAF BINDERS & DEVICES		NR		3	3	99
2789	BOOKBINDING & RELATED WORK		NR		3	3	99
2791	TYPESETTING		NR		3	3	99
2796	PHOTOENGRAVING		NR		3	3	99
2796	ELECTROTYPING & STEROTYPING		NR		3	3	99
2796	LITHOGRAPHIC PLATEMAKING & RELATED SERVICES		NR		3	3	99
2812	ALKALIES AND CHLORINE	415	F	CHLORINE & SODIUM OR POTASSIUM HYDR.	10	10	1
2812	ALKALIES AND CHLORINE	415	F	CHLORINE & SOD/POT HYDR. (MERCURY CELL)	10	10	3
2812	ALKALIES AND CHLORINE	415	F	CHLORINE & SOD/POT HYDR. (DIAPHRAGM CELL)	10	10	2
2812	ALKALIES AND CHLORINE	415	N	SODIUM BICARBONATE	3	3	5
2812	ALKALIES AND CHLORINE	415	O	SODIUM CARBONATE	6	6	4
2812	ALKALIES AND CHLORINE		NR	POTASSIUM CARBONATE	3	3	99
2812	ALKALIES AND CHLORINE		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2813	INDUSTRIAL GASES	415	AF	CARBON DIOXIDE	3	3	1
2813	INDUSTRIAL GASES	415	AO	HYDROGEN	3	3	2
2813	INDUSTRIAL GASES	415	AW	OXYGEN & NITROGEN	3	3	3
2813	INDUSTRIAL GASES		NR	GASES, IND COMPRESSED LIQUID/SOLID, NEC	3	3	99
2813	INDUSTRIAL GASES		NR	NITROUS OXIDE	3	3	99
2813	INDUSTRIAL GASES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2816	INORGANIC PIGMENTS	415	V	TITANIUM DIOXIDE (SULFATE PROCESS)	8	9	1
2816	INORGANIC PIGMENTS	415	V	TITANIUM DIOXIDE (CHLORIDE PROCESS)	1	2	2
2816	INORGANIC PIGMENTS	415	AM	CHROME PIGMENTS	1	8	3
2816	INORGANIC PIGMENTS		NR	BARYTES PIGMENTS	6	6	99
2816	INORGANIC PIGMENTS	415	BJ	ZINC OXIDE	6	6	4
2816	INORGANIC PIGMENTS		NR	LEAD DIOXIDE, BROWN (Pb02)	6	6	99
2816	INORGANIC PIGMENTS		NR	LEAD OXIDE, RED (Pb304)	6	6	99
2816	INORGANIC PIGMENTS		NR	BARIUM SULFATE	6	6	99
2816	INORGANIC PIGMENTS		NR	WHITE LEAD PIGMENT (Pb(OH)2+PbCO)3	6	6	99
2816	INORGANIC PIGMENTS		NR	IRON COLORS	6	6	99

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2816	INORGANIC PIGMENTS		NR	IRON OXIDE, BLACK	6	6	99
2816	INORGANIC PIGMENTS		NR	IRON OXIDE, MAGNETIC	6	6	99
2816	INORGANIC PIGMENTS		NR	IRON OXIDE, YELLOW	6	6	99
2816	INORGANIC PIGMENTS		NR	OCHERS	6	6	99
2816	INORGANIC PIGMENTS		NR	SATIN WHITE PIGMENT	6	6	99
2816	INORGANIC PIGMENTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2816	INORGANIC PIGMENTS		NR	ULTRAMARINE PIGMENT	6	6	99
2816	INORGANIC PIGMENTS		NR	UMBERS	6	6	99
2816	INORGANIC PIGMENTS		NR	WHITING	6	6	99
2816	INORGANIC PIGMENTS		NR	SIENNAS	6	6	99
2816	INORGANIC PIGMENTS	415	BL	CADIUM PIGMENTS	10	10	5
2819	INORGANIC CHEMICALS NEC	415	A	ALUMINUM CHLORIDE	6	6	1
2819	INORGANIC CHEMICALS NEC	415	B	ALUMINUM SULFATE	3	3	6
2819	INORGANIC CHEMICALS NEC	415	C	CALCIUM CARBIDE	3	3	26
2819	INORGANIC CHEMICALS NEC	415	D	CALCIUM CHLORIDE	6	6	28
28 19	INORGANIC CHEMICALS NEC	415	J	NITRIC ACID	3	3	81
2819	INORGANIC CHEMICALS NEC	415	G	HYDROCHLORIC ACID	3	3	51
2819	INORGANIC CHEMICALS NEC	415	H	HYDROFLFUORIC ACID	8	9	52
2819	INORGANIC CHEMICALS NEC	415	I	HYDROGEN PEROXIDE	3	3	55
2819	INORGANIC CHEMICALS NEC	415	E	CALCIUM OXIDE	6	6	31
2819	INORGANIC CHEMICALS NEC	415	K	POTASSIUM METAL	3	3	166
2819	INORGANIC CHEMICALS NEC	415	L	POTASSIUM DICHROMATE	3	3	96
2819	INORGANIC CHEMICALS NEC	415	M	POTASSIUM SULFATE	6	6	102
2819	INORGANIC CHEMICALS NEC	415	P	SODIUM CHLORIDE	6	6	121
2819	INORGANIC CHEMICALS NEC	415	Q	SODIUM DICHROMATE/SODIUM SULFATE	3	3	124
2819	INORGANIC CHEMICALS NEC	415	R	SODIUM METAL	3	3	128
2819	INORGANIC CHEMICALS NEC	415	AD	CALCIUM CARBONATE	3	3	27
2819	INORGANIC CHEMICALS NEC	415	AE	CALCIUM HYDROXIDE	6	6	165
2819	INORGANIC CHEMICALS NEC	415	T	SODIUM SULFITE	6	6	131
2819	INORGANIC CHEMICALS NEC	415	AG	CALCIUM MONOXIDE & BY-PRODUCT HYDROGEN	3	3	32
2819	INORGANIC CHEMICALS NEC	415	W	ALUMINIUM FLUORIDE	7	8	3
2819	INORGANIC CHEMICALS NEC	415	AI	CHRONIC ACID	3	3	35
2819	INORGANIC CHEMICALS NEC	415	Y	AMMONIUM HYDROXIDE	3	3	11
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SULFATE	10	10	43
2819	INORGANIC CHEMICALS NEC	415	AA	BORAX	3	3	19
2819	INORGANIC CHEMICALS NEC	415	AK	CUPROUS OXIDE	10	10	44
2819	INORGANIC CHEMICALS NEC	415	AC	BROMINE	3	3	24
2819	INORGANIC CHEMICALS NEC	415	AL	FERRIC CHLORIDE	3	3	45
2819	INORGANIC CHEMICALS NEC	415	U	SULFURIC ACID	3	3	144
2819	INORGANIC CHEMICALS NEC	415	Z	BARIUM CARBONATE	3	3	15
2819	INORGANIC CHEMICALS NEC	415	AB	BORIC ACID	6	6	20
2819	INORGANIC CHEMICALS NEC	415	S	SODIUM SILICATE	3	3	129
2819	INORGANIC CHEMICALS NEC	415	X	AMMONIUM CHLORIDE	3	3	9
2819	INORGANIC CHEMICALS NEC	415	AM	FERROUS SULFATE	3	3	46
2819	INORGANIC CHEMICALS NEC	415	AM	FLUORINE	3	3	48
2819	INORGANIC CHEMICALS NEC	415	AO	HYDROGEN	3	3	53
2819	INORGANIC CHEMICALS NEC	415	AP	HYDROGEN CYANIDE	1	7	54
2819	INORGANIC CHEMICALS NEC	415	AQ	IODINE	3	3	61
2819	INORGANIC CHEMICALS NEC		NR	SILVER OXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AR	LEAD MONOXIDE	3	3	64
2819	INORGANIC CHEMICALS NEC		NR	SODA ALUM	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AT	MANGANESE SULFATE	3	3	71
2819	INORGANIC CHEMICALS NEC		NR	SODIUM ANTIMONIATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AV	NITRIC ACIDE (STRONG)	3	3	80
2819	INORGANIC CHEMICALS NEC	415	BN	SODIUM CHLORATE	10	10	120
2819	INORGANIC CHEMICALS NEC	415	AY	POTASSIUM IODIDE	3	3	98
2819	INORGANIC CHEMICALS NEC		NR	SODIUM COMPOUNDS, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BA	SILVER NITRATE	6	6	115
2819	INORGANIC CHEMICALS NEC		NR	SODIUM CYANIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BC	SODIUM FLUORIDE	3	3	125
2819	INORGANIC CHEMICALS NEC		NR	STANNIC AND STANNOUS CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BE	SODIUM HYDROSULFITE	3	3	126
2819	INORGANIC CHEMICALS NEC		NR	STRONTIUM CARBONATE (PRECIPITATED/OXIDE)	6	6	99

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2819	INORGANIC CHEMICALS NEC	415	BG	SODIUM THIOSULFATE	3	3	132
2819	INORGANIC CHEMICALS NEC		NR	STRONTIUM NITRATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BI	SULFUR DIOXIDE	3	3	141
2819	INORGANIC CHEMICALS NEC		NR	SULFIDES & SULFITES	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BK	ZINC SULFATE	3	3	149
2819	INORGANIC CHEMICALS NEC		NR	SULFOCYANIDES	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	ALUMINUM HYDROXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SULFUR CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	ALUMS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SULFUR HEXAFLUORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	ANNOMIUM COMPOUNDS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	THIOCYANATES, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	AMMONIUM PERCHLORATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	TIN COMPOUNDS, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	BARIUM COMPOUNDS (NOT PRODUCED AT MINES)	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	URANIUM SLAG, RADIOACTIVE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	BORON COMPOUNDS (NOT PRODUCED AT MINES)	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BO	ZINC CHLORIDE	10	10	147
2819	INORGANIC CHEMICALS NEC		NR	BRINE CHEMICALS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	ZINC SULFIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	CALCIUM HYPOCHLORITE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	CALCIUM	3	3	99
2819	INORGANIC CHEMICALS NEC		NR	CHLOROSULFONIC ACID	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	NON-CONTACT COOLING	1	1	99
2819	INORGANIC CHEMICALS NEC		NR	CHROMIUM SULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC	419	E	INTEGRATED REFINERIES (SULFUR RECOVERY)	6	6	139
2819	INORGANIC CHEMICALS NEC	415	BM	COBALT SALTS (COBALT SULFATE)	1	8	39
2819	INORGANIC CHEMICALS NEC	421	A	BAUXITE REFINING	5	10	164
2819	INORGANIC CHEMICALS NEC		NR	COPPER CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	421	A	BAUXITE REFINING (ALUMINA)	5	10	168
2819	INORGANIC CHEMICALS NEC		NR	FISSIONABLE MATERIALS PRODUCTION	6	6	99
2819	INORGANIC CHEMICALS NEC	421	O	BERYLIUM OXIDE	5	10	17
2819	INORGANIC CHEMICALS NEC		NR	HYDRATED ALUMINUM SILICATE	6	6	99
2819	INORGANIC CHEMICALS NEC	422	A	PHOSPHORUS PRODUCTION	6	6	160
2819	INORGANIC CHEMICALS NEC		NR	HYDROPHOSPHITES	6	6	99
2819	INORGANIC CHEMICALS NEC	422	B	PHOSPHORUS CONSUMING	6	6	161
2819	INORGANIC CHEMICALS NEC		NR	INORGANIC ACIDS (EXC HNO2 OR H2PO4)	6	6	99
2819	INORGANIC CHEMICALS NEC	422	C	PHOSPHATE	6	6	162
2819	INORGANIC CHEMICALS NEC		NR	ISOTOPES, RADIOACTIVE	6	6	99
2819	INORGANIC CHEMICALS NEC	422	D	DEFLUORINATED PHOSPHATE ROCK	6	6	158
2819	INORGANIC CHEMICALS NEC		NR	LEAD SILICATE	6	6	99
2819	INORGANIC CHEMICALS NEC	422	E	DEFLUORINATED PHOSPHORIC ACID	6	6	159
2819	INORGANIC CHEMICALS NEC		NR	LUMINOUS COMPOUNDS (RADIUM)	6	6	99
2819	INORGANIC CHEMICALS NEC	422	F	SODIUM PHOSPHATES	6	6	163
2819	INORGANIC CHEMICALS NEC		NR	MANGANESE DIOXIDE (POWDER SYNTHETIC)	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SALTS (NICKEL CHLORIDE)	8	9	169
2819	INORGANIC CHEMICALS NEC		NR	MERCURY OXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SALTS (NICKEL NITRATE)	8	9	170
2819	INORGANIC CHEMICALS NEC		NR	NUCLEAR FUEL REACTOR CASES, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SALTS (NICKEL FLUOBORATE)	8	9	171
2819	INORGANIC CHEMICALS NEC		NR	OLEUM (FUMING SULFURIC ACID)	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SALTS (NICKEL CARBONATE)	8	9	172
2819	INORGANIC CHEMICALS NEC		NR	PERCHLORIC ACID	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS (COPPER CHLORIDE)	10	10	173
2819	INORGANIC CHEMICALS NEC		NR	POTASH ALUM	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS(COPPER IODIDE)	10	10	174
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM ALUMINUM SULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS (COPPER NITRATE)	10	10	175
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM CYANIDE	6	6	99

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2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS (COPPER CARBONATE)	10	10	176
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM COMPOUNDS, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BL	CADIUM SALTS (CADIUM CHLORORIDE)	10	10	177
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM NITRATE & SULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BL	CADIUM SALTS (CADIUM NITRATE)	10	10	178
2819	INORGANIC CHEMICALS NEC		NR	RADIUM LUMINOUS COMPOUNDS	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BL	CADIUM SALTS (CADIUM SULFATE)	10	10	179
2819	INORGANIC CHEMICALS NEC		NR	REAGENT GRADE CHEM (INORG REF FROM TECH)	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BM	COBALT SALTS (COBALT NITRATE)	8	8	180
2819	INORGANIC CHEMICALS NEC		NR	SILICA AMORPHOUS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILVER BROMIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BM	COBALT SALTS (COBALT CHLORIDE)	1	8	38
2819	INORGANIC CHEMICALS NEC		NR	COBALT 60 (RADIOACTIVE)	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILVER CYANIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	COPPER IODIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AS	LITHIUM CARBONATE	3	3	66
2819	INORGANIC CHEMICALS NEC		NR	HEAVY WATER (DEUTERIUM OXIDE)	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AX	POTASSIUM CHLORIDE	3	3	92
2819	INORGANIC CHEMICALS NEC		NR	HYDROGEN SULFIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BB	SODIUM BISULFITE	3	3	119
2819	INORGANIC CHEMICALS NEC		NR	INDIUM CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BF	SODIUM SILICOFLUORIDE	6	6	130
2819	INORGANIC CHEMICALS NEC		NR	IODIDES	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BJ	ZINC OXIDE	3	3	148
2819	INORGANIC CHEMICALS NEC		NR	LEAD ARSENATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	ALUMINUM OXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	LITHIUM COMPOUNDS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	AMMONIUM MOLYBDATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	MAGNESIUM COMPOUNDS (INORGANIC)	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	BLEACHING POWDER	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	MERCURY CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	CALCIUM COMPOUNDS (INORGANIC)	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	NICKEL AMMONIUM SULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	CHRONIUM OXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	NUCLEAR FUEL SCRAP RE-PROCESSING	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILVER IODIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	OXIDATION CATALYST FROM PORCELAIN	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AZ	POTASSIUM PERMANGANATE	3	3	101
2819	INORGANIC CHEMICALS NEC		NR	PEROXIDES, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BH	STANNIC OXIDE	3	3	134
2819	INORGANIC CHEMICALS NEC		NR	POTASH MAGNESIA	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	AMMONIA ALUM	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM BROMIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	BOROSILICATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM CHLORATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILVER CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM HYPOCHLORITE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BD	SODIUM HYDROSULFIDE	3	3	127
2819	INORGANIC CHEMICALS NEC		NR	AMMONIUM THIOSULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	CERIUM SALTS	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SULFATE	8	10	79
2819	INORGANIC CHEMICALS NEC		NR	ALUMINUM COMPOUNDS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	RADIUM CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	RARE EARTH METAL SALTS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SALTS OF RARE EARTH METALS	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILICA GEL	6	6	99
2819	INORGANIC CHEMICALS NEC		NR	SILVER CARBONATE	6	6	99
2821	PLASTIC MATERIALS, SYN RESINS & NONVULCANIZABLE ELASTOMERS	414/416	B	RAYON FIBERS	8	9	5
2821	PLASTIC MATERIALS, SYN RESINS & NONVULCANIZABLE ELASTOMERS	414/416	D	THERMOPLASTIC RESINS	8	9	2

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2821	PLASTIC MATERIALS, SYN RESINS & NONVULCANIZABLE ELASTOMERS	414/416	E	THERMOSETTING RESINS	8	9	3
2821	PLASTIC MATERIALS, SYN RESINS & NONVULCANIZABLE ELASTOMERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2821	PLASTIC MATERIALS, SYN RESINS & NONVULCANIZABLE ELASTOMERS	414/416	C	OTHER FIBERS	8	9	16
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	414/416	D	THERMOPLASTIC RESINS (SILICONES)	8	9	4
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	B	EMULSION CRUMB RUBBER	8	8	1
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	C	SOLUTION CRUMB RUBBER	8	8	2
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	D	LATEX RUBBER	8	8	3
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2823	CELLULOSIC MAN-MADE FIBERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2823	CELLULOSIC MAN-MADE FIBERS	416	B	RAYON FIBERS	8	9	1
2823	CELLULOSIC MAN-MADE FIBERS	416	C	OTHER FIBERS	8	9	2
2824	SYNTHETIC ORGANIC FIBERS, EXCEPT CELLULOSIC	416	C	OTHER FIBERS	8	9	0
2824	SYNTHETIC ORGANIC FIBERS, EXCEPT CELLULOSIC		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2835	BIOLOGICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	1
2835	BIOLOGICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	2
2836	BIOLOGICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	3
2836	BIOLOGICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	4
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	3
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	2
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	C	CHEMICAL SYNTHESIS PRODUCTS	6	8	1
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2834	PHARMACEUTICAL PREPARATIONS	439	D	MIXING/COMPOUNDING-FORMULATION	6	8	0
2834	PHARMACEUTICAL PREPARATIONS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	A	SOAP MANUFACTURING BY BATCH KETTLE	5	5	12
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	B	FATTY ACID MANUFACTURING BY FATSPLITTING	5	5	1
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	C	SOAP MANUFACTURING BY FATTY ACID NEUTRALIZATION	5	5	13
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	D	GLYCERINE CONCENTRATION	5	5	2
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	P	MANUFACTURING OF LIQUID DETERGENTS	5	5	9
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	E	GLYCERINE DISTILLATION	5	5	3
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	G	MANUFACTURING OF BAR SOAPS	5	5	4
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	H	MANUFACTURING OF LIQUID SOAPS	5	5	8
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	O	MANUFACTURING OF SPRAY DRIED DETERGENTS	5	5	11
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	F	MANUFACTURING OF SOAP FLAKES & POWDERS	5	5	10
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	Q	MANUFACTURING OF DETERGENTS BY DRY BLEND	5	5	6
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	R	MANUFACTURING OF DRUM DRIED DETERGENTS	5	5	7
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	S	MANUFACTURING OF DETERGEN BAR & CAKES	5	5	5
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99

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2842	SPECIALTY CLEANING, POLISHING & SANITATION PREPARATIONS	417	H	MANUFACTURING OF LIQUID SOAPS	5	5	1
2842	SPECIALTY CLEANING, POLISHING & SANITATION PREPARATIONS	417	P	MANUFACTURING OF LIQUID DETERGENTS	5	5	2
2842	SPECIALTY CLEANING, POLISHING & SANITATION PREPARATIONS		NR	OTHER PREPARATIONS, NEC	5	5	99
2842	SPECIALTY CLEANING, POLISHING & SANITATION PREPARATIONS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	I	OLEUM SULFONATION & SULFATION	5	5	3
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	J	AIR-S03 SULFONATION & SULFATION	5	5	1
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	K	S03 SOLVENT & VACUUM SULFONATION	5	5	6
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	L	SULFAMIC ACID SULFATION	5	5	7
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	M	CHLOROSULFONIC ACID SULFATION	5	5	2
2843	SURFACE ACTIVE AGENTS, FINISHING AGENTS	417	N	NEUTRAL SULFURIC ACID ESTERS & SULFONIC	5	5	4
2844	PERFUMES, COSMETICS & OTHER TOILET PREPARATIONS	417	H	MANUFACTURING OF LIQUID SOAPS	5	5	1
2844	PERFUMES, COSMETICS & OTHER TOILET PREPARATIONS		NR	OTHER PREPARATIONS, NEC	5	5	99
2851	PAINTS/VARNISHES/LACQUERS/ENAMELS & ALLIED PRODUCTS		NR	OTHER PAINTS	8	8	99
2851	PAINTS/VARNISHES/LACQUERS/ENAMELS & ALLIED PRODUCTS	446	A	OIL-BASE SOLVENT WASH PAINT	3	3	0
2861	GUM AND WOOD CHEMICALS	454	A	CHAR & CHARCOAL BRIQUETTES	3	3	1
2861	GUM AND WOOD CHEMICALS	454	B	GUM ROSIN & TURPENTINE	3	3	3
2861	GUM AND WOOD CHEMICALS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2861	GUM AND WOOD CHEMICALS	454	D	TALL OIL, ROSIN, PITCH, FATTY ACIDS	6	6	6
2861	GUM AND WOOD CHEMICALS	454	E	ESSENTIAL OILS	3	3	2
2861	GUM AND WOOD CHEMICALS	454	F	ROSIN BASED DERIVATIVES	6	6	4
2861	GUM AND WOOD CHEMICALS	454	C	WOOD ROSIN, TURPENTINE & PINE OIL	6	6	7
2865	CYCLIC ORGANIC CRUDES, INTERM., DYES & PIGMENTS	414/416	F	COMMODITY	8	9	1
2865	CYCLIC ORGANIC CRUDES, INTERM., DYES & PIGMENTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2865	CYCLIC ORGANIC CRUDES, INTERM., DYES & PIGMENTS	414/416	G	BULK	8	9	2
2865	CYCLIC ORGANIC CRUDES, INTERM., DYES & PIGMENTS	414/416	H	SPECIALTY	8	9	3
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC	414/416	H	SPECIALTY	8	9	3
2869	INORGANIC CHEMICALS NEC	455	A	ORGANIC PESTICIDE CHEMICALS MFG.	8	10	152
2819	INDUSTRIAL ORGANIC CHEMICALS, NEC		NR		10	10	99
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC	414/416	F	COMMODITY	8	9	1
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC	414/416	G	BULK	8	9	2
2869	INORGANIC CHEMICALS NEC	455	B	METALLO-ORGANIC PESTICIDES	8	10	154
2873	NITROGEN FERTILIZERS	418	B	AMMONIA	1	1	1
2873	NITROGEN FERTILIZERS	418	C	UREA	1	1	2
2873	NITROGEN FERTILIZERS	418	D	AMMONIUM NITRATE	1	1	3
2873	NITROGEN FERTILIZERS	418	E	NITRIC ACID	1	1	4
2873	NITROGEN FERTILIZERS	418	F	AMMONIUM SULFATE PRODUCTION	1	1	5
2874	PHOSPHATIC FERTILIZERS	418	A	PHOSPHATE	1	1	0
2874	PHOSPHATIC FERTILIZERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2875	FERTILIZERS, MIXING ONLY	418	G	MIXED & BLEND FERTILIZER PRODUCTION	1	1	0
2879	PESTICIDES & AGRICULTURAL CHEMICALS NEC	455	C	PESTICIDE CHEMICALS FORMULATING	10	10	0
2891	ADHESIVES AND SEALANTS		NR	ADHESIVES AND SEALANTS	8	8	99

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2892	EXPLOSIVES	457	A	MANUFACTURE OF EXPLOSIVES	6	6	1
2892	EXPLOSIVES	457	C	EXPLOSIVES LOAD, ASSEMBLE & PACK PLANTS	6	6	3
2892	EXPLOSIVES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2893	PRINTING INK	447	A	OIL-BASED SOLVENT WASH INK	3	3	0
2893	PRINTING INK		NR	OTHER INKS	8	8	99
2895	CARBON BLACK	458	A	CARBON BLACK FURNACE PROCESS	5	5	2
2895	CARBON BLACK	458	C	CARBON BLACK CHANNEL PROCESS	3	3	1
2895	CARBON BLACK	458	D	CARBON BLACK LAMP PROCESS	3	3	3
2895	CARBON BLACK		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC	417	B	FATTY ACID MANUFACTURING BY FATSPLITTING	5	5	1
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC	424	F	ROSIN BASED DERIVATIVES	6	6	4
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC	454	D	TALL OIL, ROSIN, PITCH, FATTY ACIDS	6	6	2
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC	457	C	EXPLOSIVES LOAD, ASSEMBLE & PACK PLANTS	6	6	5
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC		NR	OTHER CHEMICAL PREPARATIONS NEC	6	6	99
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2899	CHEMICALS AND CHEMICAL PREPARATIONS, NEC	454	E	ESSENTIAL OILS	3	3	3
2911	PETROLEUM REFINING	419	A	TOPPING	3	8	1
2911	PETROLEUM REFINING	419	B	CRACKING	3	8	2
2911	PETROLEUM REFINING	419	C	PETROCHEMICAL	3	8	3
2911	PETROLEUM REFINING	419	D	LUBE	3	8	4
2911	PETROLEUM REFINING	419	E	INTEGRATED	3	8	5
2911	PETROLEUM REFINING		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2911	PETROLEUM REFINING	443	A	ASPHALT EMULSION	8	8	6
2951	PAVING MIXTURES AND BLOCKS	443	A	ASPHALT EMULSION	8	8	1
2951	PAVING MIXTURES AND BLOCKS	443	B	ASPHALT CONCRETE	8	8	2
2951	PAVING MIXTURES AND BLOCKS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2952	ASPHALT FELT AND COATINGS	443	C	ASPHALT ROOFING	8	8	1
2952	ASPHALT FELT AND COATINGS	443	D	LINOLEUM AND PRINTED ASPHALT FELT	8	8	2
2952	ASPHALT FELT AND COATINGS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2992	LUBRICATING OILS AND GREASES		NR	LUBE OIL RE-REFINING	8	8	99
2992	LUBRICATING OILS AND GREASES		NR	WASTE OIL RECYCLING	10	10	99
2992	LUBRICATING OILS AND GREASES		NR	OTHER OILS & GREASES NEC	5	5	99
2992	LUBRICATING OILS AND GREASES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2999	PRODUCTS OF PETROLEUM AND COAL, NEC		NR		5	5	99
3011	TIRES AND INNER TUBES	428	A	TIRE & INNER TUBE PLANTS	6	6	0
3011	TIRES AND INNER TUBES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3021	RUBBER AND PLASTICS FOOTWEAR	428	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	4
3021	RUBBER AND PLASTICS FOOTWEAR	428	F	MD-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	3
3021	RUBBER AND PLASTICS FOOTWEAR	428	G	LG-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	1
3021	RUBBER AND PLASTICS FOOTWEAR	428	J	LATEX-DIPPED, MOLDED, EXTRUDED GOODS	5	5	2
3021	RUBBER AND PLASTICS FOOTWEAR		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3021	RUBBER AND PLASTICS FOOTWEAR	463	A	CONTACT COOLING & HEATING WATER (PLASTICS)	4	6	5
3021	RUBBER AND PLASTICS FOOTWEAR	463	B	CLEANING (PLASTICS)	5	6	6
3069	RECLAIMED RUBBER	428	H	WET DIGESTION RECLAIM	8	8	2
3069	RECLAIMED RUBBER	428	I	PAN, DRY DIGESTION & MECHANICAL RECLAIM	8	8	1
3069	RECLAIMED RUBBER		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3052	RUBBER & PLASTICS HOSE AND BELTING	428	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	3
3052	RUBBER & PLASTICS HOSE AND BELTING	428	F	MD-SIZED GEN MOLDED, EXTR 7 FABR RUBBER PLANT	6	6	2

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3052	RUBBER & PLASTICS HOSE AND BELTING	428	G	LG-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	1
3052	RUBBER & PLASTICS HOSE AND BELTING		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3052	RUBBER & PLASTICS HOSE AND BELTING	463	A	CONTACT COOLING & HEATING WATER	4	6	4
3052	RUBBER & PLASTICS HOSE AND BELTING	463	B	CLEANING WATER	5	6	5
3061	MOLDED, EXTRUDED & LATHE CUT	428	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	1
3061	MOLDED, EXTRUDED & LATHE CUT	428	F	MD-SIZED GEN MOLDED, EXTR 7 FABR RUBBER PLANT	6	6	2
3061	MOLDED, EXTRUDED & LATHE CUT	428	G	LG-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	3
3069	FABRICATED RUBBER PRODUCTS NEC	428	G	LG-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	4
3069	FABRICATED RUBBER PRODUCTS NEC	428	F	MD-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	5
3069	FABRICATED RUBBER PRODUCTS NEC	42 8	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	6
3081	UNSUPPORTED PLASTIC FILM & SHEET	463	A	CONTACT COOLING & HEATING WATER	4	6	1
3081	UNSUPPORTED PLASTIC FILM & SHEET	463	B	CLEANING WATER	5	6	2
3083	LAMINATED PLASTICS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3081	UNSUPPORTED PLASTIC FILM & SHEET	463	C	FINISHING WATER	6	8	3
3083	LAMINATED PLASTICS	463	A	CONTACT COOLING & HEATING WATER	4	6	4
3083	LAMINATED PLASTICS	463	B	CLEANING WATER	5	6	5
3083	LAMINATED PLASTICS	463	C	FINISHING WATER	6	8	6
3081	UNSUPPORTED PLASTIC FILM & SHEET		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3084	PLASTICS PIPE	463	A	CONTACT COOLING & HEATING WATER	4	6	7
3084	PLASTICS PIPE	463	B	CLEANING WATER	5	6	8
3084	PLASTICS PIPE	463	C	FINISHING WATER	6	8	9
3084	PLASTICS PIPE		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3085	PLASTIC BOTTLES	463	A	CONTACT COOLING & HEATING WATER	4	6	10
3085	PLASTIC BOTTLES	463	B	CLEANING WATER	5	6	12
3089	PLASTICS PRODUCTS, NEC		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3432	MISCELLANEOUS PLASTICS PRODUCTS	463	A	CONTACT COOLING & HEATING WATER	4	6	29
3085	PLASTIC BOTTLES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3432	MISCELLANEOUS PLASTICS PRODUCTS	463	B	CLEANING WATER	5	6	30
3082	UNSUPPORTED PLASTIC PROFILE SHAPES	463	B	CLEANING WATER	5	6	15
3432	MISCELLANEOUS PLASTICS PRODUCTS	463	C	FINISHING WATER	6	8	31
3082	UNSUPPORTED PLASTIC PROFILE SHAPES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3432	MISCELLANEOUS PLASTICS PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3086	PLASTIC FOAM PRODUCTS	463	B	CLEANING WATER	5	6	18
3086	PLASTIC FOAM PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3089	PLASTICS PRODUCTS, NEC	463	A	CONTACT COOLING & HEATING WATER	4	6	26
3089	PLASTICS PRODUCTS, NEC	463	B	CLEANING WATER	5	6	27
3087	CUSTOM COMPOUNDING OF PURCHASED PLASTIC RESINS	463	C	FINISHING WATER	6	8	22
3089	PLASTICS PRODUCTS, NEC	463	C	FINISHING WATER	6	8	28
3088	PLASTIC PLUMBING FIXTURES	463	A	CONTACT COOLING & HEATING WATER	4	6	23
3085	PLASTIC BOTTLES	463	C	FINISHING WATER	6	8	13
3088	PLASTIC PLUMBING FIXTURES	463	C	FINISHING WATER	6	8	25
3087	CUSTOM COMPOUNDING OF PURCHASED PLASTIC RESINS	463	B	CLEANING WATER	5	6	21
3087	CUSTOM COMPOUNDING OF PURCHASED PLASTIC RESINS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3088	PLASTIC PLUMBING FIXTURES	463	B	CLEANING WATER	5	6	24
3088	PLASTIC PLUMBING FIXTURES		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3082	UNSUPPORTED PLASTIC PROFILE SHAPES	463	A	CONTACT COOLING & HEATING WATER	4	6	14
3082	UNSUPPORTED PLASTIC PROFILE SHAPES	463	C	FINISHING WATER	6	8	16
3086	PLASTIC FOAM PRODUCTS	463	A	CONTACT COOLING & HEATING WATER	4	6	17
3086	PLASTIC FOAM PRODUCTS	463	C	FINISHING WATER	6	8	19
3087	CUSTOM COMPOUNDING OF PURCHASED PLASTIC RESINS	463	A	CONTACT COOLING & HEATING WATER	4	6	20

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3111	LEATHER TANNING AND FINISHING	425	A	HAIR PULP, CHROME TAN, RETAN-WET FINISH	7	8	1
3111	LEATHER TANNING AND FINISHING	425	I	RETAIN-WET FINISH - SPLITS	1	6	9
3111	LEATHER TANNING AND FINISHING		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3111	LEATHER TANNING AND FINISHING	425	C	HAIR SAVE, NON-CHROME TAN, RETAN-WET FINISH	5	9	3
3111	LEATHER TANNING AND FINISHING	425	E	NO BEAMHOUSE	4	10	4
3111	LEATHER TANNING AND FINISHING	425	G	SHEARLING	4	7	6
3111	LEATHER TANNING AND FINISHING	425	H	PIGSKIN	4	10	8
3111	LEATHER TANNING AND FINISHING	425	B	HAIR SAVE, NON-CHROME TAN, RETAN-WET FINISH	3	7	2
3111	LEATHER TANNING AND FINISHING	425	D	RETAN-WET FINISH SIDES	1	6	5
3111	LEATHER TANNING AND FINISHING	425	F	THROUGH-THE-BLUE	1	10	7
3131	BOOT & SHOE CUT STOCK & FINDINGS		NR		1	1	99
3142	HOUSE SLIPPERS		NR		1	1	99
3143	MEN'S FOOTWEAR, EXCEPT ATHLETIC		NR		1	1	99
3144	WOMEN'S FOOTWEAR, EXCEPT ATHLETIC		NR		1	1	99
3149	FOOTWEAR, EXCEPT RUBBER, NEC		NR		1	1	99
3151	LEATHER GLOVES AND MITTENS		NR		1	1	99
3161	LUGGAGE		NR		1	1	99
3171	WOMEN'S HANDBAGS AND PURSES		NR		1	1	99
3172	PERSONAL LEATHER GOODS, EXCEPT WOMEN'S HANDBAGS & PURSES		NR		1	1	99
3199	LETHER GOODS NEC		NR		1	1	99
3211	FLAT GLASS	426	B	SHEET GLASS	1	1	1
3211	FLAT GLASS	426	C	ROLLED GLASS	1	1	2
3211	FLAT GLASS	426	D	PLATE GLASS	1	1	3
3211	FLAT GLASS	426	E	FLOAT GLASS	1	1	4
3211	FLAT GLASS	426	F	AUTOMOTIVE GLASS TEMPERING	1	1	5
3211	FLAT GLASS	426	G	AUTOMOTIVE GLASS LAMINATING	1	1	6
3221	GLASS CONTAINERS	426	H	GLASS CONTAINER	1	1	0
3229	PRESSED & BLOWN GLASS & GLASSWARE NEC	426	I	MACHINE PRESSED & BLOWN GLASS	1	1	1
3229	PRESSED & BLOWN GLASS & GLASSWARE NEC	426	J	GLASS TUBING (DANNER)	1	1	2
3229	PRESSED & BLOWN GLASS & GLASSWARE NEC	426	K	TELEVISION PICTURE TUBE ENVELOPE	1	1	3
3229	PRESSED & BLOWN GLASS & GLASSWARE NEC	426	L	INCANDESCENT LAMP ENVELOPE	1	1	4
3229	PRESSED & BLOWN GLASS & GLASSWARE NEC	426	M	HAND PRESSED & BLOWN GLASS	1	1	5
3231	GLASS PRODUCTS MADE OF PURCHASED GLASS	426	F	AUTOMOTIVE GLASS TEMPERING	1	1	1
3231	GLASS PRODUCTS MADE OF PURCHASED GLASS	426	G	AUTOMOTIVE GLASS LAMINATING	1	1	2
3241	CEMENT, HYDRAULIC	411	A	NONLEACHING	1	1	1
3241	CEMENT, HYDRAULIC	411	B	LEACHING	1	1	2
3241	CEMENT, HYDRAULIC	411	C	MATERIALS STORAGE PILES RUNOFF	1	1	3
3251	BRICK AND STRUCTURAL CLAY TILE		NR		1	1	99
3253	CERAMIC WALL AND FLOOR TILE		NR		1	1	99
3255	CLAY REFRACTORIES		NR		1	1	99
3259	STRUCTURAL CLAY PRODUCTS NEC		NR		1	1	99
3261	VITREOUS CHINA PLUMBING FIXTURES		NR		1	1	99
3262	VITREOUS CHINA TABLE & KITCHEN ARTICLES		NR		1	1	99
3263	FINE EARTHENWARE		NR		1	1	99
3264	PORCELAIN ELECTRICAL SUPPLIES		NR		1	1	99
3269	POTTERY PRODUCTS, NEC		NR		1	1	99
3271	CONCRETE BLOCK & BRICK		NR		1	1	99
3272	CONCRETE PRODUCTS EXCEPT BLOCK & BRICK		NR		1	1	99
3273	READY-MIXED CONCRETE		NR		1	1	99
3274	LIME	415	E	CALCIUM OXIDE PRODUCTION	1	1	0
3274	LIME		NR	OTHER LIME PRODUCTION	1	1	99
3275	GYPSUM PRODUCTS		NR		1	1	99
3281	CUT STONE & STONE PRODUCTS	436	A	DIMENSION STONE	1	1	0

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3291	ABRASIVE PRODUCTS		NR		1	1	99
3292	ASBESTOS PRODUCTS	427	A	ASBESTOS-CEMENT PIPE	1	1	1
3292	ASBESTOS PRODUCTS	427	B	ASBESTOS-CEMENT SHEET	1	1	2
3292	ASBESTOS PRODUCTS	427	I	SOLVENT RECOVERY	1	1	7
3292	ASBESTOS PRODUCTS	427	F	ASBESTOS ROOFING	1	1	4
3292	ASBESTOS PRODUCTS	427	G	ASBESTOS FLOOR TILE	1	1	5
3292	ASBESTOS PRODUCTS	427	H	COATING OR FINISHING ASBESTOS TEXTILES	1	1	6
3292	ASBESTOS PRODUCTS	427	E	ASBESTOS MILLBOARD	1	1	3
3292	ASBESTOS PRODUCTS	427	J	VAPOR ABSORPTION	1	1	8
3292	ASBESTOS PRODUCTS	427	K	WET DUST COLLECTION	1	1	9
3053	GASKETS, PACKING & SEALING DEVICES	427	K	WEST DUST COLLECTION (ASBESTOS)	1	1	4
3053	GASKETS, PACKING & SEALING DEVICES	428	E	SM-SIZE GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	3
3053	GASKETS, PACKING & SEALING DEVICES	428	F	MD-SIZE GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	2
3053	GASKETS, PACKING & SEALING DEVICES	428	G	LG-SIZE GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	1
3053	GASKETS, PACKING & SEALING DEVICES		NR	NON-RUBBER PRODUCTS	1	1	99
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	J	BARITE	1	1	1
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	W	MAGNESITE	1	1	2
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	X	DIATOMITE	1	1	3
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AG	KAOLIN	1	1	4
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AJ	TALC, STEATITE, SOAPSTONE & PYROPHYLLITE	1	1	5
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AL	GRAPHITE	1	1	6
3295	MINERALS & EARTHS, GROUND OR OTHERWISE		NR	OTHER MINERALS & EARTHS	1	1	99
3296	MINERAL WOOL	426	A	INSULATION FIBERGLASS	1	1	1
3296	MINERAL WOOL		NR	OTHER MINERAL WOOLS	1	1	99
3299	NONMETALLIC MINERAL PRODUCTS, NEC		NR		1	1	99
3312	BLAST FURNACES, STEEL WORKS & ROLLING MI	420	A	COKEMAKING	10	10	6
3312	BLAST FURNACES, STEEL WORKS & ROLLING MI	420	B	SINTERING	9	9	23
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	C	IRONMAKING	10	10	5
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	D	STEELMAKING	10	10	1
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	E	VACUUM DEGASSING	3	9	24
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	F	CONTINUOUS CASTING	1	7	10
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	G	HOT FORMING	1	3	16
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	H	SALT BATH DESCALING	9	10	22
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	J	COLD FORMING	10	10	7
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	K	ALKALINE CLEANING	8	8	9
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	L	HOT COATING	10	10	13
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	I	ACID PICKLING	10	10	20
3313	ELECTROMETALLURGICAL PRODUCTS	420	D	STEELMAKING	10	10	2
3313	ELECTROMETALLURGICAL PRODUCTS	420	F	CONTINUOUS CASTING	1	7	3
3313	ELECTROMETALLURGICAL PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99

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3313	ELECTROMETALLURGICAL PRODUCTS	424	A	OPEN ELECTRIC FURNACES W/WET APC	5	5	4
3313	ELECTROMETALLURGICAL PRODUCTS	424	B	COVERED ELECTRIC FURNACES W/WET APC	5	5	5
3313	ELECTROMETALLURGICAL PRODUCTS	424	G	ELECTROLYTIC CHROMIUM	5	5	10
3313	ELECTROMETALLURGICAL PRODUCTS	424	D	COVERED CALCIUM CARBIDE FURNACES W/WET APC	5	5	7
3313	ELECTROMETALLURGICAL PRODUCTS	424	E	OTHER CALCIUM CARBIDE FURNACES	5	5	8
3313	ELECTROMETALLURGICAL PRODUCTS	424	F	ELECTROLYTIC MANGANESE PRODUCTS	5	5	9
3313	ELECTROMETALLURGICAL PRODUCTS	424	C	SLAG PROCESSING	5	5	6
3315	STEEL WIRE DRAWING & STEEL NAILS & SPIKE	420	H	SALT BATH DESCALING	9	10	1
3315	STEEL WIRE DRAWING & STEEL NAILS & SPIKE	420	J	COLD FORMING	10	10	3
3315	STEEL WIRE DRAWING & STEEL NAILS & SPIKE	420	K	ALKALINE CLEANING	8	8	4
3315	STEEL WIRE DRAWING & STEEL NAILS & SPIKE	420	I	ACID PICKLING	10	10	2
3316	COLD ROLLED STEEL SHEET, STRIP & BARS	420	J	COLD FORMING	10	10	2
3316	COLD ROLLED STEEL SHEET, STRIP & BARS	420	I	ACID PICKLING	10	10	1
3317	STEEL PIPE AND TUBES	420	H	SALT BATH DESCALING	9	10	2
3317	STEEL PIPE AND TUBES	420	G	HOT FORMING	1	3	1
3317	STEEL PIPE AND TUBES	420	I	ACID PICKLING	10	10	3
3317	STEEL PIPE AND TUBES	420	J	COLD FORMING	10	10	4
3317	STEEL PIPE AND TUBES	420	K	ALKALINE CLEANING	8	8	5
3321	GRAY & DUCTILE IRON FOUNDRIES	464	C	FERROUS CASTING	1	9	0
3322	MALLEABLE IRON FOUNDRIES	464	C	FERROUS CASTING	1	9	0
3324	STEEL INVESTMENT FOUNDRIES	464	C	FERROUS CASTING	1	9	0
3325	STEEL FOUNDRIES, NEC	464	C	FERROUS CASTING	1	9	0
3331	PRIMARY SMELTING AND REFINING OF COPPER	421	D	PRIMARY COPPER SMELTING	1	8	1
3331	PRIMARY SMELTING AND REFINING OF COPPER	421	E	PRIMARY ELECTROLYTIC COPPER REFINING	1	8	2
3331	PRIMARY SMELTING AND REFINING OF COPPER	421	I	METALLURGICAL ACID PLANTS	10	10	3
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	G	PRIMARY LEAD	1	6	1
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	I	METALLURGICAL ACID PLANTS	10	10	2
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	H	PRIMARY ZINC	10	10	1
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	I	METALLURGICAL ACID PLANTS	10	10	2
3334	PRIMARY PRODUCTION OF ALUMINUM	421	A	BAUXITE REFINING	10	10	2
3334	PRIMARY PRODUCTION OF ALUMINUM	421	B	PRIMARY ALUMINUM SMELTING	10	10	1
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	I	METALLURGICAL ACID PLANTS (MOLYBDENUM)	10	10	36
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	J	PRIMARY TUNGSTEN	10	10	33
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	K	PRIMARY COLUMSIUM-TANTALUM	10	10	13
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	N	PRIMARY ANTIMONY	10	10	3
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	O	PRIMARY BERYLLIUM	10	10	6
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	P	PRIMARY BORON	10	10	8
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	Q	PRIMARY CALCIUM & RUBIDIUM	10	10	11
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	R	PRIMARY & SECONDARY GERMANIUM & GALLIUM	10	10	15
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	424	G	ELECTROLYTIC CHROMIUM	8	8	37

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3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	W	PRIMARY NICKEL & COBALT	1	9	22
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY ARSENIC	5	5	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY BARIUM	5	5	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	AC	PRIMARY & SECONDARY TIN	10	10	31
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY BISMUTH	5	5	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY URANIUM	8	8	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY CALCIUM	5	5	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY PLATINUM GROUP	8	8	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY & SECONDARY INDIUM	8	8	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY SELENIUM	10	10	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY LITHIUM	8	8	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	AA	PRIMARY RARE EARTH METALS	10	10	24
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	AG	PRIMARY ZIRCONIUM & HAFNIUM	7	10	35
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY CADMIUM	10	10	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY TELLURIUM	10	10	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	AD	PRIMARY & SECONDARY TITANIUM	9	10	32
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	PRIMARY MAGNESIUM	5	5	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	424	F	ELECTROLYTIC MANGANESE PRODUCTS	8	8	36
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	U	PRIMARY MOLYBDENUM & RHENIUM	10	10	21
3339	PRIMARY SMELTING AND REFINING OF NONFERROUS METALS EXCEPT CU & AL	421	Y	PRIMARY PRECIOUS METALS & MERCURY	1	10	16
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	C	SECONDARY ALUMINUM SMELTING	1	8	1
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	AB	SECONDARY TANTALUM	10	10	16
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	AE	SECONDARY TUNGSTEN & COBALT	10	10	19
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	L	SECONDARY SILVER-PHOTOGRAPHIC	7	8	15
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	AF	SECONDARY URANIUM	10	10	20
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	M	SECONDARY LEAD	10	10	8
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY BERYLLIUM	5	5	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	T	SECONDARY MERCURY	8	8	10
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY BABBITT	5	5	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	X	SECONDARY NICKEL	8	8	11
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY BORON	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	F	SECONDARY COPPER	1	8	7

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3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	S	SECONDARY INDIUM	5	5	23
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	V	SECONDARY MOLYBDENUM & VANADIUM	10	10	24
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	Z	SECONDARY PRECIOUS METALS	10	10	13
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	L	SECONDARY SILVER-NON-PHOTOGRAPHIC	7	8	22
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY COLUMBIUM	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY MAGNESIUM	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY PLUTONIUM	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY TIN	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY TITANIUM	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY ZINC	8	8	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS		NR	SECONDARY CADMIUM	5	5	99
3351	ROLLING, DRAWING & EXTRUDING OF COPPER	468	A	COPPER FORMING	1	9	11
3351	ROLLING, DRAWING & EXTRUDING OF COPPER	468	B	BERYLLIUM COPPER ALLOY FORMING	1	9	21
3351	ROLLING, DRAWING & EXTRUDING OF COPPER		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3353	ALUMINUM SHEET, PLATE AND FOIL	464	A	ALUMINUM CASTING	1	8	1
3353	ALUMINUM SHEET, PLATE AND FOIL	467	A	ROLLING WITH NEAT OILS	5	8	2
3353	ALUMINUM SHEET, PLATE AND FOIL	467	B	ROLLING WITH EMULSIONS	4	8	3
3353	ALUMINUM SHEET, PLATE AND FOIL		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3354	ALUMINUM EXTRUDED PRODUCTS	467	C	EXTRUSION	1	8	2
3354	ALUMINUM EXTRUDED PRODUCTS	467	E	DRAWING WITH NEAT OILS	1	9	3
3354	ALUMINUM EXTRUDED PRODUCTS	467	F	DRAWING WITH EMULSIONS OR SOAPS	4	8	1
3354	ALUMINUM EXTRUDED PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3355	ALUMINUM ROLLING & DRAWING NEC	464	A	ALUMINUM CASTING	1	8	1
3355	ALUMINUM ROLLING & DRAWING NEC	467	A	ROLLING WITH NEAT OILS	5	8	2
3355	ALUMINUM ROLLING & DRAWING NEC	467	B	ROLLING WITH EMULSIONS	4	8	3
3355	ALUMINUM ROLLING & DRAWING NEC	467	E	DRAWING WITH NEAT OILS	1	9	4
3355	ALUMINUM ROLLING & DRAWING NEC	467	F	DRAWING WITH EMULSIONS OR SOAPS	4	8	5
3355	ALUMINUM ROLLING & DRAWING NEC		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	A	BERYLLIUM FORMING	5	5	1
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	B	LEAD/TIN/BISMUTH FORMING	9	10	2
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	D	NICKEL-COBALT FORMING	8	9	4
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	E	PRECIOUS METALS FORMING	1	10	5
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	F	REFRACTORY METALS FORMING	1	8	6
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	G	TITANIUM FORMING	3	8	7
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	H	URANIUM FORMING	1	8	8

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3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	I	ZINC FORMING	1	8	9
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL	471	J	ZIRCONIUM/HAFNIUM FORMING	7	9	10
3356	ROLLING, DRAWING & EXTRUDING OFNONFERROUS METALS EXCEPT CU & AL		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3357	DRAWING & INSULATING OF NONFERROUS WIRE	433	A	METAL FINISHING	1	9	1
3357	DRAWING & INSULATING OF NONFERROUS WIRE	463	A	CONTACT COLLING & HEATING WATER (PLASTICS)	4	6	2
3357	DRAWING & INSULATING OF NONFERROUS WIRE	463	B	CLEANING & FINISHING WATER (PLASTICS)	5	6	3
3357	DRAWING & INSULATING OF NONFERROUS WIRE	467	E	DRAWING WITH NEAT OILS (ALUMINUM)	1	9	4
3357	DRAWING & INSULATING OF NONFERROUS WIRE	467	F	DRAWING W/EMULSIONS OR SOAPS (ALUMINUM)	4	8	1
3357	DRAWING & INSULATING OF NONFERROUS WIRE	468	A	COPPER FORMING	1	9	6
3357	DRAWING & INSULATING OF NONFERROUS WIRE		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3363	ALUMINUM DIE CASTING	464	A	ALUMINUM CASTING	1	8	1
3365	ALUMINUM FOUNDRIES EXCEPT DIE CASTING	464	A	ALUMINUM CASTING	1	8	2
3364	NONFERROUS DIE CASTING EXCEPT AL	464	B	COPPER CASTING	5	8	1
3366	COPPER FOUNDRIES	464	B	COPPER CASTING	5	8	2
3364	NONFERROUS DIE CASTING EXCEPT AL	464	B	COPPER CASTING	5	8	1
3369	NONFERROUS FOUNDRIES EXCEPT AL & CU	464	D	ZINC CASTING	10	10	2
3398	METAL HEAT TREATING	433	A	METAL FINISHING	1	9	0
3399	PRIMARY METAL PRODUCTS, NEC	433	A	METAL FINISHING	1	9	1
3399	PRIMARY METAL PRODUCTS, NEC	471	K	METAL POWDERS	7	9	2
3399	PRIMARY METAL PRODUCTS, NEC		NR	OTHER PRODUCTS	1	1	99
3411	METAL CANS	465	D	CAN MAKING	1	7	0
3412	METAL BARRELS, DRUMS AND PAILS	433	A	METAL FINISHING	1	9	0
3412	METAL BARRELS, DRUMS AND PAILS		NR	DRUM RECYCLING	8	8	99
3412	METAL BARRELS, DRUMS AND PAILS		NR	NO ELECTROPLATING	1	1	99
3421	CUTLERY	433	A	METAL FINISHING	1	9	0
3421	CUTLERY		NR	NO ELECTROPLATING	1	1	99
3423	HAND AND EDGE TOOLS, NEC	433	A	METAL FINISHING	1	9	0
3423	HAND AND EDGE TOOLS, NEC		NR	NO ELECTROPLATING	1	1	99
3425	HAND SAWS AND SAW BLADES	433	A	METAL FINISHING	1	9	1
3429	HARDWARE, NEC	433	A	METAL FINISHING	1	9	0
3429	HARDWARE, NEC		NR	NO ELECTROPLATING	1	1	99
3431	METAL SANITARY WARE	466	B	CAST IRON BASIS MATERIAL	10	10	0
3432	PLUMBING FIXTURE FITTINGS & TRIM		NR	NO ELECTROPLATING	1	1	99
3432	PLUMBING FIXTURE FITTINGS & TRIM	433	A	METAL FINISHING	1	9	1
3432	PLUMBING FIXTURE FITTINGS & TRIM	468	A	COPPER FORMING	1	9	2
3567	HEATING EQUIPMENT, EXCEPT ELECTRIC	433	A	METAL FINISHING	1	9	1
3567	HEATING EQUIPMENT, EXCEPT ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC	433	A	METAL FINISHING	1	9	2
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3441	FABRICATED STRUCTURAL METAL		NR		1	1	99
2431	METAL DOORS, SASH AND TRIM				1	1	1
3442	METAL DOORS, SASH AND TRIM	433	A	METAL FINISHING	1	9	2
3442	METAL DOORS, SASH AND TRIM		NR	NO ELECTROPLATING	1	1	99
3443	FABRICATED PLATE WORK (BOILER SHOPS)		NR		1	1	99
3444	SHEET METAL WORK		NR		1	1	99
3449	SHEET METAL WORK		NR		1	1	99
3446	ARCHITECTURAL METAL WORK		NR		1	1	99
3448	PREFABRICATED METAL BUILDINGS		NR		1	1	99
3449	MISCELLANEOUS METAL WORK		NR		1	1	99
3451	SCREW MACHINE PRODUCTS	433	A	METAL FINISHING	1	9	0

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3451	SCREW MACHINE PRODUCTS		NR	NO ELECTROPLATING	1	1	99
3452	BOLTS, NUTS, RIVETS AND WASHERS	433	A	METAL FINISHING	1	9	0
3452	BOLTS, NUTS, RIVETS AND WASHERS		NR	NO ELECTROPLATING	1	1	99
3462	IRON AND STEEL FORGINGS	433	A	METAL FINISHING	1	9	0
3462	IRON AND STEEL FORGINGS		NR	NO ELECTROPLATING	1	1	99
3463	NONFERROUS FORGINGS	433	A	METAL FINISHING	1	9	3
3463	NONFERROUS FORGINGS	467	D	FORGING (ALUMINUM)	5	5	1
3463	NONFERROUS FORGINGS	468	A	COPPER FORMING	1	9	2
3463	NONFERROUS FORGINGS	471	A	BERYLLIUM FORMING	5	5	4
3463	NONFERROUS FORGINGS	471	B	LEAD/TIN/BISMUTH FORMING	9	10	5
3463	NONFERROUS FORGINGS	471	C	MAGNESIUM FORMING	5	5	6
3463	NONFERROUS FORGINGS	471	D	NICKEL-COBALT FORMING	8	9	7
3463	NONFERROUS FORGINGS	471	E	PRECIOUS METALS FORMING	1	10	8
3463	NONFERROUS FORGINGS	471	J	ZIRCONIUM/HAFNIUM FORMING	7	9	13
3463	NONFERROUS FORGINGS	471	G	TITANIUM FORMING	3	8	10
3463	NONFERROUS FORGINGS	471	H	URANIUM FORMING	1	8	11
3463	NONFERROUS FORGINGS	471	I	ZINC FORMING	1	8	12
3463	NONFERROUS FORGINGS	471	F	REFRACTORY METALS FORMING	1	8	9
3463	NONFERROUS FORGINGS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3465	AUTOMOTIVE STAMPINGS	433	A	METAL FINISHING	1	9	0
3465	AUTOMOTIVE STAMPINGS		NR	NO ELECTROPLATING	1	1	99
3466	CROWNS AND CLOSURES	433	A	METAL FINISHING	1	9	0
3466	CROWNS AND CLOSURES		NR	NO ELECTROPLATING	1	1	99
3449	METAL STAMPINGS, NEC		NR		1	1	99
3469	METAL STAMPINGS, NEC		NR		1	1	99
3471	PLATING AND POLISHING	433	A	METAL FINISHING	1	9	0
3479	METAL COATING AND ALLIED SERVICES	420	L	HOT COATING	10	10	5
3479	METAL COATING AND ALLIED SERVICES	433	A	METAL FINISHING	1	9	4
3479	METAL COATING AND ALLIED SERVICES		NR	NO ELECTROPLATING/COATING	1	1	99
3479	METAL COATING AND ALLIED SERVICES	465	A	STEEL BASIS MATERIAL COATING	10	10	2
3479	METAL COATING AND ALLIED SERVICES	465	B	GALVANIZED BASIS MATERIAL COATING	10	10	3
3479	METAL COATING AND ALLIED SERVICES	465	C	ALUMINUM BASIS MATERIAL COATING	10	10	1
3482	SMALL ARMS AMMUNITION	433	A	METAL FINISHING	1	9	1
3482	SMALL ARMS AMMUNITION	457	C	EXPLOSIVES LOAD, ASSEMBLE & PACK PLANTS	6	6	2
3482	SMALL ARMS AMMUNITION		NR	NO ELECTROPLATING/EXPLOSIVES	1	1	99
3482	SMALL ARMS AMMUNITION	463	A	CONTACT COOLING & HEATING WATER (PLASTICS)	4	6	3
3482	SMALL ARMS AMMUNITION	463	B	CLEANING WATER (PLASTICS)	5	6	4
3483	AMMUNITION, EXC. FOR SMALL ARMS	433	A	METAL FINISHING	1	9	1
3483	AMMUNITION, EXC. FOR SMALL ARMS	457	C	EXPLOSIVES LOAD, ASSEMBLE & PACK PLANTS	6	6	2
3483	AMMUNITION, EXC. FOR SMALL ARMS		NR	NO ELECTROPLATING/EXPLOSIVES	1	1	99
3484	SMALL ARMS	433	A	METAL FINISHING	1	9	0
3484	SMALL ARMS		NR	NO ELECTROPLATING	1	1	99
3489	ORDINANCE AND ACCESSORIES, NEC	433	A	METAL FINISHING	1	9	0
3489	ORDINANCE AND ACCESSORIES, NEC		NR	NO ELECTROPLATING	1	1	99
3493	STEEL SPRINGS, EXCEPT WIRE	433	A	METAL FINISHING	1	9	0
3493	STEEL SPRINGS, EXCEPT WIRE		NR	NO ELECTROPLATING	1	1	99
3492	VALVES & HOSE FITTINGS	433	A	METAL FINISHING	1	9	1
3491	INDUSTRIAL VALVES	433	A	METAL FINISHING	1	9	2
3494	VALVES AND PIPE FITTINGS, NEC	433	A	METAL FINISHING	1	9	3
3494	VALVES AND PIPE FITTINGS, NEC		NR	NO ELECTROPLATING	1	1	99
3494	VALVES AND PIPE FITTINGS, NEC		NR	NO ELECTROPLATING	1	1	99
3492	VALVES & HOSE FITTINGS		NR	NO ELECTROPLATING	1	1	99
3495	WIRE SPRINGS	433	A	METAL FINISHING	1	9	0
3495	WIRE SPRINGS		NR	NO ELECTROPLATING	1	1	99
3496	MISC. FABRICATED WIRE PRODUCTS	433	A	METAL FINISHING	1	9	0
3496	MISC. FABRICATED WIRE PRODUCTS		NR	NO ELECTROPLATING	1	1	99
3497	METAL FOIL AND LEAF	468	A	COPPER FORMING	1	9	2
3497	METAL FOIL AND LEAF	471	E	PRECIOUS METALS FORMING	1	10	7
3497	METAL FOIL AND LEAF	465	C	ALUMINUM BASIS MATERIAL COATING	5	5	1
3497	METAL FOIL AND LEAF	471	B	LEAD/TIN/BISMUTH FORMING	9	10	4
3497	METAL FOIL AND LEAF	471	C	MAGNESIUM FORMING	5	5	5
3497	METAL FOIL AND LEAF	471	D	NICKEL-COBALT FORMING	8	9	6

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3497	METAL FOIL AND LEAF	471	A	BERYLLIUM FORMING	5	5	3
3497	METAL FOIL AND LEAF	471	F	REFRACTORY METALS FORMING	1	8	8
3497	METAL FOIL AND LEAF	471	G	TITANIUM FORMING	3	8	9
3497	METAL FOIL AND LEAF	471	H	URANIUM FORMING	1	8	10
3497	METAL FOIL AND LEAF	471	I	ZINC FORMING	1	8	11
3497	METAL FOIL AND LEAF	471	J	ZIRCONIUM/HAFNIUM FORMING	7	9	12
3498	FABRICATED PIPE AND FITTINGS	433	A	METAL FINISHING	1	9	0
3498	FABRICATED PIPE AND FITTINGS		NR	NO ELECTROPLATING	1	1	99
3499	FABRICATED METAL PRODUCTS, NEC	433	A	METAL FINISHING	1	9	0
3499	FABRICATED METAL PRODUCTS, NEC		NR	NO ELECTROPLATING	1	1	99
3511	TURBINES AND TURBINE GENERATOR SETS	433	A	METAL FINISHING	1	9	0
3511	TURBINES AND TURBINE GENERATOR SETS		NR	NO ELECTROPLATING	1	1	99
3519	INTERNAL COMBUSTION ENGINES, NEC	433	A	METAL FINISHING	1	9	0
3519	INTERNAL COMBUSTION ENGINES, NEC		NR	NO ELECTROPLATING	1	1	99
3523	FARM MACHINERY AND EQUIPMENT	433	A	METAL FINISHING	1	9	0
3523	FARM MACHINERY AND EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3524	LAWN AND GARDEN EQUIPMENT	433		METAL FINISHING	1	9	0
3524	LAWN AND GARDEN EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3531	CONSTRUCTION MACHINERY	433	A	METAL FINISHING	1	9	0
3531	CONSTRUCTION MACHINERY		NR	NO ELECTROPLATING	1	1	99
3532	MINING MACHINERY	433	A	METAL FINISHING	1	9	0
3532	MINING MACHINERY		NR	NO ELECTROPLATING	1	1	99
3533	OIL FIELD MACHINERY	433	A	METAL FINISHING	1	9	0
3533	OIL FIELD MACHINERY		NR	NO ELECTROPLATING	1	1	99
3534	ELEVATORS AND MOVING STAIRWAYS	433	A	METAL FINISHING	1	9	0
3534	ELEVATORS AND MOVING STAIRWAYS		NR	NO ELECTROPLATING	1	1	99
3535	CONVEYORS AND CONVEYING EQUIPMENT	433	A	METAL FINISHING	1	9	0
3535	CONVEYORS AND CONVEYING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3536	HOISTS, CRANES AND MONORAILS	433	A	METAL FINISHING	1	9	2
3536	HOISTS, CRANES AND MONORAILS	433	A	METAL FINISHING	1	9	1
3537	HOISTS, CRANES AND MONORAILS		NR	NO ELECTROPLATING	1	1	99
3536	HOISTS, CRANES AND MONORAILS		NR	NO ELECTROPLATING	1	1	99
3536	HOISTS, CRANES AND MONORAILS		NR	NO ELECTROPLATING	1	1	99
3531	HOISTS, CRANES AND MONORAILS		NR	NO ELECTROPLATING	1	1	99
3537	HOISTS, CRANES AND MONORAILS	433	A	METAL FINISHING	1	9	3
3537	INDUSTRIAL TRUCKS AND TRACTORS	433	A	METAL FINISHING	1	9	0
3537	INDUSTRIAL TRUCKS AND TRACTORS		NR	NO ELECTROPLATING	1	1	99
3541	MACHINE TOOLS, METAL CUTTING TYPES	433	A	METAL FINISHING	1	9	0
3541	MACHINE TOOLS, METAL CUTTING TYPES		NR	NO ELECTROPLATING	1	1	99
3542	MACHINE TOOLS, METAL FORMING TYPES	433	A	METAL FINISHING	1	9	0
3542	MACHINE TOOLS, METAL FORMING TYPES		NR	NO ELECTROPLATING	1	1	99
3544	SPECIAL DIES, TOOLS, JIGS & FIXTURES	433	A	METAL FINISHING	1	9	0
3544	SPECIAL DIES, TOOLS, JIGS & FIXTURES		NR	NO ELECTROPLATING	1	1	99
3545	MACHINE TOOL ACCESSORIES	433	A	METAL FINISHING	1	9	0
3545	MACHINE TOOL ACCESSORIES		NR	NO ELECTROPLATING	1	1	99
3546	POWER DRIVEN HAND TOOLS	433	A	METAL FINISHING	1	9	0
3546	POWER DRIVEN HAND TOOLS		NR	NO ELECTROPLATING	1	1	99
3547	ROLLING MILL MACHINERY	433	A	METAL FINISHING	1	9	0
3547	ROLLING MILL MACHINERY		NR	NO ELECTROPLATING	1	1	99
3548	METALWORKING MACHINERY, NEC	433	A	METAL FINISHING	1	9	1
3548	METALWORKING MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3559	METALWORKING MACHINERY, NEC	433	A	METAL FINISHING	1	9	2
3559	METALWORKING MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3549	METALWORKING MACHINERY, NEC	433	A	METAL FINISHING	1	9	3
3549	METALWORKING MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3565	PACKAGING MACHINERY	433	A	METAL FINISHING	1	9	0
3552	TEXTILE MACHINERY	433	A	METAL FINISHING	1	9	0
3552	TEXTILE MACHINERY		NR	NO ELECTROPLATING	1	1	99
3553	WOODWORKING MACHINERY	433	A	METAL FINISHING	1	9	0
3553	WOODWORKING MACHINERY		NR	NO ELECTROPLATING	1	1	99

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3554	PAPER INDUSTRIES MACHINERY	433	A	METAL FINISHING	1	9	0
3554	PAPER INDUSTRIES MACHINERY		NR	NO ELECTROPLATING	1	1	99
3069	PRINTING TRADES MACHINERY	428	E	SM-SIZED GEN MOLDED, EXTRA & FABR RUBBER PLANT	5	5	1
3069	PRINTING TRADES MACHINERY	428	F	MD-SIZED GEN MOLDED, EXTRA & FABR RUBBER PLANT	6	6	2
3069	PRINTING TRADES MACHINERY	428	G	LG-SIZED GEN MOLDED, EXTRA & FABR RUBBER PLANT	6	6	3
3523	PRINTING TRADES MACHINERY		NR	NO ELECTROPLATING	1	1	99
3423	PRINTING TRADES MACHINERY	433	A	METAL FINISHING	1	9	4
3555	PRINTING TRADES MACHINERY	433	A	METAL FINISHING	1	9	5
3555	PRINTING TRADES MACHINERY		NR	NO ELECTROPLATING	1	1	99
3559	SPECIAL INDUSTRY MACHINERY, NEC	433	A	METAL FINISHING	1	9	0
3559	SPECIAL INDUSTRY MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3594	FLUID POWER PUMPS & MOTORS		NR	NO ELECTROPLATING	1	1	99
3561	PUMPS AND PUMPING EQUIPMENT	433	A	METAL FINISHING	1	9	0
3561	PUMPS AND PUMPING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3594	FLUID POWER PUMPS & MOTORS	433	A	METAL FINISHING	1	9	0
3562	BALL AND ROLLER BEARINGS	433	A	METAL FINISHING	1	9	0
3562	BALL AND ROLLER BEARINGS		NR	NO ELECTROPLATING	1	1	99
3563	AIR AND GAS COMPRESSORS	433	A	METAL FINISHING	1	9	0
3563	AIR AND GAS COMPRESSORS		NR	NO ELECTROPLATING	1	1	99
3564	BLOWER AND FANS	433	A	METAL FINISHING	1	9	0
3564	BLOWER AND FANS		NR	NO ELECTROPLATING	1	1	99
3543	INDUSTRIAL PATTERNS	433	A	METAL FINISHING	1	9	0
3543	INDUSTRIAL PATTERNS		NR	NO ELECTROPLATING	1	1	99
3594	SPEED CHANGERS, DRIVES AND GEARS	433	A	METAL FINISHING	1	9	1
3594	SPEED CHANGERS, DRIVES AND GEARS		NR	NO ELECTROPLATING	1	1	99
3566	SPEED CHANGERS, DRIVES AND GEARS		NR	NO ELECTROPLATING	1	1	99
3566	SPEED CHANGERS, DRIVES AND GEARS	433	A	METAL FINISHING	1	9	2
3567	INDUSTRIAL FURNACES AND OVENS	433	A	METAL FINISHING	1	9	0
3567	INDUSTRIAL FURNACES AND OVENS		NR	NO ELECTROPLATING	1	1	99
3568	POWER TRANSMISSION EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	0
3568	POWER TRANSMISSION EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3594	GENERAL INDUSTRIAL MACHINERY, NEC	433	A	METAL FINISHING	1	9	1
3594	GENERAL INDUSTRIAL MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3565	GENERAL INDUSTRIAL MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3565	GENERAL INDUSTRIAL MACHINERY, NEC	433	A	METAL FINISHING	1	9	2
3569	GENERAL INDUSTRIAL MACHINERY, NEC	433	A	METAL FINISHING	1	9	3
3569	GENERAL INDUSTRIAL MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3579	TYPEWRITERS	433	A	METAL FINISHING	1	9	0
3579	TYPEWRITERS		NR	NO ELECTROPLATING	1	1	99
3571	ELECTRONIC COMPUTING EQUIPMENT	433	A	METAL FINISHING	1	9	1
3571	ELECTRONIC COMPUTING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3572	COMPUTER STORAGE DEVICES	433	A	METAL FINISHING	1	9	2
3572	COMPUTER STORAGE DEVICES		NR	NO ELECTROPLATING	1	1	99
3575	COMPUTER TERMINALS		NR	NO ELECTROPLATING	1	1	99
3575	COMPUTER TERMINALS	433	A	METAL FINISHING	1	9	3
3577	COMPUTER PERIPHERAL EQUIP, NEC	433	A	METAL FINISHING	1	9	4
3577	COMPUTER PERIPHERAL EQUIP, NEC		NR	NO ELECTROPLATING	1	1	99
3695	MAGNETIC & OPTICAL RECORDING MEDIA	433	A	METAL FINISHING	1	9	5
3695	MAGNETIC & OPTICAL RECORDING MEDIA		NR	NO ELECTROPLATING	1	1	99
3578	CALCULATING AND ACCOUNTING MACHINES	433	A	METAL FINISHING	1	9	0
3578	CALCULATING AND ACCOUNTING MACHINES		NR	NO ELECTROPLATING	1	1	99
3596	SCALES AND BALANCES, EXC. LABORATORY	433	A	METAL FINISHING	1	9	0
3596	SCALES AND BALANCES, EXC. LABORATORY		NR	NO ELECTROPLATING	1	1	99
3579	OFFICE MACHINES, NEC	433	A	METAL FINISHING	1	9	0
3579	OFFICE MACHINES, NEC		NR	NO ELECTROPLATING	1	1	99
3581	AUTOMATIC VENDING MACHINES	433	A	METAL FINISHING	1	9	0
3581	AUTOMATIC VENDING MACHINES		NR	NO ELECTROPLATING	1	1	99
3582	COMMERCIAL LAUNDRY EQUIPMENT	433	A	METAL FINISHING	1	9	0
3582	COMMERCIAL LAUNDRY EQUIPMENT		NR	NO ELECTROPLATING	1	1	99

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3585	REFRIGERATION AND HEATING EQUIPMENT	433	A	METAL FINISHING	1	9	0
3585	REFRIGERATION AND HEATING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3586	MEASURING AND DISPENSING PUMPS	433	A	METAL FINISHING	1	9	0
3586	MEASURING AND DISPENSING PUMPS		NR	NO ELECTROPLATING	1	1	99
3589	SERVICE INDUSTRY MACHINERY, NEC	433	A	METAL FINISHING	1	9	0
3589	SERVICE INDUSTRY MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3592	CARBURETORS, PISTONS, RINGS, VALVES	433	A	METAL FINISHING	1	9	0
3592	CARBURETORS, PISTONS, RINGS, VALVES		NR	NO ELECTROPLATING	1	1	99
3593	FLUID POWER CYLINDERS & ACTUATORS	433	A	METAL FINISHING	1	9	1
3593	FLUID POWER CYLINDERS & ACTUATORS		NR	NO ELECTROPLATING	1	1	99
3599	INDUSTRIAL & COMMERCIAL MACHINERY, NEC		NR	NO ELECTROPLATING	1	1	99
3599	INDUSTRIAL & COMMERCIAL MACHINERY, NEC	433	A	METAL FINISHING	1	9	2
3612	TRANSFORMERS	433	A	METAL FINISHING	1	9	0
3612	TRANSFORMERS		NR	NO ELECTROPLATING	1	1	99
3612	TRANSFORMERS		NR	DRY TRANSFORMERS	8	8	99
3625	RELAYS AND INDUSTRIAL CONTROLS	433	A	METAL FINISHING	1	9	0
3625	RELAYS AND INDUSTRIAL CONTROLS		NR	NO ELECTROPLATING	1	1	99
3613	SWITCHGEAR AND SWITCHBOARD APPARATUS		NR	NO ELECTROPLATING	1	1	99
3613	SWITCHGEAR AND SWITCHBOARD APPARATUS	433	A	METAL FINISHING	1	9	0
3621	MOTORS AND GENERATORS	433	A	METAL FINISHING	1	9	0
3621	MOTORS AND GENERATORS		NR	NO ELECTROPLATING	1	1	99
3548	WELDING APPARATUS, ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3548	WELDING APPARATUS		NR	NO ELECTROPLATING	1	1	99
3624	CARBON AND GRAPHITE PRODUCTS		NR	CARBON & GRAPHITE PRODUCTS	8	8	99
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC	433	A	METAL FINISHING	1	9	0
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC		NR	NO ELECTROPLATING	1	1	99
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC		NR	FUEL CELLS	8	8	99
3631	HOUSEHOLD COOKING EQUIPMENT	433	A	METAL FINISHING	1	9	1
3631	HOUSEHOLD COOKING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3631	HOUSEHOLD COOKING EQUIPMENT	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	3
3631	HOUSEHOLD COOKING EQUIPMENT	466	C	ALUMINUM BASIS MATERIAL (PORCELAIN)	10	10	2
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS	433	A	METAL FINISHING	1	9	1
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS		NR	NO ELECTROPLATING (PORCELAIN)	1	1	99
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	2
3633	HOUSEHOLD LAUNDRY EQUIPMENT	433	A	METAL FINISHING	1	9	1
3633	HOUSEHOLD LAUNDRY EQUIPMENT		NR	NO ELECTROPLATING (PORCELAIN)	1	1	99
3633	HOUSEHOLD LAUNDRY EQUIPMENT	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	2
3634	ELECTRIC HOUSEWARES AND FANS	433	A	METAL FINISHING	1	9	0
3634	ELECTRIC HOUSEWARES AND FANS		NR	NO ELECTROPLATING	1	1	99
3635	HOUSEHOLD VACUUM CLEANERS	433	A	METAL FINISHING	1	9	0
3635	HOUSEHOLD VACUUM CLEANERS		NR	NO ELECTROPLATING	1	1	99
3639	SEWING MACHINES	433	A	METAL FINISHING	1	9	0
3639	SEWING MACHINES		NR	NO ELECTROPLATING	1	1	99
3559	SEWING MACHINES	433	A	METAL FINISHING	1	9	0
3559	SEWING MACHINES		NR	NO ELECTROPLATING	1	1	99
3639	HOUSEHOLD APPLIANCES, NEC	433	A	METAL FINISHING	1	9	3
3639	HOUSEHOLD APPLIANCES, NEC	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	1
3641	ELECTRIC BULBS	433	A	METAL FINISHING	1	9	2
3641	ELECTRIC BULBS	469	D	LUMINESCENT MATERIALS	1	1	1
3643	CURRENT-CARRYING WIRING DEVICES	433	A	METAL FINISHING	1	9	0
3643	CURRENT-CARRYING WIRING DEVICES		NR	NO ELECTROPLATING	1	1	99

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3643	CURRENT-CARRYING WIRING DEVICES		NR		1	1	99
3644	NONCURRENT-CARRYING WIRING DEVICES	433	A	METAL FINISHING	1	9	0
3644	NONCURRENT-CARRYING WIRING DEVICES		NR	NO ELECTROPLATING	1	1	99
3645	RESIDENTIAL LIGHTING FIXTURES	433	A	METAL FINISHING	1	9	0
3645	RESIDENTIAL LIGHTING FIXTURES		NR	NO ELECTROPLATING	1	1	99
3646	COMMERCIAL LIGHTING FIXTURES	433	A	METAL FINISHING	1	9	0
3646	COMMERCIAL LIGHTING FIXTURES		NR	NO ELECTROPLATING	1	1	99
3647	VEHICULAR LIGHTING EQUIPMENT	433	A	METAL FINISHING	1	9	0
3647	VEHICULAR LIGHTING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3648	LIGHTING EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	0
3648	LIGHTING EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3651	RADIO AND TV RECEIVING SETS	433	A	METAL FINISHING	1	9	0
3651	RADIO AND TV RECEIVING SETS		NR	NO ELECTROPLATING	1	1	99
3652	PHONOGRAPH RECORDS		NR		1	1	99
3575	TELEPHONE AND TELEGRAPH APPARATUS		NR		1	1	99
3661	TELEPHONE AND TELEGRAPH APPARATUS		NR		1	1	99
3663	RADIO AND TV COMMUNICATION EQUIPMENT		NR		1	1	99
3812	RADIO AND TV COMMUNICATION EQUIPMENT		NR		1	1	99
3669	COMMUNICATION EQUIPMENT, NEC		NR		1	1	99
3829	RADIO AND TV COMMUNICATION EQUIPMENT		NR		1	1	99
3699	RADIO AND TV COMMUNICATION EQUIPMENT		NR		1	1	99
3671	ELECTRON TUBES	469	C	CATHODE RAY TUBE	8	8	0
3674	SEMICONDUCTORS AND RELATED DEVICES	469	A	SEMI-CONDUCTORS	9	10	0
3675	ELECTRONIC CAPACITORS	433	A	METAL FINISHING	1	9	0
3676	ELECTRONIC RESISTORS	433	A	METAL FINISHING	1	9	0
3676	ELECTRONIC RESISTORS		NR	NO ELECTROPLATING	1	1	99
3677	ELECTRONIC COILS, TRANSFORMERS & OTHER INDUCTORS	433	A	METAL FINISHING	1	9	0
3677	ELECTRONIC COILS, TRANSFORMERS & OTHER INDUCTORS		NR	DRY TRANSFORMERS	8	8	99
3678	ELECTRONIC CONNECTORS	433	A	METAL FINISHING	1	9	0
3678	ELECTRONIC CONNECTORS		NR	NO ELECTROPLATING	1	1	99
3672	ELECTRONIC COMPONENTS, NEC	413	H	PRINTED CIRCUIT BOARDS	1	9	1
3264	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3679	ELECTRONIC COMPONENTS, NEC	469	B	ELECTRONIC CRYSTALS	1	5	2
3671	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3695	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3679	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3625	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3691	STORAGE BATTERIES	461	A	CADMIUM BATTERIES	5	10	14
3691	STORAGE BATTERIES	461	B	CADMIUM BATTERIES	5	5	1
3691	STORAGE BATTERIES	461	C	LEAD BATTERIES	2	9	5
3691	STORAGE BATTERIES	461	D	LECLANCHE BATTERIES	5	5	17
3691	STORAGE BATTERIES	461	E	LITHIUM BATTERIES	5	5	7
3691	STORAGE BATTERIES	461	O	MERCURY (WESTON) CELLS	5	5	11
3691	STORAGE BATTERIES	461	G	ZINC BATTERIES	10	10	4
3691	STORAGE BATTERIES	461	O	MERCURY (RUBEN) BATTERIES	5	5	10
3691	STORAGE BATTERIES	461	O	LEAD ACID RESERVE BATTERIES	5	5	6
3691	STORAGE BATTERIES	461	F	MAGNESIUM BATTERIES	5	5	9
3692	PRIMARY BATTERIES, DRY & WET	461	A	CADMIUM BATTERIES	5	10	14
3692	PRIMARY BATTERIES, DRY & WET	461	B	CALCIUM BATTERIES	5	5	1
3692	PRIMARY BATTERIES, DRY & WET	461	C	LEAD BATTERIES	2	9	5
3692	PRIMARY BATTERIES, DRY & WET	461	E	LITHIUM BATTERIES	5	5	7
3692	PRIMARY BATTERIES, DRY & WET	461	F	MAGNESIUM BATTERIES	5	5	9
3692	PRIMARY BATTERIES, DRY & WET	461	O	MERCURY (RUBEN) BATTERIES	5	5	10
3692	PRIMARY BATTERIES, DRY & WET	461	O	MERCURY (WESTON) CELLS	5	5	11
3692	PRIMARY BATTERIES, DRY & WET	461	O	LEAD ACID RESERVE BATTERIES	3	3	6

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3692	PRIMARY BATTERIES, DRY & WET	461	G	ZINC BATTERIES	10	10	4
3845	ELECTROMEDICAL EQUIPMENT	469	C	ELECTRON TUBES	8	8	1
3844	X-RAY APPARATUS AND TUBES	469	C	ELECTRON TUBES	8	8	2
3694	ELECTRICAL EQUIP FOR INTERNAL COMBUSTION	433	A	METAL FINISHING	1	9	0
3694	ELECTRICAL EQUIP FOR INTERNAL COMBUSTION		NR	NO ELECTROPLATING	1	1	99
3641	ELECTRICAL MACHINERY, EQUIPMENT & SUPPLIES	433	A	METAL FINISHING	1	9	1
3585	ELECTRICAL MACHINERY, EQUIPMENT & SUPPLIES	433	A	METAL FINISHING	1	9	2
3699	ELECTRICAL MACHINERY, EQUIPMENT & SUPPLIES,NEC	433	A	METAL FINISHING	1	9	3
3711	MOTOR VEHICLES & PASSENGER CAR BODIES	433	A	METAL FINISHING	1	9	0
3711	MOTOR VEHICLES & PASSENGER CAR BODIES		NR	NO ELECTROPLATING	1	1	99
3713	TRUCK & BUS BODIES	433	A	METAL FINISHING	1	9	0
3713	TRUCK & BUS BODIES		NR	NO ELECTROPLATING	1	1	99
3714	MOTOR VEHICLE PARTS & ACCESSORIES		NR	NO ELECTROPLATING	1	1	99
3714	MOTOR VEHICLE PARTS & ACCESSORIES	433	A	METAL FINISHING	1	9	0
3715	TRUCK TRAILERS	433	A	METAL FINISHING	1	9	0
3715	TRUCK TRAILERS		NR	NO ELECTROPLATING	1	1	99
3721	AIRCRAFT	433	A	METAL FINISHING	1	9	0
3721	AIRCRAFT		NR	NO ELECTROPLATING	1	1	99
3724	AIRCRAFT ENGINES & ENGINES PARTS	433	A	METAL FINISHING	1	9	0
3724	AIRCRAFT ENGINES & ENGINES PARTS		NR	NO ELECTROPLATING	1	1	99
3492	AIRCRAFT EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	0
3593	AIRCRAFT EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3594	AIRCRAFT EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3594	AIRCRAFT EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	1
3594	AIRCRAFT EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	2
3492	AIRCRAFT EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3728	AIRCRAFT EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3728	AIRCRAFT EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	3
3731	SHIP BUILDING AND REPAIRING	470	1	SHIP BUILDING & REPAIRING	6	6	0
3732	BOAT BUILDING AND REPAIRING		NR	NO ELECTROPLATING	1	1	99
3732	BOAT BUILDING AND REPAIRING	433	A	METAL FINISHING	1	9	0
3743	RAILROAD EQUIPMENT	433	A	METAL FINISHING	1	9	0
3743	RAILROAD EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3751	MOTORCYCLES, BICYCLES AND PARTS	433	A	METAL FINISHING	1	9	0
3751	MOTORCYCLES, BICYCLES AND PARTS		NR	NO ELECTROPLATING	1	1	99
3761	GUIDED MISSILES & SPACE VEHICLES	433	A	METAL FINISHING	1	9	0
3761	GUIDED MISSILES & SPACE VEHICLES		NR	NO ELECTROPLATING	1	1	99
3764	SPACE PROPULSION UNITS AND PARTS	433	A	METAL FINISHING	1	9	0
3764	SPACE PROPULSION UNITS AND PARTS		NR	NO ELECTROPLATING	1	1	99
3769	SPACE VEHICLE EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	0
3769	SPACE VEHICLE EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3792	TRAVEL TRAILERS AND CAMPERS	433	A	METAL FINISHING	1	9	0
3792	TRAVEL TRAILERS AND CAMPERS		NR	NO ELECTROPLATING	1	1	99
3795	TANKS AND TANK COMPONENTS	433	A	METAL FINISHING	1	9	0
3795	TANKS AND TANK COMPONENTS		NR	NO ELECTROPLATING	1	1	99
3799	TRANSPORTATION EQUIPMENT, NEC	433	A	METAL FINISHING	1	9	0
3799	TRANSPORTATION EQUIPMENT, NEC		NR	NO ELECTROPLATING	1	1	99
3812	SEARCH, DETECTION NAVIGATION INSTRUMENTS	433	A	METAL FINISHING	1	9	1
3812	SEARCH, DETECTION NAVIGATION INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3821	LABORATORY APPARATUS		NR	NO ELECTROPLATING	1	1	99
3821	LABORATORY APPARATUS	433	A	METAL FINISHING	1	9	2
3826	LABORATORY ANALYTICAL INSTRUMENTS	433	A	METAL FINISHING	1	9	3
3826	LABORATORY ANALYTICAL INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3829	MEASURING & CONTROLLING DEVICES, NEC	433	A	METAL FINISHING	1	9	4

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3829	MEASURING & CONTROLLING DEVICES, NEC		NR	NO ELECTROPLATING	1	1	99
3826	ENGINEERING AND SCIENTIFIC INSTRUMENTS	433	A	METAL FINISHING	1	9	5
3827	ENGINEERING AND SCIENTIFIC INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3827	ENGINEERING AND SCIENTIFIC INSTRUMENTS	433	A	METAL FINISHING	1	9	6
3822	ENVIRONMENTAL CONTROLS	433	A	METAL FINISHING	1	9	0
3822	ENVIRONMENTAL CONTROLS		NR	NO ELECTROPLATING	1	1	99
3823	PROCESS CONTROL INSTRUMENTS	433	A	METAL FINISHING	1	9	0
3823	PROCESS CONTROL INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3824	FLUID METERS AND COUNTING DEVICES	433	A	METAL FINISHING	1	9	0
3824	FLUID METERS AND COUNTING DEVICES		NR	NO ELECTROPLATING	1	1	99
3825	INSTRUMENTS TO MEASURE ELECTRICITY	433	A	METAL FINISHING	1	9	0
3825	INSTRUMENTS TO MEASURE ELECTRICITY		NR	NO ELECTROPLATING	1	1	99
3829	MEASURING & CONTROLLING DEVICES, NEC	433	A	METAL FINISHING	1	9	0
3829	MEASURING & CONTROLLING DEVICES, NEC		NR	NO ELECTROPLATING	1	1	99
3826	OPTICAL INSTRUMENTS AND LENSES	433	A	METAL FINISHING	1	9	1
3826	OPTICAL INSTRUMENTS AND LENSES		NR	NO ELECTROPLATING	1	1	99
3829	OPTICAL INSTRUMENTS AND LENSES	433	A	METAL FINISHING	1	9	2
3829	OPTICAL INSTRUMENTS AND LENSES		NR	NO ELECTROPLATING	1	1	99
3827	OPTICAL INSTRUMENTS AND LENSES	433	A	METAL FINISHING	1	9	3
3827	OPTICAL INSTRUMENTS AND LENSES		NR	NO ELECTROPLATING	1	1	99
3841	SURGICAL AND MEDICAL INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3841	SURGICAL AND MEDICAL INSTRUMENTS	433	A	METAL FINISHING	1	9	0
3842	SURGICAL APPLIANCES AND SUPPLIES		NR	NO ELECTROPLATING	1	1	99
3842	SURGICAL APPLIANCES AND SUPPLIES	433	A	METAL FINISHING	1	9	0
3843	DENTAL EQUIPMENT AND SUPPLIES		NR	NO ELECTROPLATING	1	1	99
3843	DENTAL EQUIPMENT AND SUPPLIES	433	A	METAL FINISHING	1	9	0
3851	OPHTHALMIC GOODS		NR	NO ELECTROPLATING	1	1	99
3851	OPHTHALMIC GOODS	433	A	METAL FINISHING	1	9	0
3861	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES	459	3	DIAZO, SOLVENT PROCESS	8	8	1
3861	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES	459	4	PHOTOGRAPHIC EQUIPMENT & SUPPLIES	8	8	2
3861	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES	459	5	THERMAL, SOLVENT PROCESS	8	8	3
3873	WATCHES, CLOCKS AND WATCHCASES	433	A	METAL FINISHING	1	9	0
3873	WATCHES, CLOCKS AND WATCHCASES		NR	NO ELECTROPLATING	1	1	99
3911	JEWELRY, PRECIOUS METAL	433	A	METAL FINISHING	1	9	2
3911	JEWELRY, PRECIOUS METAL	471	D	PRECIOUS METAL FORMING	1	10	1
3914	SILVERWARE AND PLATED WARE	433	A	METAL FINISHING	1	9	0
3914	SILVERWARE AND PLATED WARE		NR	NO ELECTROPLATING	1	1	99
3915	JEWELERS' MATERIALS & LAPIDARY WORK	433	A	METAL FINISHING	1	9	0
3915	JEWELERS' MATERIALS & LAPIDARY WORK		NR	NO ELECTROPLATING	1	1	99
3931	MUSICAL INSTRUMENTS		NR	NO ELECTROPLATING	1	1	99
3931	MUSICAL INSTRUMENTS	433	A	METAL FINISHING	1	9	0
3942	DOLLS		NR		1	1	99
3944	GAMES, TOYS AND CHILDREN'S VEHICLES	433	A	METAL FINISHING	1	9	0
3944	GAMES, TOYS AND CHILDREN'S VEHICLES		NR	NO ELECTROPLATING	1	1	99
3949	SPORTING AND ATHLETIC GOODS, NEC	433	A	METAL FINISHING	1	1	2
3949	SPORTING AND ATHLETIC GOODS, NEC		NR	NO ELECTROPLATING	1	1	99
3951	PENS AND MECHANICAL PENCILS		NR	NO ELECTROPLATING	1	1	99
3951	PENS AND MECHANICAL PENCILS	433	A	METAL FINISHING	1	9	0
3952	LEAD PENCILS AND ART GOODS		NR		1	1	99
3953	MARKING DEVICES		NR		1	1	99
3955	CARBON PAPER AND INKED RIBBONS		NR		1	1	99

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3961	COSTUME JEWELRY		NR	NO ELECTROPLATING	1	1	99
3961	COSTUME JEWELRY	433	A	METAL FINISHING	1	9	0
3999	ARTIFICIAL FLOWERS		NR		1	1	99
3965	NEEDLES, PINS AND FASTENERS	433	A	METAL FINISHING	1	9	0
3965	NEEDLES, PINS AND FASTENERS		NR	NO ELECTROPLATING	1	1	99
3991	BROOMS AND BRUSHES	433	A	METAL FINISHING	1	9	0
3991	BROOMS AND BRUSHES		NR	NO ELECTROPLATING	1	1	99
3993	SIGNS AND ADVERTISING DISPLAYS	433	A	METAL FINISHING	1	9	0
3993	SIGNS AND ADVERTISING DISPLAYS		NR		1	1	99
3993	SIGNS AND ADVERTISING DISPLAYS		NR	NO ELECTROPLATING	1	1	99
3995	BURIAL CASKETS		NR	NO ELECTROPLATING	1	1	99
3995	BURIAL CASKETS	433	A	METAL FINISHING	1	9	0
3996	HARD SURFACE FLOOR COVERINGS, NEC		NR		1	1	99
3996	HARD SURFACE FLOOR COVERINGS, NEC	443	D	LINOLEUM & PRINTED ASPHALT FELT	1	1	0
3999	MANUFACTURING INDUSTRIES, NEC	433	A	METAL FINISHING	1	9	0
3999	MANUFACTURING INDUSTRIES, NEC		NR		1	1	99
4173	BUS TERMINAL AND SERVICE FACILITIES		NR		1	1	99
4226	SPECIAL WAREHOUSING & STORAGE, NEC		NR		1	1	99
4231	TRUCKING TERMINAL FACILITIES		NR		5	5	0
4493	MARINAS		NR		5	5	1
4959	WATER TRANSPORTATION SERVICES, NEC		NR		5	5	2
4499	WATER TRANSPORTATION SERVICES, NEC		NR		5	5	3
4612	CRUDE PETROLEUM PIPELINES		NR		8	8	0
4911	ELECTRICAL SERVICES	423	A	HYDRO ELECTRIC PWER GEN. (W/SAN. WST.)	6	6	1
4911	ELECTRICAL SERVICES	423	A	STEAM ELECTRIC POWER GENERATING	6	6	2
4931	ELECTRIC AND OTHER SERVICES COMBINED	423	A	HYDRO ELECTRIC PWER GEN. (W/SAN. WST.)	6	6	1
4931	ELECTRIC AND OTHER SERVICES COMBINED	423	A	STEAM ELECTRIC POWER GENERATING	6	6	2
4941	WATER SUPPLY		NR		7	7	0
4952	SEWERAGE SYSTEMS		NR		1	1	0
4953	REFUSE SYSTEMS		NR	SOLID WASTE FACILITIES	7	7	1
4953	REFUSE SYSTEMS		NR	HAZARDOUS WASTE TREATMENT FACILITIES	10	10	2
4959	SANITARY SERVICES, NEC		NR		1	1	0
4961	STEAM SUPPLY		NR		1	1	0
5052	COAL & OTHER MINERALS & ORES		NR		8	8	0
5093	SCRAP & WASTE MATERIALS		NR		10	10	0
5143	DAIRY PRODUCTS	405	A	RECEIVING STATIONS	1	1	0
5169	CHEMICALS AND ALLIED PRODUCTS, NEC		NR		10	10	0
5171	PETROLEUM BULK STATIONS & TERMINALS		NR		8	8	0
5191	FARM SUPPLIES		NR		6	6	0
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	E	SMALL PROCESSOR	1	1	1
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	F	MEAT CUTTER	1	1	2
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	G	SAUSAGE AND LUNCHEON MEATS PROCESSOR	1	1	3
5421	MEAT AND FISH (SEAFOOD) MARKETS		NR	OTHER MARKETS WITHOUT PROCESSING	1	1	99
7211	POWER LAUNDRIES, FAMILY AND COMMERCIAL	444	3	POWER LAUNDRIES	3	3	0
7213	LINEN SUPPLY	444	9	LINEN SUPPLY	6	6	0
7219	LAUNDRY, GARMENT SERVICES, NEC	444	5	DIAPER SERVICE	3	3	0
7215	COIN-OPERATED LAUNDRIES & DRY CLEANING	444	1	COIN-OPERATED LAUNDRIES	3	3	0
7216	DRY CLEANING PLANTS, EXCEPT RUG CLEANING	444	2	DRY CLEANING PLANTS	3	3	0
7217	CARPET & UPHOLSTERY CLEANING	444	4	CARPET & UPHOLSTERY CLEANING	3	3	0
7218	INDUSTRIAL LAUNDERERS	444	8	INDUSTRIAL LAUNDRY	6	6	0
7219	LAUNDRY, GARMENT SERVICES, NEC	444	6	LAUNDRY, GARMENT SERVICES NEC	1	1	0

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
7342	DISINFECTING & PEST CONTROL SERVICE		NR		10	10	0
8731	PHYS & BIOL RESEARCH LABORATORIES		NR		1	1	99
7384	PHOTOFINISHING LABORATORIES	459	A	PHOTOGRAPHIC PROCESSING	1	1	0
8734	COMMERCIAL TESTING LABORATORIES		NR		1	1	0
7542	CAR WASHES	444	7	CAR WASH	3	3	0
7699	REPAIR SHOPS, NEC	433	A	METAL FINISHING	1	9	0
7699	REPAIR SHOPS, NEC		NR	NO ELECTROPLATING	1	1	99
7819	SERV. ALLIED TO MOTION PICTURE PROD.	459	A	PHOTOGRAPHIC PROCESSING	1	1	0
8062	GEN. MEDICAL/SURGICAL HOSPITALS		NR		10	10	0
8069	SPECIALTY HOSPITALS		NR		10	10	0
8071	MEDICAL LABORATORIES		NR		10	10	0
8733	NONCOMMERCIAL RESEARCH ORGANIZATIONS		NR		7	7	0

NPDES RATING WORKSHEET APPENDIX B

ESTUARIES ENROLLED IN THE NATIONAL ESTUARY PROTECTION PROGRAM

ESTUARY	STATE
San Francisco Bay/Delta	California
Santa Monica Bay	California
Albemarle	North Carolina
Pamlico	North Carolina
Puget Sound	Washington
Buzzards Bay	Massachusetts
Narragansett Bay	Rhode Island
Long Island Sound	Connecticut & New York
New York/New Jersey Harbor	New Jersey & New York
Delaware Bay	Pennsylvania, New Jersey & Delaware
Delaware Inland Bays	Delaware
Sarasota Bay	Florida
Galveston Bay	Texas
CASCO	Maine
Massachusetts Bay	Massachusetts
Indian River Lagoon	Florida
Tampa Bay	Florida
Barataria-Terrebonne Estuarine Complex	Louisiana

NPDES RATING WORKSHEET APPENDIX C

Coal Facility Discretionary Major Weighting Factor Guideline

Tonnage:	4 Points	≥ 1,500,000 t/y coal mined or processed
	2 Points	≥ 500,000 t/y and < 1,500,000 t/y coal mined or processed
	0 Points	< 500,000 t/y coal mined or processed
Coal Origin:	5 Points	Acidic seam
	0 Points	Non-acidic seam
Discharge Rate (Average):	5 Points	≤ 1,500 GPM (2.2 MGD)
	3 Points	< 1,500 GP< and ≥ 500 GPM
	1 Point	< 500 GPM
Receiving Stream		
	5 Points	Trout (coldwater fishery) stream
	3 Points	Other high quality stream
	0 Points	Other streams
Discretion:	0-10 Points	Sensitive watershed public w.s. intakes, public comment, past chronic violator, potential environmental damage

The above rating guide can be used to prioritize coal facilities for designation as discretionary majors. A rating of 15 points would appear to be a reasonable starting point for consideration as a discretionary major.

B. Federal Effluent Guidelines

For additional information and procedures for applying effluent guidelines see Chapter 5 of the NPDES Permit Writer's Manual.

Airport Deicing	40 CFR Part 449
Aluminum Forming	40 CFR Part 467
Asbestos Manufacturing	40 CFR Part 427
Battery Manufacturing	40 CFR Part 461
Canned and Preserved Fruits and Vegetables	40 CFR Part 407
Canned and Preserved Seafood	40 CFR Part 408
Carbon Black Manufacturing	40 CFR Part 458
Cement Manufacturing	40 CFR Part 411
Centralized Waste Treatment	40 CFR Part 437
Coal Mining	40 CFR Part 434
Coil Coating	40 CFR Part 465
Concentrated Aquatic Animal Production	40 CFR Part 451
Copper Forming	40 CFR Part 468
Dairy Products	40 CFR Part 405
Electrical and Electronic Components	40 CFR Part 469
Electroplating	40 CFR Part 413
Explosives Manufacturing	40 CFR Part 457
Feedlots	40 CFR Part 412
Ferroalloy Manufacturing	40 CFR Part 424
Fertilizer Manufacturing	40 CFR Part 418
Glass Manufacturing	40 CFR Part 426
Grain Mills	40 CFR Part 406
Gum and Wood Chemicals Manufacturing	40 CFR Part 454
Hospitals	40 CFR Part 460
Ink Formulating	40 CFR Part 447
Inorganic Chemicals Manufacturing	40 CFR Part 415
Iron and Steel Manufacturing	40 CFR Part 420
Landfills	40 CFR Part 445
Leather Tanning and Finishing	40 CFR Part 425
Meat Products	40 CFR Part 432
Metal Finishing	40 CFR Part 433
Metal Molding and Casting	40 CFR Part 464
Mineral Mining and Processing	40 CFR Part 436
Nonferrous Metals	40 CFR Part 421
Nonferrous Metal Forming	40 CFR Part 471
Oil and Gas Extraction	40 CFR Part 435
Ore Mining and Dressing	40 CFR Part 440
Organic Chemicals, Plastics and Synthetic Fibers	40 CFR Part 414
Paint Formulating	40 CFR Part 446
Paving and Roofing Materials	40 CFR Part 443
Pesticide Chemicals	40 CFR Part 455
Petroleum Refining	40 CFR Part 419
Pharmaceutical Manufacturing	40 CFR Part 439
Phosphate Manufacturing	40 CFR Part 422
Photographic Processing	40 CFR Part 459
Plastics Molding and Forming	40 CFR Part 463

Porcelain Enameling	40 CFR Part 466
Pulp, Paper and Paperboard	40 CFR Part 430
Rubber Processing	40 CFR Part 428
Secondary Treatment	40 CFR Part 133
Soaps and Detergents	40 CFR Part 417
Steam Electric Power Generation (not applicable to biomass)	40 CFR Part 423[1]
Sugar Processing	40 CFR Part 409
Textile Mills	40 CFR Part 410
Timber Products	40 CFR Part 429
Toxic Pollutant Effluent Standards	40 CFR Part 129
Transportation Equipment Cleaning	40 CFR Part 442
Waste Combustors	40 CFR Part 444
pH Effluent Limitations Under Continuous Monitoring	40 CFR Part 401.

[1] Note that review of the development document for this point source category does not contain any basis using the using low level PCB testing (such as test method 1668) to determine compliance with the "No Discharge" requirement for this point source category. Discussions with EPA Region III confirm that Method 608 is appropriate for determining compliance with this federal effluent guideline.

As VPDES permits for Steam Electric Power Generating facilities are issued/reissued, the condition requiring "No Discharge" of PCB compounds should reference Method 608. Suggested permit language is as follows:

"There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. Compliance with this requirement will be determined using EPA Method 608."

C. Sampling

1. Introduction

It is not practical to formulate a set of fixed sampling and analysis schedules for all industrial discharges due to the wide range in categories and sizes of industries. However, in an attempt to establish some statewide uniformity, 1 sample per month for continuous discharge of process wastewaters is recommended for use in drafting of VPDES industrial permits. If the permit writer determines, based on the nature of the discharge, that once per month sampling is more or less stringent than necessary for a facility, then another frequency may be used. Provide rationale for deviations in the Fact Sheet. **Facilities which have sampling frequencies promulgated by federal effluent guidelines are not allowed to be reduced.** It is still necessary to evaluate each discharge on an individual basis when developing these monitoring programs. Refer to the Case-by-Case method below for assistance in setting sampling frequencies on an individual basis.

2. General Procedures in Exercising the Case-by-Case Approach

a. A sound sampling program should avoid excessive data collection - costly for both the discharger and the State reviewing agency. Frequency of sampling and analysis must be adequate enough to reasonably assess the permittee's performance and to effectively evaluate its potential impact on the receiving stream.

b. Frequency of sampling will be largely determined by:

   1) Compatibility of the wastewater discharge and stream uses;

   2) Receiving water quality;

   3) Potential presence of toxic or hazardous materials;

   4) Variability of the wastewater;

   5) Mode of discharge - batch, continuous, controlled, etc.

   6) Residence time - wastewater treatment facilities with short residence time should be sampled more frequently than those with long residence time; and

   7) Whether the discharge is capable of meeting permit limits.

c. The use of sampling frequencies below the minimums identified in the standard industrial permits (Section IN-3) and applicable general permits, requires justification in the Fact Sheet.

3. Sample Type

Base the sample type on treatment technology and discharge duration. A batch type discharge or flows averaging less than 0.040 MGD would be handled differently from a continuous discharger with an effluent that changes character over the discharge period. Grab samples are applicable for effluents that are not variable and for the parameters listed below:

a. Continuous Totalizing, Indicating, and Recording or estimate should be used for flows.

b. Continuous recording, or immersion stabilization should be used for temperature. Continuous recording refers to an *in-situ* measurement where a thermometer or thermistor is positioned in the stream of flow and electronically sends the temperature readings to a recording device. Immersion stabilization refers to an *in-situ* measurement where a

thermometer or thermistor is suspended in the flow channel until the temperature reading stabilizes and the reading would then be recorded manually for that measurement.

c. Grab samples or continuous recording should be used for pH, DO, and residual chlorine (See MN-1 for suggested sampling types).

d. Grab samples should be used for bacteria, cyanide, oil and grease, dissolved metals, acid and base/neutral-extractables, volatile organics, pesticides/PCBs, phenols and xylenes. When discharges have variable concentrations of these parameters, the collection of multiple grab samples may be required. **Note that per 40 CFR Part 136, for dissolved metals, samples should be filtered within 15 minutes of collection before adding preservative.**

e. Where the discharge is continuous with variable characteristics over a 24-hour period, all other parameters should have 24-hour composite sampling unless stated differently in the manual.

4. Reporting Instructions

The results of Part I.A monitoring are reported via eDMR. If the facility is sampling the effluent at a frequency greater than the permit requirement for a parameter limited in the permit, the RO may request the permittee to submit a separate report with the DMR that details the results of the additional monitoring.

5. Monitoring Reductions for Reissuances

a. Qualification Criteria

Per GM98-2005, reduced monitoring may be provided to certain facilities based on their performance and compliance history. The procedures outlined in this section represent the updated recommendations. Permit writers should evaluate with each reissuance whether a facility qualifies for reduced monitoring. Monitoring frequency reductions are not considered effluent limitations under section 402(o) of the Clean Water Act, and therefore anti-backsliding prohibitions would not be triggered by reductions in monitoring frequencies. Some facilities and parameters (e.g., chemicals for disinfection (chlorine) and dechlorination) are not eligible for reduced monitoring to ensure protection of aquatic life and human health. For further details see subdivision A.5.d. (Special Considerations).

The following should be considered when facilities are evaluated for reduced monitoring:

1) Seasonal limits should not be eligible for reduced monitoring. Seasonally tiered limits already reflect relief from an annual limit.

2) To qualify for consideration of reduced monitoring requirements, the facility should not have been issued three or more Warning Letters, two or more NOVs, or be under any Consent Orders, Consent Decrees, or related enforcement actions during the past three years.

3) If the facility has received fewer than three Warning Letters or two NOVs during the past three years, reduced monitoring can be considered for parameters that did not incur effluent violations.

4) If the facility has received a Warning Letter or NOV for effluent violations of a WET limit during the past two years, it should not be considered for reduced monitoring.

5) If a facility has multiple and independent outfalls, and one outfall was subject to compliance or enforcement actions(s) in the past three years, the rest of the outfalls are not eligible for reduced monitoring.

6) Parameters sampled once per month or less frequently should not be considered for additional monitoring reductions.

7) If an upgraded facility replaces a facility that was under an enforcement action, the new facility can be considered for monitoring reduction after it produces three years of effluent data.

8) If the facility has had other operational excursions such as exceeding the 95% flow level, but has not yet been issued an enforcement action, it can still qualify for monitoring reduction.

b. Calculation of Monitoring Reductions

For each eligible parameter, calculate the four-year composite average of representative data at each outfall. (Note: D.O., pH, temperature and bacteria are evaluated differently, as described at the end of this section.) The ratio of the composite long-term average is divided by the permit limit, and the resulting percentage provides the potential monitoring frequency reduction.

Monitoring Frequency "Floor": Current federal NPDES regulations do not establish a monitoring frequency "floor" but do establish a reporting frequency floor of once/year. The monitoring frequency from which reductions could be made in this manual is considered to be the level of the monitoring in the existing effective VPDES permit. It is important to recognize that the EPA guidance from which Table 1 was taken asserts that there is no loss of statistical confidence in determining whether a permit limit is being violated at reduced monitoring frequencies. Also, the EPA guidance does not advocate any reductions for parameters that are currently monitored only once/quarter.

However, other factors may be considered specific to the facility. If a facility has already been given monitoring reductions due to superior performance, the baseline *may* be a previous permit. *In this case it is not recommended that further reductions be granted.* It is important to recognize that permittees who receive monitoring frequency reductions in accordance with Table 1 are still expected to take all appropriate measures to control both the average level of pollutants of concern in their discharge (mean) as well as the variability of such parameters in the discharge (variance), regardless of any reductions in monitoring frequencies granted from the baseline levels.

Monitoring Frequency Reduction Based on Actual Performance Percentage of Permit Limit

Ratio of Composite Long-Term Average to Monthly Average Limit X100

Baseline Monitoring Frequency	75-66%	65-50%	49-25%	<25%
7/wk	5/wk	4/wk	3/wk	1/wk
6/wk	4/wk	3/wk	2/wk	1/wk
5/wk	4/wk	3/wk	2/wk	1/wk
4/wk	3/wk	2/wk	1/wk	1/wk
3/wk	3/wk	2/wk	1/wk	1/wk
2/wk	2/wk	1/wk	2/mo	1/mo
1/wk	1/wk	1/wk	2/mo	1/2mo

1) New permittees and upgraded treatment facilities should generate three years of data before being eligible for consideration for reduced monitoring. Existing permittees' data submitted during the permit term should be evaluated at permit reissuance to determine if the level of reduced monitoring is still appropriate.

2) Facilities which satisfy the qualification criteria but are not experiencing discharges of 75% or less of their permitted levels of water quality-based parameters should not be eligible for reductions in monitoring/reporting frequencies.

3) Dissolved Oxygen: Where the post-aeration system is passive (i.e., cascade steps), reduction of monitoring frequency can be considered on a case-by-case basis. Reduced monitoring should not be allowed during months when minimum or average D.O.s fall within 0.5 mg/l or 1.0 mg/l, respectively, of the permit limit.

4) pH: Where pH is not directly adjusted by chemical addition, reduction of monitoring frequency can be considered on a case-by-case basis. Reduced monitoring should not be allowed where minimum or maximum pHs fall within 0.5 units of the permit limits.

5) Temperature: Reduction of monitoring frequency may be considered on a case-by-case basis.

6) Bacteria: Reduction of monitoring frequency when using TRC disinfection can be considered on a case-by-case basis (i.e. if the chlorine contact tank is designed in accordance with the SCAT regulation and operating correctly) but not less than 4 weekly samples in one calendar month per quarter for majors and not less than 4 weekly samples in one calendar month per year or one annual sample (single sample maximum NOT geometric mean) for minors.

   All bacteria sampling should be conducted between the hours of 10:00 a.m. and 4:00 p.m.

Example Reduced Monitoring Schedule for Bacteria

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Major			4 Weekly Samples Quarterly			4 weekly samples Quarterly			4 weekly samples Quarterly			4 weekly samples Quarterly
Minor					4 Weekly Samples Annually			1/month Annually Use Single Sample Max as Limit (Not Geometric Mean)				

Monitoring reductions for bacteria for facilities using alternate disinfection may be granted on a case by case basis in ***non-PWS*** and non-shellfish waters depending on past performance and if the UV system utilizes dose pacing with appropriate alarms (e.g., failure to achieve dose or high/low flow, intensity, and transmittance) to provide assurance that the design dose, and subsequent disinfection, is being achieved. The

O&M Manual should be modified to include a schedule for recording pertinent UV operational data.

c. Reinstating Higher Monitoring Special Condition

Permittees are expected to maintain high performance levels after being granted reduced monitoring. If the permittee receives notice of violations related to any of the effluent limitations for which reduced monitoring was granted, reinstate the baseline frequencies for all parameters that previously had reduced monitoring.

d. Special Considerations

1) **Discontinuous data:** Monitoring cannot be reduced using the methodology described above if effluent data have not been continuously reported over the period of time being considered. Effluent averages from interrupted or discontinuous data sets may not be representative of long-term performance. Monitoring frequencies for discharges that are intermittent or short-term, such as seasonal discharges, and highly variable batch processes, cannot be assessed or reduced using the methods described in these procedures.

2) **Exceptions:** It may be appropriate to maintain higher monitoring levels in individual situations where there may be a particular interest in human health, endangered species, or a sensitive aquatic environment. An example would be a water body that has water quality problems and it has been determined which point and nonpoint sources are particularly critical from the standpoint of protection of aquatic resources (e.g., endangered species) or human health (e.g., drinking water source). Discharges that involve addition of chemicals such as polymers for flocculation may change character rapidly and might not continue to reflect the quality demonstrated in earlier monitoring. The permit writer may decide not to reduce monitoring of critical point sources in these instances. The permit writer should always apply Professional Judgement in setting monitoring frequencies.

3) **Limits below Levels of Detection**: We do not recommend reductions in monitoring frequencies in cases where stringent water-quality based effluent limits (WQBELs) are below levels of quantitation (the level at which a constituent present in a wastewater sample can be reliably detected and quantified). Permittees with these types of limits will normally be deemed to be in compliance when monitored levels are below the level of quantitation; however, by definition, it is not scientifically possible (until analytical methods improve) to certify that the WQBELs are actually being achieved. Thus, DEQ feels it would be inappropriate to develop procedures recommending reductions from established monitoring frequencies for these types of limits.

4) **Use of Daily Maximum Values**: These procedures do not provide a specific methodology for considering daily maximum permit values when considering monitoring/reporting reductions. Consider such situations on a case-by-case basis. There may be concerns over instances where, for example, there are acutely toxic conditions in a receiving water due to violations of daily maximum permit limitations. In such cases, higher monitoring frequencies may be required. In addition, it is important to recognize that dischargers who frequently violate daily maximum permit limitations will likely be unable to achieve high levels of performance in monthly average limits and effectively would not be eligible to participate in this program on that basis. In addition, such facilities may also trigger enforcement criteria.

6. Bacteria Sampling Schedule Table

Bacteria monitoring frequencies may be 4/month (weekly 10am-4pm) provided TRC sampling frequencies are applied that match those TRC sampling requirements in the sampling schedule table in MN-1. For alternative disinfection, follow the sampling schedule following the paragraph below. If the facility has discontinuous discharge and 4 monthly samples are difficult to obtain, use a monthly single sample maximum of 235 CFU/100 ml instead of monthly geometric mean of 126 CFU/100ml.

When disinfection is by means other than chlorination, use the following procedures for bacteria monitoring frequency to ensure adequate continuous disinfection. This follows the same sampling frequencies in the Sample Frequency Table in MN-1. For industrial facilities, the design flow should be the maximum flow of the sanitary portion only when the flows are combined. For food processors which may have process wastewater contaminated by bacteria, base the frequency on the maximum 30-day average flow.

Design Flow (MGD)	Frequency
> 2.0	1/day (10 am to 4 pm, grab)
1.0-2.0	5 days/wk (10 am to 4 pm, grab)
0.101-0.999	3 days/wk at 48- hour intervals (10 am to 4 pm, grab)
0.0401-.01	2 days/wk (10 am to 4 pm, grab)
< 0.040	1/week (10 am to 4 pm, grab)

7. Reporting

The results of Part I.A monitoring are reported on the DMR. DMRs are submitted via myDEQ Portal by the 10th of each month for reporting the previous month's monitoring activities. Reports of monitoring required by special conditions may be submitted as separate documents.

SECTION IN-2

INDUSTRIAL STORMWATER PERMITTING PROCEDURES

Table of Contents

A. Stormwater Discharges

All permits that authorize stormwater discharges associated with industrial activity must include stormwater management provisions. **Note**: Publicly owned industrial facilities classified as Category 9 of the stormwater associated with industrial activity definition (i.e., treatment works treating domestic sewage) in the VPDES permit regulation (VAC25-31-10) should use the conditions described in **Section MN–1 Municipal**; all other publicly owned industrial facilities should use the conditions described below.

The information provided in this section reflect the 2024 VPDES ISWGP (9VAC25-151) requirements that are also available on DEQnet. Any sectors or SIC codes not covered by the ISWGP should consult the EPA MSGP or the corresponding VPDES general permits for concrete, nonmetallic mineral mining, seafood, or other VPDES general permit and decide upon appropriate limits and conditions for the individual permit.

The components of stormwater management are:

- Monitoring requirements followed by corrective actions (quarterly visual, benchmark for certain sectors, numerical effluent limits for certain sectors, impaired waters and TMDL monitoring);
- Special stormwater conditions (authorized non-stormwater discharges, releases of hazardous substances or oil, co-located industrial activities, TMDL requirement details, other general conditions);
- Stormwater pollution prevention plans: deadlines, contents [pollution prevention team, site description, potential pollutant sources, stormwater controls including good housekeeping, routine facility inspections], maintenance, non-stormwater evaluation, signatures, updating the SWPPP;
- Sector specific requirements; and
- Stormwater management evaluation (pollutant screening and follow up WET testing if needed).

The permit writer will have to evaluate the application information (and historical monitoring data, if available) to determine which requirements are applicable. Where a facility has industrial activity discharges that fall into one or more of the industrial sectors, the permit must include the requirements that apply to all industrial sectors that contribute stormwater to each outfall. Facilities with collocated industrial activities must comply with all applicable monitoring requirements, and stormwater pollution prevention plan requirements.

Sectors of industrial activity regulated under the ISWGP are shown in Exhibit IN-2-1 below.

Exhibit IN-2-1 - Sectors of Industrial Activity Covered By the ISWGP

SIC Code or Activity Code	Activity Represented
Sector A: Timber Products	
2411	Log Storage and Handling (wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
2421	General Sawmills and Planing Mills.
2426	Hardwood Dimension and Flooring Mills.

2429	Special Product Sawmills, Not Elsewhere Classified.
2431-2439 (except 2434 - see Sector W)	Millwork, Veneer, Plywood, and Structural Wood.
2441, 2448, 2449	Wood Containers.
2451, 2452	Wood Buildings and Mobile Homes.
2491	Wood Preserving.
2493	Reconstituted Wood Products.
2499	Wood Products, Not Elsewhere Classified (includes SIC Code 24991303 - Wood, Mulch and Bark facilities).
Sector B: Paper and Allied Products	
2631	Paperboard Mills.
Sector C: Chemical and Allied Products	
2812-2819	Industrial Inorganic Chemicals.
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Synthetic Fibers, except Glass.
2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
2873-2879	Agricultural Chemicals (includes SIC Code 2875 - Composting Facilities).
Sector D: Asphalt Paving and Roofing Materials and Lubricants	
2951, 2952	Asphalt Paving and Roofing Materials.
2992, 2999	Miscellaneous Products of Petroleum and Coal.
Sector E: Glass Clay, Cement, Concrete, and Gypsum Products	
3251-3259	Structural Clay Products.
3261-3269	Pottery and Related Products.
3274, 3275	Concrete, Gypsum and Plaster Products, Except: Concrete Block and Brick; Concrete Products, except Block and Brick; and Ready-Mixed Concrete Facilities (SIC Codes 3271-3273).
Sector F: Primary Metals	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills.
3321-3325	Iron and Steel Foundries.
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals.
3363-3369	Nonferrous Foundries (Castings).
Sector G: Metal Mining (Ore Mining and Dressing)	

1011	Iron Ores.
1021	Copper Ores.
1031	Lead and Zinc Ores.
1041, 1044	Gold and Silver Ores.
1061	Ferroalloy Ores, except Vanadium.
1081	Metal Mining Services.
1094, 1099	Miscellaneous Metal Ores.
Sector H: Coal Mines and Coal Mining Related Facilities	
1221-1241	Coal Mines and Coal Mining-Related Facilities.
Sector J: Mineral Mining and Dressing Facilities (SIC Codes 1411-1499 are not authorized under the ISWGP – see the Non-Metallic Mineral Mining General Permit (VAG84) for permit coverage)	
Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities	
HZ	Hazardous Waste Treatment Storage or Disposal.
Sector L: Landfills and Land Application Sites	
LF	Landfills, Land Application Sites, and Open Dumps.
Sector M: Automobile Salvage Yards	
5015	Automobile Salvage Yards.
Sector N: Scrap Recycling Facilities	
5093	Scrap Recycling Facilities.
4499 (limited to list)	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap.
Sector O: Steam Electric Generating Facilities	
SE	Steam Electric Generating Facilities.
Sector Q: Water Transportation and Ship and Boat Building or Repairing Yards	
4412-4499 (except 4499 facilities as specified in Sector N)	Water Transportation.
3731, 3732	Ship and Boat Building or Repairing Yards.
Sector U: Food and Kindred Products	
2021-2026	Dairy Products.
2041-2048	Grain Mill Products.
2074-2079	Fats and Oils.

Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	
3011	Tires and Inner Tubes.
3021	Rubber and Plastics Footwear.
3052, 3053	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting.
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified.
Sector AA: Fabricated Metal Products	
3411-3471, 3482-3499	Fabricated Metal Products, except Machinery and Transportation Equipment.
3479	Fabricated Metal Coating and Engraving.
3911-3915	Jewelry, Silverware, and Plated Ware.
Sector AB: Industrial or Commercial Machinery	
3511-3599 (except 3571-3579)	Industrial and Commercial Machinery (except Computer and Office Equipment).
Sector AD: Nonclassified Facilities/Stormwater Discharges Designated by the Department as Requiring Permits	
N/A (case-by case decision)	Stormwater Discharges Designated by the department for Permitting under the Provisions of 9VAC25-31-120 A 1, or under 9VAC25-31-120 A 7 a (1) or (2) of the VPDES Permit Regulation. Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to Sector AD.
Sector AE: Facilities with No Analytical Benchmark Monitoring Requirements	
2611	Pulp Mills.
2621	Paper Mills.
2652-2657	Paperboard Containers and Boxes.
2671-2679	Converted Paper and Paperboard Products, except Containers and Boxes.
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, except Diagnostic Substances.
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
2861-2869	Industrial Organic Chemicals.
2891-2899	Miscellaneous Chemical Products.

3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's paints, and Artist's Watercolors.
3211	Flat Glass.
3221, 3229	Glass and Glassware, Pressed or Blown.
3231	Glass Products Made of Purchased Glass.
3241	Hydraulic Cement.
3281	Cut Stone and Stone Products.
3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products.
3331-3339	Primary Smelting and Refining of Nonferrous Metals.
3398, 3399	Miscellaneous Primary Metal Products.
3341	Secondary Smelting and refining of Nonferrous Metals.
1311	Crude Petroleum and Natural Gas.
1321	Natural Gas Liquids.
1381-1389	Oil and Gas Field Services.
2911	Petroleum Refineries.
4512-4581	Air Transportation Facilities.
TW	Treatment Works.
2011-2015	Meat Products.
2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties.
2051-2053	Bakery Products.
2061-2068	Sugar and Confectionary Products.
2082-2087	Beverages.
2091-2099	Miscellaneous Food Preparations Kindred Products.
2111-2141	Tobacco Products.
2211-2299	Textile Mill Products.
2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials.
3131-3199	Leather and Leather Products, except Leather Tanning and Finishing.
2434	Wood Kitchen Cabinets.
2511-2599	Furniture and Fixtures.
2711-2796	Printing, Publishing, and Allied Products.

3081-3089	Miscellaneous Plastics Products.
3931	Musical Instruments.
3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods.
3951-3955 (except 3952)	Pens, Pencils, and Other Artist's Materials.
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, except Precious Metal.
3991-3999	Miscellaneous Manufacturing Industries.
3111	Leather Tanning, Currying, and Finishing.
3711-3799 (except 3731, 3732 – see Sector Q)	Transportation Equipment, except Ship and Boat Building and Repairing.
3571-3579	Computer and Office Equipment.
3612-3699	Electronic and Other Electrical Equipment and Components, except Computer Equipment.
3812-3873	Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks.
Sector AF: Facilities Limited to Total Suspended Solids Benchmark Monitoring Requirements	
4011, 4013	Railroad Transportation.
4111-4173	Local and Highway Passenger Transportation.
4212-4231	Motor Freight Transportation and Warehousing.
4311	United State Postal Service.
5171	Petroleum Bulk Stations and Terminals.

1. Effluent Limitations and Monitoring Requirements

a. Compliance Monitoring for Facilities Subject to Numeric Effluent Limitations

Compliance monitoring requirements are imposed to ensure that discharges subject to numerical effluent limitations under the stormwater effluent limitation guidelines are in compliance with those limitations. Eight types of stormwater discharges subject to effluent limitation guidelines are covered under the ISWGP. These discharges include contaminated stormwater runoff from timber products facilities, phosphate fertilizer manufacturing facilities, runoff associated with asphalt paving or roofing emulsion production, runoff from material storage piles at cement manufacturing facilities, contaminated runoff from hazardous waste landfills, contaminated runoff from municipal solid waste landfills, coal pile runoff at steam electric generating facilities, and airport deicing at primary airports (if covered under Sector AD). Effluent limitations are listed in the Sector-Specific Permit Requirements section of the permit (Part IV). These limitations are required under the VPDES permit regulation, 9VAC25-31-220 A, and EPA's stormwater effluent limitation guidelines in the Code of Federal Regulations (CFR) at 40 CFR Part 429, Part 418, Part 443, Part 411, Part 445 Subparts A and B, Part 449, and Part 423. The effluent limitations for the eight discharge categories are listed in Table 4.

Effluent limitations for stormwater discharges in industrial sectors are based on EPA Effluent Guidelines and they must be included in the permit. Consult the CFR citation for specific applicability and the Industrial Stormwater General Permit Regulation 9VAC25-151. These limits should be placed on the Part I.A page for the outfall.

Table 1 -
Sectors Subject to Effluent Limitation Guidelines

Effluent Limitation Guideline	Sectors with Affected Facilities
Runoff from material storage piles at cement manufacturing facilities (40 CFR Part 411 Subpart C (established February 20, 1974))	E
Contaminated runoff from phosphate fertilizer manufacturing facilities (40 CFR Part 418 Subpart A (established April 8, 1974))	C
Coal pile runoff at steam electric generating facilities (40 CFR Part 423 (established November 19, 1982))	O
Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas (40 CFR Part 429, Subpart I (established January 26, 1981))	A
Runoff from asphalt emulsion facilities (40 CFR Part 443 Subpart A (established July 24, 1975))	D
Runoff from landfills (40 CFR Part 445, Subpart A and B (established January 19, 2000))	K and L

Discharges from airport deicing operations (40 CFR Part 449 (established May 16, 2012))	Facilities subject to the effluent limitation guidelines in 40 CFR Part 449 may be covered under Sector AD.

Coal Pile Runoff **-** The ISWGP establishes effluent limitations of 50 mg/L total suspended solids and a pH range of 6.0-9.0 for coal pile runoff. Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff associated with a 10-year, 24-hour rainfall event (maximum design criteria, 9VAC25-870 et seq.) is not subject to the 50 mg/L limitation for total suspended solids. The permit extends these effluent limitations to all industrial operations that discharge coal pile runoff, where the coal pile runoff can be defined as a stormwater discharge associated with industrial activity (i.e., at a plant at any of the industrial sectors listed in Table 1). Facilities with discharges of stormwater from coal storage piles shall comply with the limitations and monitoring requirements specified in the table below as stipulated in 9VAC-25-151-70 for all discharges containing the coal pile runoff, regardless of the facility's sector of industrial activity.

b. Analytical (Benchmark) Monitoring

Certain categories of industrial facilities require monitoring of their stormwater discharges because, due to the nature of the industrial activity or materials stored on site, they have significant potential to contribute pollutants to their stormwater discharges. This is called "analytical monitoring" or "benchmark monitoring" and it also is placed on the Part I.A page for the stormwater outfall. This monitoring is done to evaluate the effectiveness of the stormwater BMPs, but it is not as intensive as the Stormwater Management Evaluation monitoring (discussed in the next section). Analytical monitoring should be done semi-annually.

Exhibit IN-2-2 lists the recommended analytical monitoring and associated benchmarks for specific industrial sectors, or subsectors. Waivers from benchmark monitoring are available to facilities whose discharges are below benchmark concentration values on an outfall by outfall basis. Sector-specific benchmark monitoring is not required to be conducted in subsequent monitoring periods during the term of this permit provided:

(a) Samples were collected in four consecutive monitoring periods, and the average of the four samples for all parameters at the outfall is below the applicable benchmark concentration value in Part IV. Facilities that were covered under the 2019 industrial stormwater general permit may use sampling data from the last two monitoring periods of that permit and the first two monitoring periods of this permit to satisfy the four consecutive monitoring periods requirement;

(b) The facility is not subject to a numeric effluent limitation established in ISWGP for any of the parameters at that outfall; and

(c) A waiver request is submitted to and approved by the department. The waiver request shall be sent to the appropriate DEQ regional office, along with the supporting monitoring data for four consecutive monitoring periods, and a certification that, based on current potential pollutant sources and control measures used, discharges from the facility are reasonably expected to be substantially similar or cleaner compared to when the benchmark monitoring for the four consecutive monitoring periods was done.

Waiver requests will be evaluated by the department based on (i) benchmark monitoring results below the benchmark concentration values; (ii) a favorable compliance history (including inspection results); and (iii) no outstanding enforcement actions.

The monitoring waiver may be revoked by the department for cause. The permittee will be notified in writing that the monitoring waiver is revoked, and that the benchmark monitoring requirements are again in force and will remain in effect until the permit's expiration date. . Note that all metals should be listed as "Total Recoverable" on the Part I.A page.

Benchmark concentration values for each sector can be found in the ISWGP.

Exhibit IN-2-2 – Benchmark Monitoring Requirements

Industry Sector [1]	SIC Code or Activity Code	Benchmark Monitoring Parameters
A	2421	TSS.
	2491	Arsenic, Chromium, Copper.
	2411	TSS.
	2426	TSS.
	2499 (24991303)	COD, TSS.
	2499 (Mulch Dyeing)	BOD, TSS, COD, Aluminum, Arsenic, Cadmium, Chromium, Copper, Selenium, Silver, Zinc, Total N, Total P.
B	2631	BOD.
C	2812-2819	Aluminum, Total N.
	2821-2824	Zinc.
	2841-2844	Total N, Zinc.
	2873-2879	Total N, Zinc, Total P.
	2875 (Composting Facilities)	TSS, BOD, COD, Ammonia, Total N, Total P.
D	2951, 2952	TSS.
E	3251-3259, 3261-3269	Aluminum.
	3274, 3275	TSS, pH.
F	3312-3317	Aluminum, Zinc.
	3321-3325	Aluminum, TSS, Copper, Zinc.
	3351-3357	Copper, Zinc.
	3363-3369	Copper, Zinc.
G [2]	1021	TSS
H	1221-1241	TSS, Aluminum.
K	HZ (Hazardous Waste Treatment, Storage, or Disposal)	TKN, TSS, TOC, Arsenic, Cadmium, Cyanide, Lead, Mercury, Selenium, Silver.
L	LF (Landfills, Land Application Sites, and Open Dumps)	TSS.

M	5015	TSS, Aluminum, Lead.
N	5093	Aluminum, Cadmium, Chromium, Copper, Lead, Zinc, TSS.
	4499	Aluminum, Cadmium, Chromium, Copper, Lead, Zinc, TSS.
O	SE (Steam Electric Generating Facilities)	Facilities in Sector O are not subject to benchmark requirements.
Q	4412-4499 (except 4499 facilities as specified in Sector N)	TSS, Copper, Zinc.
	3731, 3732	TSS, Copper, Zinc.
U	2021-2026	BOD, TSS.
	2041-2048	TSS, TKN.
	2074-2079	BOD, Total N, TSS.
Y	3011-3069	Zinc.
AA	3411-3471, 3482-3499, 3911-	Aluminum, Copper, Zinc.
	3479	Zinc.
AB	3511-3599 (except 3571-3579)	TSS, TPH, Copper, Zinc.
AD	Nonclassified Facilities/Stormwater Discharges Designated By the Department As Requiring Permits	As determined by the director.
AE	2611, 2621, 2652-2657, 2671-2679, 2833-2836, 2851, 2861 2869, 2891 2899, 39523211, 3221, 3229, 3231, 3241, 3281, 3291 3299, 3331 3339, 3398, 3399, 3341, 1311, 1321, 1381 1389, 2911, 4512-4581, (TW) Treatment Works, 2011 2015, 2032 2038, 2051 2053, 2061 2068, 2082-2087, 2091 2099, 2111 2141, 2211 2299, 2311 2399, 3131 3199, 2434, 2511 2599, 2711 2796, 3081 3089, 3931, 3942 3949, 3951 3955 (except 3952), 3961, 3965, 3991 3999, 3111, 3711 3799 (except 3731, 3732 see Sector Q), 3571 3579, 3612 3699, 3812 3873	Facilities in Sector AE are not subject to benchmark monitoring requirements.

AF	4011, 4013, 4111 4173, 4212 4231, 4311, 5171	TSS.

1 Table does not include parameters for compliance monitoring under effluent limitations guidelines.

2 See Sector G (Part IV G) for additional monitoring discharges from waste rock and overburden piles from active ore mining or dressing facilities, inactive ore mining or dressing facilities, and sites undergoing reclamation.

c. Chesapeake Bay Total Maximum Daily Load (TMDL) Compliance

Requirements are separated into three distinct categories depending on the status of a facility's demonstration of compliance:

1) Facilities that demonstrated compliance with the Chesapeake Bay TMDL loading rates.

a) Documentation of the demonstration of compliance is to be maintained with the Stormwater Pollution Prevention Plan (SWPPP) and permittees are to continue to implement any BMPs developed as part of the demonstration.

2) Facilities that obtained coverage that did not demonstrate compliance with the Chesapeake Bay TMDL loading rates.

a) If the required sampling was not completed during the previous permit cycle, additional samples are to be collected during the first four quarters of permit coverage.

b) If stormwater load calculations and a Chesapeake Bay TMDL action plan (if required) were not submitted under the previous permit cycle, they are to be submitted no later than 60 days following permit coverage (if sampling was already completed) or 60 days following the completion of the fourth sample collected during the first four quarters of permit coverage.

c) Reductions, if applicable, are to be achieved by December 31, 2025, and documentation that the reductions have been achieved is to be submitted to the department no later than February 1, 2026. Documentation of compliance with the Chesapeake Bay TMDL loading rates is to be maintained with the SWPPP.

3) Facilities that obtain initial coverage (but are not newly constructed facilities).

a) Samples are to be collected during the first four quarters of permit coverage. Stormwater load calculations and a Chesapeake Bay TMDL action plan (if required) are to be submitted no later than 60 days following the completion of the fourth sample. Reductions, if applicable, are to be achieved two years following the end of the fourth quarterly monitoring period and documentation that the reductions have been achieved shall be submitted to the department no later than the 10th of the month directly following the two-year period. Documentation of compliance with the Chesapeake Bay TMDL loading rates shall be maintained with the SWPPP.

d. Additional Information/Considerations

The applicable stormwater limits and monitoring requirements are to be applied at outfalls that are

> An outfall that contains stormwater commingled with wastewater OR is comprised solely of stormwater associated with a regulated industrial activity that requires storm event monitoring, substitute the leading 0 with a 9 for storm event sampling (e.g., 901, 902, etc.)

composed entirely of stormwater, or that have stormwater combined with other wastewaters. These requirements are referred to as "storm event monitoring" to distinguish them from the monitoring requirements for other wastewaters and apply only during a measurable storm event. (A "measurable storm event" is defined as a storm event that results in an actual discharge from the site.)

An outfall that contains stormwater commingled with wastewater and requires storm event monitoring should have a separate outfall designation for the storm event monitoring requirements. The number 9 should be used as the first digit for the outfall designation for the storm event monitoring. For example, if outfall 001 contains process wastewater and stormwater then the Part I.A page and the DMR for the process wastewater monitoring should be designated as 001, and the Part I.A page and the DMR for the stormwater monitoring should be designated 901. The number 9 will designate it as storm event monitoring associated with outfall 001. The Fact Sheet should clearly state that Outfalls 001 and 901 are the same, but that the monitoring requirements for Outfall 901 apply only during a measurable storm event as defined on the Part I.A page. For an outfall comprised solely of stormwater, the designation should also follow the aforementioned guidance and start with the number 9 (i.e., 902, 903, etc.). All internal outfalls will continue to be numbered as per existing procedures.

All outfalls that discharge stormwater associated with industrial activity that are identified in the permit application should be identified on a Part I.A page to authorize the discharge of stormwater, regardless of whether there are monitoring requirements for the outfall. If there are no storm event monitoring requirements for the outfall, then the Part I.A page should prohibit the discharge of process wastewater.

Where more than one numeric limitation for a specific parameter applies to a discharge, compliance with the more restrictive limitation is required. Where requirements for semi-annual and quarterly monitoring overlap, a single sample can satisfy both monitoring requirements.

2. Stormwater Management Evaluation.

Where stormwater discharge data submitted by a permittee are greater than two times the acute criterion for a given parameter, the permit should require a stormwater management evaluation.

a. Background

The Clean Water Act (CWA) Section 402(p)(2)(B) requires permits for stormwater discharges associated with industrial activity. VPDES permits for stormwater discharges must establish BAT/BCT requirements in accordance with Section 402(p)(3) of the Act. The SWPPP is the vehicle proposed by EPA initially in the NPDES Baseline Industrial Stormwater General Permit (published in the Federal Register 09/09/92) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9VAC25-31-220.K, and 40 CFR 122.44(k) allow BMPs for the control of pollutants where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

On August 1, 1996, EPA published a document titled "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits". This document indicated that an interim approach to limiting stormwater could be through the use of BMPs rather than numerical limits. EPA pointed out that section 502 of the CWA defined "effluent limitation" to mean "any restriction on quantities, rates, and concentrations of constituents discharged from point sources. The CWA does not say that effluent limitations need be

numeric." The use of BMPs falls in line with the CWA which notes the need to control these discharges to the maximum extent necessary to mitigate impacts on water quality.

Guidance Memo 96-001 recommends that chemical water quality-based limits not be placed on stormwater outfalls, with **two exceptions**: (1) where a VPDES permit for a stormwater discharge has been issued that includes effluent limitations, the issue of backsliding must be considered before these limitations can be modified; and (2) where the Regional Office has reliable data, obtained using sound, scientifically defensible procedures, and the data indicates the need for an effluent limitation which the Regional Office believes is justified and can be defended, then they should proceed accordingly. EPA memorandum "Revisions to the November 22, 2002, Memorandum 'Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLAs'" dated November 26, 2014, states, "EPA recommends that NPDES permitting authorities use the experience gained in developing WQBELs to design effective permit conditions to create objective and accountable means for controlling stormwater discharges."

b. Screening Criteria

Permit writers should make a pollutant-by-pollutant comparison of stormwater effluent data to the acute toxicity water quality criteria in the Water Quality Standards. Screening criteria have been established at 2 times the acute criteria. Data submitted by the permittee (on either an EPA Form 2F or on a DMR) which are above these levels result in the establishment of a Stormwater Management Evaluation for that specific pollutant. This will include a requirement for quarterly monitoring of the parameter on the storm event monitoring Part I.A page for the outfall and annual Whole Effluent Toxicity (WET) testing special condition. If sampling for metals is included due to exceeding screening criteria, it should be reported as dissolved. The permit writer should include the results of this screening in the Fact Sheet as part of the rationale for the stormwater event monitoring requirements.

The permit will also require that the permittee implement BMPs at the problem outfall(s) in accordance with the SWPPP to reduce the pollutant concentrations in the stormwater runoff. The effectiveness of the SWPPP will be evaluated (by both the permittee and DEQ) via the required monitoring for all parameters listed in Part I.A of the permit for the regulated stormwater outfalls, including the screening criteria parameters and WET screening. Monitoring results which are either above the screening criteria values (2x acute criteria) or, in the case of WET testing, result in an LC_{50} of less than 100% effluent will justify the need to reexamine the effectiveness of the SWPPP and any BMPs being utilized for the affected outfalls. In addition, the permittee must update and implement the SWPPP whenever there is a change in the facility or its operation which materially increases the potential for activities to result in a discharge of significant amounts of pollutants.

The permittee must also submit an Annual Report to the Regional Office which includes the pollutant-specific and WET monitoring data from the outfalls included in the evaluation condition, along with a summary of any steps taken to modify either the SWPPP or any BMPs based on the monitoring data.

3. General Stormwater and Special Conditions

The General Stormwater and Special Conditions contained in 9VAC-25-151-70 should be placed in every individual permit that covers stormwater from one of the 30 regulated industrial sectors. See the ISWGP Permit template available on DEQnet for special conditions language.

(*Note: There will be several cross-references within the body of the conditions that must be changed to match the actual Part designations in the issued permit).*

4. Stormwater Pollution Prevention Plan Requirements

The general Stormwater Pollution Prevention Plan requirements should be placed in every permit that covers stormwater associated with industrial activity. The language for the requirements is contained in 9VAC-25-151-80. See the ISWGP Permit template available on DEQnet for special conditions language. (*Note: There will be several cross-references within the body of the conditions that must be changed to match the actual Part designations in the issued permit).*

5. Sector-Specific SWPPP Requirements

Sector-specific stormwater pollution prevention plan requirements contained in 9VAC-25-151-85 through 9VAC25-151-380 should be included in the permit where the "industrial sector" located at a facility contributes stormwater associated with industrial activity to the outfall.

SECTION IN-3

INDUSTRIAL STANDARD PERMITS

Table of Contents

A. Standard Permit Development

These are recommendations for common types of discharges. Use them to facilitate permit writing. **These dischargers may qualify for coverage under the general permit. Permit writers should evaluate the operation to determine whether the general permit is appropriate.**

1. Commercial Laundries

a. Permitting Strategy

All commercial laundries must disinfect their washwater waste. If chlorine is used, then the facility may need to dechlorinate, depending on the chlorine limit calculations. The permit writer should evaluate the application data and develop appropriate effluent limits. The limits presented here are minimum suggested limits. Alternative parameters, limits and monitoring may be necessary because of site-specific water quality issues. Oxygen demanding parameters and dissolved oxygen may be evaluated using the regional model, if the model assumptions are appropriate for the discharge situation in question. If the model assumptions are not appropriate, then a site-specific model should be used.

b. Form 2C Minimum Testing Requirements

The applicant must test for and report all parameters unless a waiver has been requested and granted. The applicant may request and be granted a waiver for all except the following parameters:

1) Table A – BOD, TSS, Flow, pH, Temperature, and Ammonia

2) Table B and C - must provide results for parameters "believed present". All applicants shall provide results for Chlorine and bacteria (*E. coli*, enterococci and fecal coliform – see footnotes below).

c. Suggested Effluent Limitations & Basis

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Quarter	Estimate
BOD_5 [a, h]	2	NA	NA	60 mg/L	1/Quarter	Grab
Total Suspended Solids [h]	PJ	NA	NA	60 mg/L	1/Quarter	Grab
E. Coli [e]	1	NA	NA	235 CFU/100 mL	1/6 Months	Grab
Enterococci [f]	1	NA	NA	104 CFU/100 mL	1/6 Months	Grab
Fecal Coliform [g]	1	NA	NA	200 CFU/100 mL	1/6 Months	Grab
Temperature[a, i]	1	NA	NA	32 °C	1/6 Months	Immersion Stabilization
Dissolved Oxygen[a]	1	NA	mg/l	NA	1/Quarter	Grab
Total Residual Chlorine[a,b,d]	1	NA	NA	0.011 mg/L	1/Quarter	Grab
pH (s.u)[a]	1	NA	6.0	9.0	1/Quarter	Grab

Technology-based Limits: Professional Judgement (PJ)
Water Quality-based Limits: 1. Water Quality Standards 2. Other (e.g. wasteload allocation model)
NL = No Limitation, monitoring required NA = Not Applicable

a. Where the Water Quality Standards (9VAC25-260) establish alternate standards for pH, BOD5, DO, TRC and temperature in waters receiving the discharge, those standards shall be, as appropriate, the maximum and minimum effluent limitations.
b. See Part IB for Quantification Levels and reporting instructions.
c. Geometric Mean.
d. See Section IV for chlorine limits determination.
e. Applies only when the discharge is into freshwater (see 9VAC25-260-140 C for the classes of waters and boundary designations).
f. Applies only when the discharge is into saltwater or the transition zone (see 9VAC25-260-140.C for the classes of waters and boundary designations).
g. Applies only when the discharge is into shellfish waters (see 9VAC25-260-160 for the description of what are shellfish waters).
h. Limit given is expressed in two significant figures.
i. The effluent temperature shall not exceed a maximum 32°C for discharges to nontidal coastal and piedmont waters, 31°C for mountain and upper piedmont waters, 21°C for put and take trout waters, or 20°C for natural trout waters. For estuarine waters, nontidal coastal and piedmont waters, mountain and upper piedmont waters, and put and take trout waters, the effluent shall not cause an increase in temperature of the receiving stream of more than 3°C above the natural water temperature. For natural trout waters, the temperature of the effluent shall not cause an increase of 1°C above natural water temperature. The effluent shall not cause the temperature in the receiving stream to change more than 2°C per hour, except in the case of natural trout waters where the hourly temperature change shall not exceed 0.5°C.

See 9VAC25-194-70 for additional effluent limitations and monitoring requirements.

d. Special Conditions

The following special conditions should be included in permits for coin operated laundries. See the Fact Sheet template for rationale and special condition language.

- Chlorine Monitoring and Compliance
- Notification Levels
- Operation and Maintenance Manual Requirement
- Quantification Levels (*Include for water quality-based parameters, if applicable*).
- Monitoring Frequency Reduction (*Do not consider further reduction of the monitoring frequency unless the permittee has demonstrated compliance with all limitations contained within the permit for a minimum of six consecutive months.*)

If the permittee can demonstrate compliance with all limitations contained within this permit for a minimum of six consecutive months, the staff may consider a permit modification to reduce the monitoring frequency to once per quarter.

Quarterly monitoring is the minimum frequency which will be representative of the monitored activity. If the discharge has demonstrated consistent compliance with effluent limitations, then monitoring frequency may be reduced to semi-annually as noted above.

2. Petroleum Storage and Transportation

a. Permitting Strategy

1) Facility Type

The permitting recommendations described below are for wet weather flows from facilities that store petroleum products (bulk oil facilities) and pipeline companies. Effluents from petroleum storage facilities and pipelines have similar characteristics and can be permitted with similar limitations and monitoring requirements. If the facility has dry weather flows, the permit writer should consider different effluent parameters, limits and/or monitoring frequencies. Dry weather flows should have been identified on the permit application or site inspection report. Hydrostatic test discharges are addressed by this guidance.

2) Pipeline Booster Pump Stations

Most booster pump stations discharge into a dry ditch or small stream that provides little or no dilution at the discharge point. If the facility does not have a discharge, no permit is required. If there is a discharge, the permit writer should consider the following options.

Individual Permit

Possible sources of wastewater are:

a) Wash pad water - needs to meet BPJ technology limits for TPH;

b) Contaminated water from manifold yard - needs to meet BPJ technology limits for TPH;

c) Uncontaminated site runoff - no limits at this time; or

d) Hydrostatic test water.

Sources (a) and (b) may be treated by an oil water separator which discharges into a retention basin which also collects (c) and possibly (d). For this type of situation, write permits according to the following guidelines:

Define the oil/water separator effluent as internal Outfall 101 and apply BPJ technology limits for TPH of 15 mg/l maximum. Define the effluent from the retention basin as Outfall 001 and apply any needed water quality standard limits to it. If the discharge is such that significant dilution is available then WQS limits may be calculated for BTEX based on that dilution.

General Permit

If there is stormwater but no discharge of process wastewaters, consideration may be given to coverage under the Industrial Stormwater General Permit. For hydrostatic test water, consideration may be given to coverage under the Petroleum Contaminated Sites and Hydrostatic Tests General Permit.

3) Bulk Oil Facilities - Individual vs General Permit

Bulk oil facilities (SIC Code 5171 with vehicle maintenance) may be covered under a General Stormwater Permit instead of an individual VPDES permit unless antibacksliding prevents converting those with an existing individual permit. If the facility does not qualify for the general permit and vehicle maintenance or equipment cleaning (concrete loading pad cleaning is NOT equipment cleaning) activities take place on site, include the section regarding Stormwater

Management with the individual permit. Vehicle maintenance includes vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication.

4) Tank bottom waters

Tank bottom water discharges should be classified as process wastewater, due to their high level of pollutants. No direct discharge of tank bottom waters is allowed. The permittee who questions this restriction has three options, which should be discussed with them:

(a) Pump and haul with offsite treatment and disposal;

(b) Discharge through a permitted outfall after appropriate treatment in addition to an oil/water separator. The type of treatment is left to the permittee, bearing in mind that the higher degree of treatment would lessen the probability of toxic effects; or

(c) Discharge to a "holding area" for evaporation. The "holding area" may be a pond or diked area which has a 10^{-7} or 10^{-6} cm/sec coefficient of permeability (GM18-2013). This alternative would also require ground water monitoring, which could be part of the VPDES permit or the AST regulation requirements.

For tank bottom waters, an internal outfall with limits for BTEX (benzene, toluene, ethylbenzene, and xylenes), and naphthalene and lead, if applicable, should be established. Virginia Water Quality Standards do not address acute and chronic toxicity for BTEX and naphthalene, thus DEQ has established chronic aquatic toxicity, instream values for these chemicals. The final effluent limits in the VPDES General Permit For Discharges From Groundwater Remediation Of Contaminated Sites, Dewatering Activities Of Contaminated Sites, And Hydrostatic Tests (Petroleum Disharges GP), VAG83 are established as instream values and should be used as permit maximums. The general permit limits assume zero dilution in the receiving stream. Where dilution exists, the limits can be adjusted as long as the resulting mix will not exceed the instream values listed.

5) Groundwater Monitoring

The purpose of a ground water monitoring program is to determine if activities at the site are resulting in violations of the Board's Groundwater Standards. The groundwater monitoring program should concentrate on at least the two following parameters: Total Petroleum Hydrocarbons (TPH) and Total Organic Carbon (TOC).

These parameters should provide an indication of the presence and amount of pollution, plus numeric values with which a comparison can be made, to evaluate the need for remediation. Groundwater monitoring at jobber type oil facilities is optional and should be evaluated on a case-by-case basis.

Note: Omit this requirement for facilities subject to a groundwater monitoring plan requirement as part of the AST, ODCP regulations (having $\geq$ 1 million gallon aggregate storage capacity).

6) Whole Effluent Toxicity Program (WET)

Monitoring for the WET Program is required for facilities that are large bulk oil storage or distribution centers and for pipeline terminals. Smaller, petroleum jobber-type storage facilities that provide petroleum products to end consumers

may need a WET Program, depending on various factors, including the site characteristics (presence of oil/water separators, etc), age and condition of facilities, and past performance.

7) Hydrostatic Tank Testing

If it is anticipated that hydrostatic testing will be performed and a discharge produced, include a limit for TPH. If hydrostatic test discharges will occur more than once every three years, the permit writer should consider including limits for BTEX parameters similar to those in the Petroleum Discharges General Permit, VAG83. Depending on site characteristics and the potential for public concern, the permit can include a requirement for notification of and approval from the DEQ Regional Office prior to the discharge actually taking place.

Address hydrostatic tank testing discharges either as a special condition or label the discharge as an internal outfall and limit it on a separate Part I.A page. In order to avoid problems with CEDS, these infrequent discharges may be better handled in special conditions rather than as internal outfalls. Internal outfalls require monthly DMRs whereas special condition reporting can be on a per discharge basis. In either case, the limits are only applicable when there is a discharge of hydrostatic test water.

b. Form 2C Minimum Testing Requirements

(For process water discharge [tank bottom waters, hydrostatic test waters, loading rack washdown waters]) The applicant must test for and report all parameters unless a written waiver request has been submitted and granted. The applicant may request and be granted a waiver for all except the following parameters:

(1) Table A - BOD, TSS, Flow, pH, Temperature, and Ammonia (2)

(2) Table B - must provide results for Oil & Grease and any other parameters "believed present"

(3) Part C - must provide results for any parameters "believed present". Office of VPDES Permits recommends testing for BTEX.

c. Form 2F Minimum Testing Requirements

(For point source discharge of stormwater associated with industrial activity)

(1) Table A - must test for and report all parameters listed

(2) Table B C - must provide results for any parameters "believed present".

(3) Part D - must provide storm event data corresponding to the maximum daily values for the flow-weighted composite sample reported in Parts A, & C.

d. Suggested Effluent Limitations & Basis

These limits assume the discharge is treated with a minimum treatment technology comparable to an oil/water separator (applicable to tank bottom waters and loading rack washdown waters).

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/M	Estimate
TPH (mg/L)	PJ	NL	NA	15	1/M	Grab
pH (s.u.)	3	NA	*	*	1/M	Grab

Technology-based Limits: PJ
Water Quality-based Limits: 1. Water Quality Standards
* Establish pH limits that will maintain water quality standards in the receiving stream

NL = No Limitation, monitoring required
NA = Not Applicable

a. The effluent shall be free of sheens. There shall be no discharge of floating solids or visible foam in other than trace amounts.
b. There shall be no discharge of tank bottom waters
c. All samples shall be collected from the discharge resulting from a storm event. The grab samples shall be taken during the first 3 hours of discharge.

Hydrostatic Test Waters are subject to the following effluent limitations and monitoring requirements:

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Discharge	Estimate
pH (SU)	1	NA	6.0	9.0	1/Discharge	Grab
TPH (mg/L) [a]	PJ	NL	NA	15	1/Discharge	Grab
TOC (mg/L)	PJ	NA	NA	NL	1/Discharge	Grab
TRC (mg/L) [b]	PJ	NL	NA	0.011	1/Discharge	Grab
TSS (mg/L)	NA	NL	NA	NL	1/Discharge	Grab

Technology-based Limits: PJ
NL = No Limitation, monitoring required
NA = Not Applicable

a. TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2000) or EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2014) or 8270E (2018).
b. Total residual chlorine limitation of 0.011 mg/l and chlorine monitoring only apply to discharges of test water that have been chlorinated or come from a chlorinated water supply. All data below the quantification level (QL) of 0.1 mg/L shall be reported as "<QL."
c. The effluent shall be free of sheens. There shall be no discharge of floating solids or visible foam in other than trace amounts.
d. See Part I B for Quantification Levels and reporting instructions.
e. The equipment being tested shall be substantially free of debris, raw material, product, or other residual materials.
f. The discharge flow shall be managed to control the volume and velocity of the discharge, including peak flow rates and total volume, to minimize erosion at outlets, and to minimize downstream channel and stream bank erosion.

e. Special Conditions

The following special conditions should be included in permits for petroleum storage or transportation facilities:

- Notification Levels
- Materials Handling/Storage
- Operation and Maintenance Manual Requirement
- Whole Effluent Toxicity Testing
- Water Quality Criteria Monitoring on a case-by-case basis

- Quantification Levels (*Include for water quality-based parameters, if applicable. Adapt for BTEX, lead and naphthalene*)
- Groundwater Monitoring Program

Oil Storage Ground Water Monitoring Reopener (*for facilities covered under UST or AST program*) As this facility currently manages ground water in accordance with 9 VAC 25-91-10 et seq., the Facility and Aboveground Storage Tank Regulation, this permit does not presently impose groundwater monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include ground water monitoring not required by this regulation.

Hydrostatic Testing (*this special condition is required for hydrostatic testing if it is not set up as an internal outfall on a Part I A. page*). **[***Include this part if necessary:* The permittee shall obtain approval from the DEQ Regional Office forty-eight hours in advance of any discharge resulting from hydrostatic testing. The conditions of approval will be contingent on the volume and duration of the proposed discharge, and the nature of the residual product.**]** Every discharge of hydrostatic testing waters shall be monitored and limited as specified below. Sampling will be required for characterization of the "first flush", as a minimum. Report results with the DMR for the month in which hydrostatic testing and sampling occurred. Such discharges shall be limited as follows:

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Discharge	Estimate
pH (SU)	1	NA	6.0	9.0	1/Discharge	Grab
TPH (mg/L) [a]	PJ	NL	NA	15	1/Discharge	Grab
TOC (mg/L)	PJ	NA	NA	NL	1/Discharge	Grab
TRC (mg/L) [b]	PJ	NL	NA	0.011	1/Discharge	Grab
TSS (mg/L)	NA	NL	NA	NL	1/Discharge	Grab

Technology-based Limits: PJ
NL = No Limitation, monitoring required
NA = Not Applicable

a. TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015C (2000) or EPA SW 846 Method 8015C (2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B (1996) and 8270D (2014) or 8270E (2018).
b. Total residual chlorine limitation of 0.011 mg/l and chlorine monitoring only apply to discharges of test water that have been chlorinated or come from a chlorinated water supply. All data below the quantification level (QL) of 0.1 mg/L shall be reported as "<QL."
c. The effluent shall be free of sheens. There shall be no discharge of floating solids or visible foam in other than trace amounts.
d. See Part I B for Quantification Levels and reporting instructions.
e. The equipment being tested shall be substantially free of debris, raw material, product, or other residual materials.
f. The discharge flow shall be managed to control the volume and velocity of the discharge, including peak flow rates and total volume, to minimize erosion at outlets, and to minimize downstream channel and stream bank erosion.

Rationale: (*See the Fact Sheet for the VPDES general permit for Discharges from Petroleum Contaminated Sites)*

3. Pulp and Paper Mills

a. Permitting Strategy

The April 15, 1998, Federal Register published a final rule, commonly referred to as the "Cluster Rule", promulgating new effluent limitations guidelines and national emission standards for hazardous air pollutants for the pulp and paper industry. The water portion of the rule reorganized the existing guidelines but the effluent limitations for most of the previously identified subcategories, and conventional pollutants for all subcategories, have not changed. New BAT effluent limitations under 40 CFR Part 430 were promulgated for the two subcategories Subpart B "Bleached Papergrade Kraft and Soda" and Subpart E "Papergrade Sulfite". In this rule EPA also introduced a "Voluntary Advanced Technology Incentives Program" (VATIP) whereby a mill was given more time to meet BAT limitations, and various other incentives, in exchange for accepting more stringent BAT limitations than the BAT "baseline" limitations.

The BAT effluent limitations guidelines are for dioxin, furan, chloroform and 12 chlorinated phenolics at the bleach plant (internal outfall), and for Adsorbable Organic Halides (AOX) at end of pipe.

Internal Bleach Plant Outfall: Dioxin, furan, chloroform and 12 chlorinated phenolics should be monitored once per year. End of Pipe Outfall: AOX, COD and water quality-based dioxin should be monitored once per month. When dioxin is being monitored internally at a monthly interval it is recommended that the end of pipe monitoring be reduced from monthly to quarterly. When the internal dioxin monitoring frequency is reduced to less than monthly, the end of pipe monitoring should be set back to monthly.

Chloroform - Chloroform is an extremely volatile compound that is generated during the bleaching of pulp with hypochlorite, chlorine, or chlorine dioxide. Hypochlorite bleaching results in the greatest amount of chloroform generation while chlorine dioxide bleaching results in the least amount of chloroform generation. As chloroform is generated, it partitions to air and to bleach plant effluent (though, some of the chloroform remains with the pulp). Any chloroform found in bleach plant effluent that is not emitted to the air prior to reaching the wastewater treatment plant is volatilized and degraded during secondary treatment.

2,3,7,8-TCDD (Dioxin) and 2,3,7,8-TCDF (Furan) - The dioxin congener consists of two benzene rings connected by two oxygen bridges. There are eight positions where substitution of hydrogen atoms by other atoms or by organic or inorganic radicals can occur. 2,3,7,8-TCDD is one of 75 dioxin congeners and is the most toxic. The chlorinated dibenzofurans have similar 4-2 structure, but have only one oxygen bridge rather than two. 2,3,7,8-TCDF is the most toxic of 135 chlorinated dibenzofurans. During the late 1980s, bleaching with chlorine and hypochlorite were discovered to be sources of dioxin and furan. Although use of chlorine dioxide (ClO) bleaching minimizes the formation of 2 chlorinated pollutants, measurable quantities of 2,3,7,8-TCDF and possibly 2,3,7,8-TCDD may still be formed. Dioxin and furan are not effectively degraded during wastewater treatment; they partition either to sludge or pass into receiving waters untreated.

Chlorinated Phenolic Compounds - Chlorinated phenolic compounds include phenols, guaiacols, catechols, and vanillins substituted with from one to five chlorine atoms per molecule. Typically, bleaching processes that result in the formation of 2,3,7,8-TCDD and 2,3,7,8-TCDF also generate the higher substituted tri-, tetra-, and

penta-chlorinated compounds. EPA established effluent limitations guidelines and pretreatment standards for the following 12 chlorinated phenolic compounds:

4-Trichlrosyringol

3,4,5-Trichlorocatechol

3,4,6-Trichlorocatechol

3,4,5-Trichloroguaiacol

3,4,6-Trichloroguaiacol

4,5,6-Trichloroguaiacol

2,4,5-Trichlorophenol

2,4,6-Trichlorophenol

Tetrachlorocatechol

Tetrachloroguaiacol

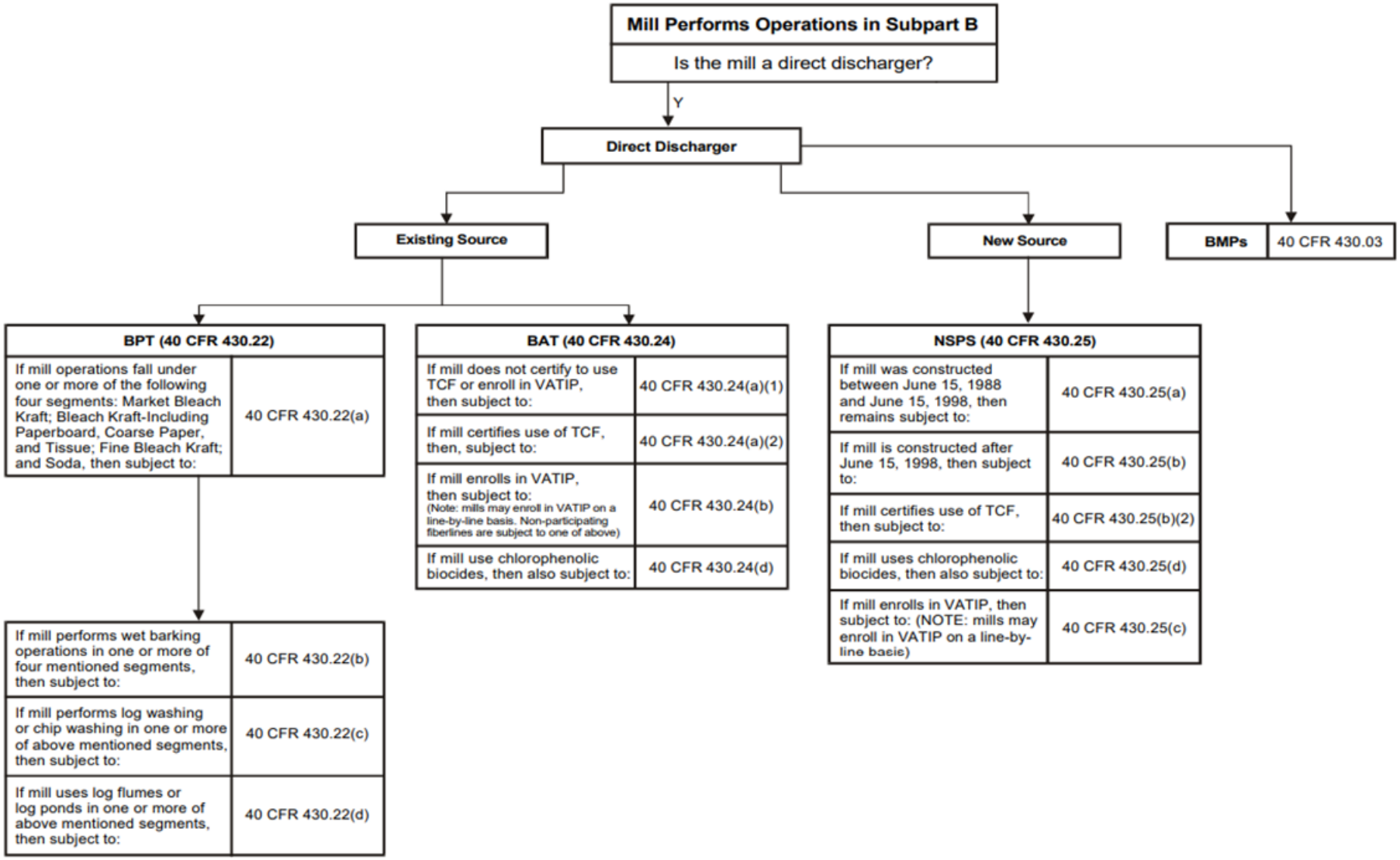
2,3,4,6-Tetrachlorophenol

Pentachlorophenol

Secondary treatment can generally achieve about 50% removal of these compounds.

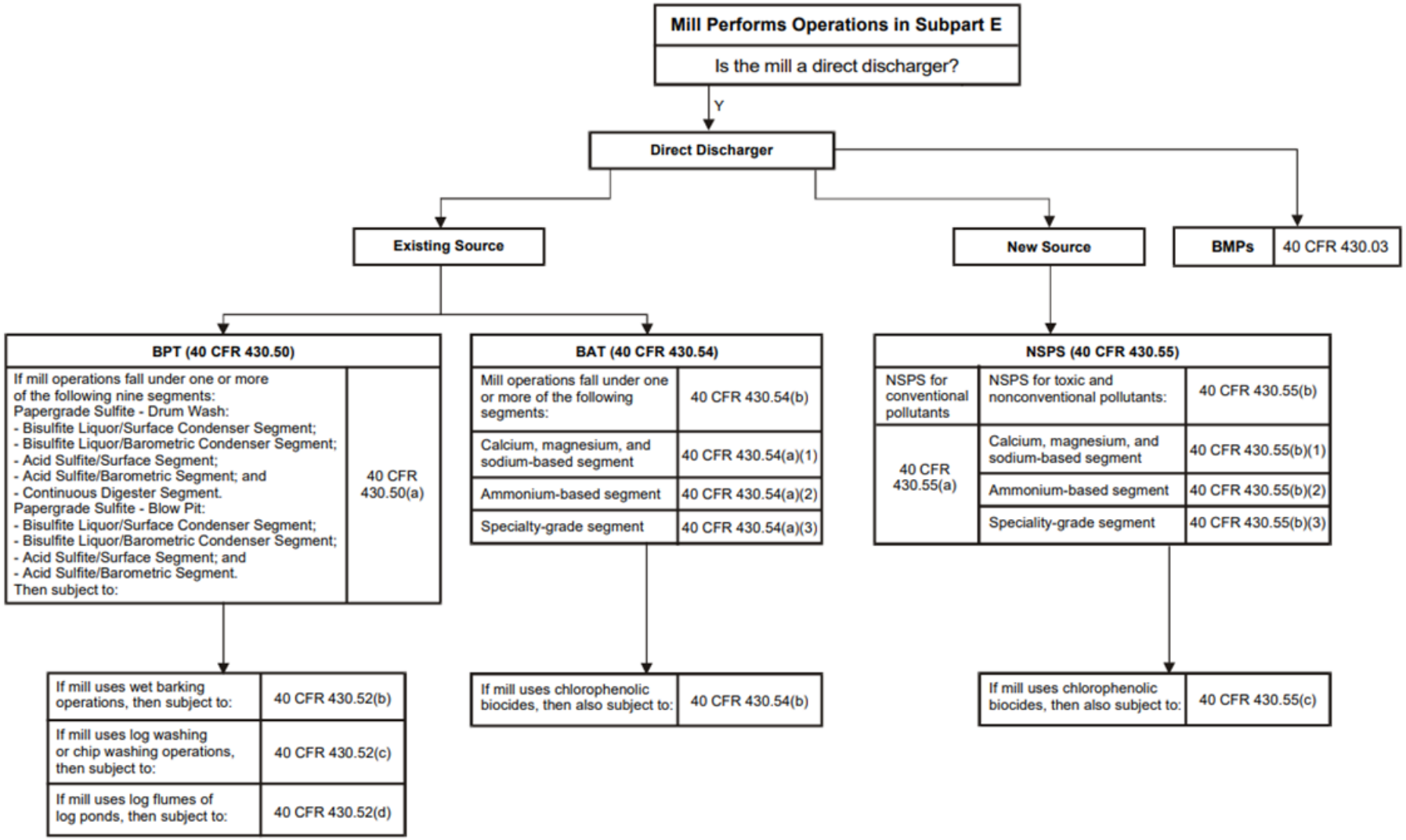
Adsorbable Organic Halides (AOX) - AOX is a measure of the total amount of halogens (chlorine, bromine, and iodine) bound to dissolved or suspended organic matter in a wastewater sample. In the effluent of Subpart B and E mills, essentially all of the AOX is chlorinated compounds formed during bleaching with chlorine and other chlorinated bleaching agents. Inefficient application of chlorine-containing bleaching chemicals can generate increased levels of AOX. Minimizing AOX will usually have the effect of reducing the generation of chloroform, 2,3,7,8-TCDD, 2,3,7,8-TCDF, and chlorinated phenolic compounds. Some AOX is biodegraded during secondary treatment. Chemical Oxygen Demand (COD). COD is a measure of the quantity of chemically oxidizable material present in wastewater. Sources of COD include the pulping area, recovery area, bleaching area, and papermaking area. A portion of COD is readily biodegradable while the rest is resistant to biodegradation (i.e., "refractory"). The refractory portion is derived from spent pulping liquor (i.e., kraft mill "black liquor" or sulfite mill "red liquor"), thus, COD biodegradability indicates the degree to which spent pulping liquor is recovered from brown stock pulp. Wastewater COD loads also correlate with discharges of toxic organic pollutants that are not readily biodegraded. (Note: EPA has not established COD ELG&S; however, EPA plans to do so in a future rulemaking.).

Exhibit IN-3-1. Applicability of Subpart B Standards[1]



[1] Permit Guidance Document Pulp, Paper and Paperboard Manufacturing Point Source Category (40 CFR §430), https://www.epa.gov/sites/default/files/2015-10/documents/pulp-paper_permit-guidance_2000.pdf

Exhibit IN-3-2. Applicability of Subpart E Standards[2]



[2] Permit Guidance Document Pulp, Paper and Paperboard Manufacturing Point Source Category (40 CFR §430), https://www.epa.gov/sites/default/files/2015-10/documents/pulp-paper_permit-guidance_2000.pdf

(1) Compliance Point

The regulation requires mills to demonstrate compliance with limitations at the point where wastewater leaves the bleach plant, as well as at the point where they discharge their treated effluent to the receiving stream (for direct dischargers).

> Some mills operate several individual fiber lines and associated bleach plants. As a result, these mills must meet limits for pollutants with bleach plant effluent limits for each individual fiber line bleaching plant.

Under 40 CFR 430, a direct discharger must demonstrate compliance with the limits for TCDD, TCDF, 12 chlorinated phenolic pollutants, and chloroform at the point where the wastewater containing these pollutants leaves the bleach plant from each individual fiber line before being combined with process wastewaters or noncontact cooling water from other operations. (EPA refers to these in-process limits as "bleach plant effluent limits"). EPA determined that bleach plant effluent limits are necessary for these pollutants because chemical pulp bleaching is the principal source of these pollutants; the effluent from a mill's bleach plant is typically combined with other process wastewater and noncontact cooling water prior to treatment and discharge. Because of this, you would not be able to accurately assess compliance at the final mill effluent due to dilution with other mill wastewaters. In addition, bleach plant limits for chloroform are necessary because there is potential for volatilization and loss in mill sewer systems. For AOX, however, direct discharge mills must comply with end-of-pipe limits at the point where the final mill process wastewater effluent is discharged to receiving waters (i.e., at the end of the pipe).

(2) Best Management Practices

The federal rule specifies BMP's that are to be implemented by all paper mills.

Recommendation: The BMP language in Section 3.b has been edited and formatted for a VPDES permit. It is recommended that permit writers insert these into the paper mill permits. Note that the BMP's include a schedule for attainment of certain goals. Any of the dates in the schedule that have passed upon this reissuance of the permit should be changed to the effective date. Also, the permit writer should insert an annual reporting date (the effective date anniversary is appropriate) for submittal of the BMP report.

(3) Bleach Plant Sampling Protocol

EPA states in the preamble to the rules that the bleach plant sample should be a flow-proportioned composite of separate samples of the acid and alkaline discharges resulting in one bleach plant sample for analysis. (They also say, however, that they did not use this protocol in the sampling program from which limits were developed, and if the mills wish to collect separate samples of acid and alkaline discharges that is acceptable. Further clarification is not given.) There are also specific requirements for chloroform sampling.

Recommendation: For sample type for bleach plant effluent parameters indicate the generic "Composite" ("COMP" in CEDS) and via footnote/special

condition describe the sampling requirements. The attached sampling methodology special condition is recommended for that purpose.

(4) Other Considerations

Since the new bleach plant effluent guideline limits are mostly in terms of minimum levels (essentially quantification levels) which are specified in the federal rule it is recommended that a special condition for compliance reporting be included in the permit. An example is attached.

The permit writers are reminded that caution should be used in incorporating the new requirements into the permits such that no exceedances of water quality criteria are inadvertently authorized by the internal limits (criteria exist for dioxin, chloroform, 2,4,6 triclorophenol and pentachlorophenol), and that special conditions regarding reduced monitoring, etc. are worded such that they are not permit self-modifying conditions.

b. Best Management Practices for Pulp and Paper Mills

Best Management Practices (BMPs) are used in permits to require the permittee to control or abate pollution by means other than typical wastewater treatment. BMPs can be used in lieu of effluent limits when effluent limits alone are not sufficient to achieve the intent of the Law or when effluent limits are not feasible.

The pulp and paper BMPs are applicable to all discharges from pulp, paper and paperboard mills with pulp production in the Bleached Papergrade Kraft and Soda industrial category (40 CFR 430 Subpart B) and the Papergrade Sulfite industrial category (40 CFR 430 Subpart E). Permits for discharges in these categories should contain these requirements.

Special Conditions Language

(Note that there are several cross references to other parts of the permit in this special condition that will have to be changed based on the numbering system used by the permit writer.)

Best Management Practices (BMPs) for Spent Pulping Liquor, Soap and Turpentine Management, Spill Prevention and Control

1) Specialized definitions

a) Action Level: A daily pollutant loading that when exceeded triggers investigative or corrective action.

b) Equipment Items: Any process vessel, storage tank, pumping system, evaporator, heat exchanger, recovery furnace or boiler, pipeline, valve, fitting, or other device that contains, processes, transports, or comes into contact with spent pulping liquor, soap, or turpentine.

c) Immediate Process Area: The location at the mill where pulping, screening, knotting, pulp washing, pulping liquor concentration, pulping liquor processing, and chemical recovery facilities are located, including spent pulping liquor storage and spill control tanks wherever located at the mill.

d) Intentional Diversion: The planned removal of spent pulping liquor, soap, or turpentine from equipment items in spent pulping liquor, soap, or turpentine service by the mill for any purpose including, but not limited to, maintenance, grade changes, or process shutdowns.

e) Senior Technical Manager: The person designated by the permittee to review the BMP Plan. The senior technical manager shall be the chief engineer at the mill, the manager of pulping and chemical recovery operations, or other such responsible person who has knowledge of and responsibility for pulping and chemical recovery operations.

f) Soap: The product of reaction between the alkali in kraft pulping liquor and fatty acid portions of the wood, which precipitate out when water is evaporated from the spent pulping liquor.

g) Spent Pulping Liquor: Black liquor that is used, generated, stored, or processed at any point in the pulping and chemical recovery processes.

h) Turpentine: A mixture of terpenes, principally pinene, obtained by the steam distillation of pine gum recovered from the condensation of digester relief gases from the cooking of softwoods by the kraft pulping process. Sometimes referred to as sulfate turpentine.

2) Requirement to implement Best Management Practices

The Best Management Practices (BMPs) specified in Part I.**[C.]**2. (a) through (j) must be developed according to best engineering practices and must be implemented in a manner that takes into account the specific circumstances at this mill. The BMPs are as follows:

a) The permittee must return spilled or diverted spent pulping liquors, soap, and turpentine to the process to the maximum extent practicable as determined by the mill, recover such materials outside the process, or release spilled or diverted material at a rate that does not disrupt the receiving wastewater treatment system.

b) The permittee must establish a program to identify and repair leaking equipment items. This program must include: (i) Regular visual inspections of process areas with equipment items in spent pulping liquor, soap, and turpentine service; (ii) Immediate repair of leaking equipment items. Leaking equipment items that cannot be repaired during normal operations must be identified, temporary means for mitigating the leaks provided, and the leaking equipment items repaired during the next maintenance outage; (iii) Identification of conditions under which production will be curtailed or halted to repair leaking equipment items or to prevent pulping liquor, soap, and turpentine leaks and spills; and (iv) A means for tracking repairs over time to identify those equipment items where upgrade or replacement may be warranted based on the frequency and severity of leaks, spills, or failures.

c) The permittee must operate continuous, automatic monitoring systems that are determined necessary by the mill to detect and control leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine. These monitoring systems should be integrated with the mill process control system and may include high level monitors and alarms on storage tanks; process area conductivity or pH monitors and alarms; and process area sewer, process wastewater, and wastewater treatment plant conductivity or pH monitors and alarms.

d) The permittee must establish a program of initial and refresher training of operators, maintenance personnel and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising

the operation and maintenance of equipment items in spent pulping liquor, soap, and turpentine service. The refresher training must be conducted at least annually. The training program must be documented.

e) The permittee must prepare a report that evaluates each spill or intentional diversion of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area. The report must describe the equipment items involved, the circumstances leading to the incident, the effectiveness of the corrective actions taken to contain and recover the spill or intentional diversion and plans to develop changes to equipment and operating and maintenance practices as necessary to prevent recurrence. Discussion of the reports must be included as part of the annual refresher training.

f) The permittee must establish a program to review any planned modifications to the pulping and chemical recovery facilities and any construction activities in the pulping and chemical recovery areas before these activities commence. The purpose of such review is to prevent leaks and spills of spent pulping liquor, soap, and turpentine during the planned modifications, and to ensure that construction and supervisory personnel are aware of possible liquor diversions and of the requirement to prevent leaks and spills of spent pulping liquors, soap, and turpentine during construction.

g) The permittee must install and maintain secondary containment (i.e., containment constructed of materials impervious to pulping liquors) for spent pulping liquor bulk storage tanks equivalent to the volume of the largest tank plus sufficient freeboard for precipitation. An annual tank integrity testing program, if coupled with other containment or diversion structures, may be substituted for secondary containment for spent pulping liquor bulk storage tanks.

h) The permittee must install and maintain secondary containment for turpentine bulk storage tanks.

i) The permittee must install and maintain curbing, diking or other means of isolating soap and turpentine processing and loading areas from the wastewater treatment facilities.

j) The permittee must conduct wastewater monitoring to detect leaks and spills, to track the effectiveness of the BMPs, and to detect trends in spent pulping liquor losses. Such monitoring must be performed in accordance with Part I.[**C**.]8.

3) Requirement to develop a BMP Plan

a) The permittee must prepare and implement a BMP Plan that is based on a detailed engineering review as described in Part I.[**C.**]3. (b) and (c), and that specifies the procedures and the practices required to meet the requirements of Part I.C.2., what construction the permittee determines is necessary to meet those requirements including a schedule for such construction, and the monitoring program (including the statistically derived action levels) that will be used to meet the requirements of Part I.[**C**.]8. The BMP Plan also must specify the period of time that the permittee determines the action levels established under Part I.[**C**.]7. may be exceeded without triggering the responses specified in Part I.[**C.**]8.

b) The permittee must conduct a detailed engineering review of the pulping and chemical recovery operation including but not limited to process equipment, storage tanks, pipelines and pumping systems, loading and unloading facilities, and other appurtenant pulping and chemical recovery equipment items in spent pulping liquor, soap, and turpentine service for the purpose of determining the magnitude and routing of potential leaks, spills, and intentional diversions of spent pulping liquors, soap, and turpentine during the following periods of operation: (i) Process start-ups and shut downs; (ii) Maintenance; (iii) Production grade changes; (iv) Storm or other weather events; (v) Power failures; and (vi) Normal operations.

c) As part of the engineering review, the permittee must determine whether existing spent pulping liquor containment facilities are of adequate capacity for collection and storage of anticipated intentional liquor diversions with sufficient contingency for collection and containment of spills. The engineering review must also consider: (i) The need for continuous, automatic monitoring systems to detect and control leaks and spills of spent pulping liquor, soap, and turpentine; (ii) The need for process wastewater diversion facilities to protect wastewater treatment facilities from adverse effects of spills and diversions of spent pulping liquors, soap, and turpentine; (iii) The potential for contamination of storm water from the immediate process areas; and (iv) The extent to which segregation and/or collection and treatment of contaminated storm water from the immediate process areas is appropriate.

4) Amendment of BMP Plan

a) The permittee must amend the BMP Plan whenever there is a change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, turpentine, or soap from the immediate process areas.

b) The permittee must complete a review and evaluation of the BMP Plan five years after the first BMP Plan is prepared and, except as provided in Part I.[**C**.]4. (a), once every five years thereafter. As a result of this review and evaluation, the permittee must amend the BMP Plan within three months of the review if the permittee determines that any new or modified management practices and engineered controls are necessary to reduce significantly the likelihood of spent pulping liquor, soap, and turpentine leaks, spills, or intentional diversions from the immediate process areas, including a schedule for implementation of such practices and controls.

5) Review and certification of BMP Plan

The BMP Plan, and any amendments thereto, must be reviewed by the senior technical manager at the mill and approved and signed by the permittee in accordance with Part II.K., certifying that the plan and any amendments thereto have been prepared in accordance with this permit.

6) Record keeping requirements

a) A complete copy of the current BMP Plan and the records specified in Part I.[**C**.]6.(b) must be maintained at the mill and made available to the Department for review upon request.

b) The permittee must maintain the following records for three years from the date they are created: (i) Records tracking the repairs performed in accordance with

the repair program described in Part I.[C.]2. (b) ; (ii) Records of initial and refresher training conducted in accordance with Part I.[C.]2. (d); (iii) Reports prepared in accordance with Part I.[C.]2. (e); and (iv) Records of monitoring required by Parts I.[C.]2. (j) and I.[C.]8.

7) Establishment of wastewater treatment system influent action levels

a) The permittee must conduct a monitoring program, described in Part I.[C.]7. (b), for the purpose of defining wastewater treatment system action levels, described in Part I.[C].7. (c), that will trigger requirements to initiate investigations on BMP effectiveness and to take corrective action.

b) The permittee must employ the following procedures in order to develop the action levels required by Part I.[C.]7.: (i) Monitoring parameters. The permittee must collect 24-hour composite samples and analyze the samples for a measure of organic content (e.g., Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)). Alternatively, the permittee may use a measure related to spent pulping liquor losses measured continuously and averaged over 24 hours (e.g., specific conductivity or color). (ii) Monitoring locations. Monitoring must be conducted at the point influent enters the wastewater treatment system. For the purposes of this requirement, the permittee may select alternate monitoring points in order to isolate possible sources of spent pulping liquor, soap, or turpentine from other possible sources of organic wastewaters that are tributary to the wastewater treatment facilities (e.g., bleach plants, paper machines and secondary fiber operations).

c) By the date prescribed in Part I.[C.]9. (c) below, the permittee must complete an initial six-month monitoring program using the procedures specified in Part I.[C.]7. (b) and must establish initial action levels based on the results of that program. The action levels must be determined by a statistical analysis of six months of daily measurements. The action levels must consist of a lower action level which if exceeded will trigger investigation requirements and an upper action level which if exceeded will trigger corrective action requirements, as described in Part I.[C.]8.

d) By the date prescribed in Part I.[C].9. (f), the permittee must complete a second six-month monitoring program using the procedures specified in Part I.[C.]7. (b) and must establish revised action levels based on the results of that program. The initial action levels shall remain in effect until replaced by revised action levels.

e) Action levels developed under this paragraph must be revised using six months of monitoring data after any change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, soap, or turpentine from the immediate process areas.

8) Monitoring, corrective action, and reporting requirements

(a) The permittee must conduct daily monitoring of the influent to the wastewater treatment system in accordance with the procedures described in Part I.[C.]7. (b) for the purpose of detecting leaks and spills, tracking the effectiveness of the BMPs, and detecting trends in spent pulping liquor losses.

(b) Whenever monitoring results exceed the lower action level for the period of time specified in the BMP Plan, the permittee must conduct an investigation to determine the cause of such exceedance. Whenever monitoring results

exceed the upper action level for the period of time specified in the BMP Plan, the permittee must complete corrective action to bring the wastewater treatment system influent mass loading below the lower action level as soon as practicable.

(c) Although exceedances of the action levels will not constitute permit violations, failure to take the actions required by Part I.[**C**.]8. (b) will be a permit violation.

(d) The permittee must report to the Department annually by [permit writer insert date] the results of the daily monitoring conducted pursuant to Part I.[**C.**]8. (a). Such reports must include a summary of the monitoring results, the number and dates of exceedances of the applicable action levels, and brief descriptions of any corrective actions taken to respond to such exceedances.

4. Shipyards and Vessel Repair Facilities

a. Permitting Strategy

Most shipyards have the potential to generate various types of wastewater as well as precipitation runoff potentially contaminated by industrial activities. Wastewaters that could be observed at these locations include, but are not limited to: treated sanitary wastewaters, contact/non-contact cooling water, hull preparation and other process wastewaters, water used for testing ship's equipment and structural integrity, water treatment plant discharges, contaminated and uncontaminated bilge and ballast waste(s) and wastewaters. A shipyard also may have an activity addressed by a promulgated Federal Effluent Guideline, such as a metal finishing operation or centralized wastewater treatment. Most of the above discharges are handled as they would be in any VPDES permit.

Discharges that are unique to shipyards are mostly those that involve contamination of storm or surface waters from shipyard activities. Permitting efforts addressing these shipyard activities have evolved from implementation of water pollution control plans (WPCP) to the use of discrete best management practices (BMPs) initially promoted by EPA in their Development Document for Proposed Effluent Limitations Guidelines and Standards for the Shipbuilding and Repair Point Source Categories (1979) and further developed specifically for VPDES permits by DEQ in Best Management Practices Manual for the Shipbuilding and Repair Industry. These shipyard specific BMPs have been modified to some degree based on regional experience with the industry. These BMPs, as listed below, should be incorporated into individual VPDES permits issued to shipyards, and should be supported by periodic effluent monitoring to insure control of the release of pollutants to the environment.

The permit writer should closely review the application and perform as many site inspections as may be required to adequately determine the scope of the permittee's operations, and effluent monitoring and other permitting requirements that may be necessary.

In general, there are three discrete sources of wastewater.

(1) Process wastewaters associated with hull preparation activities

These wastewaters are generated once a vessel is hauled from the water to remove gross fouling, slimes, mud and salts that remain on the hull. Additional wastewaters are generated during later hull-preparation activities to re-profile existing coatings, and to achieve the partial or complete removal of coatings prior to inspection, repair and/or re-coating the vessel with anti-corrosives and/or anti-foulants. For the purpose of this section, process wastewater is defined as *any water used on a vessel's hull for any purpose, including, but not limited to the activities of removing marine salts, marine growth, sediments and paint or other hull cleaning activities using water such as preparing hull areas for inspection or work (e.g., cutting, welding, grinding).*

(2) Potentially contaminated stormwater runoff associated with an industrial activity

Industrial activities conducted at shipyards and other vessel repair and maintenance facilities are addressed by one or more SIC codes, including 4499, 3731, and/or 3732. As most shipyard and vessel repair activities are performed in the open (shore-side areas, marine and Crandall railways, floating drydocks, graving docks, etc.) and since metals, solvents and conventional pollutants are

typically present throughout the shipyard environment, some level of stormwater monitoring should be considered. Based on information presented in the application and/or derived elsewhere, the monitoring of representative storm water discharges should be required as appropriate.

(3) Treated tributyltin (TBT) wastewater discharges

This wastewater has been defined as:

- Process wastewater generated during repair and maintenance of surfaces coated with TBT anti-foulants;
- Precipitation (rainfall/snowmelt) that commingles with process wastewaters;
- Sonar dome water containing TBT; or
- Any other waters that may contain a detectable TBT residue.

The Department has developed a permitting strategy specific to the issue of TBT and its presence at shipyards as a result of their process activities. This permitting approach is described below.

For any of the above discharges, include water quality-based limitations in Part I.A of the permit as needed to maintain water quality standards, based on information provided in the permit application and from other sources. Storm event monitoring is documented on the DMR. A summary of the parameters for Part I.A for storm event monitoring is discussed below. Shipyard Best Management Practices (BMPs) are included in Part I B. Other Requirements or Special Conditions. Include Part I C. Stormwater Management in the permit (refer to Storm Water guidance earlier in this section).

b. Part I.A. Storm Event and Effluent Monitoring

Upon review of the application and following a site inspection, the permit writer should determine how much point source monitoring is appropriate.

> Although not every vessel repair structure (conventional and Crandall marine railways, floating and graving drydocks, shore-side sites in proximity to travel lifts and other similar devices) has a discrete point from which samples of contaminated storm water and process wastewater can be routinely obtained, all are considered to be point sources of pollutants to State waters and Part I.A. effluent monitoring is required.

The following is a list of parameters recommended for monitoring along with a rationale. Monitoring requirements for these parameters should be included in Part I.A. for contaminated stormwater runoff, for other contaminated non-process wastewater, or if appropriate, for process wastewater.

Exhibit IN-3-3 Recommended List of Sampling Parameters

Parameter	Rationale
Flow	To determine volume and duration
pH	State Water Quality Standards (BPJ)
TSS	To determine effectiveness of BMPs (BPJ)
TPH	Petroleum hydrocarbons can be found throughout shipyards (BPJ)

Dissolved Copper	Active biocide in majority of anti-foulant coatings, present in metal alloys, piping, brake linings, off-site run-on, etc. (BPJ)
Dissolved Zinc	Active component in anti-corrosive coatings, sacrificial anodes, alloy component of metal alloys, etc. (BPJ)
Tributyltin	Potent booster biocide in anti-foulant coatings, water treatment equipment, etc. (BPJ)
Any water quality standards-based monitoring determined appropriate from application or other data	Monitoring of expected pollutants may be necessary in a permit issued to a shipyard for the first time, or when extensive operational changes occur. (BPJ)
Biological Toxicity Testing	Process wastewaters have the potential for biological toxicity

The frequency of monitoring shall be based on a BPJ determination considering the information presented in the application, the frequency of wastewater generating activities, documented volumes of wastewater generated, level of BMP imposition, in-stream water quality concerns, and other supporting information.

Part I.A. effluent monitoring of storm water shall also conform to the VPDES permitting requirements defined in the industrial storm water section (Section IN.G).

c. Best Management Practices (BMPs) for Shipyards

Best Management Practices (BMPs) are used in permits to require the permittee to control or abate pollution by means other than typical wastewater treatment. BMPs can be used in lieu of effluent limits when effluent limits alone are not sufficient to achieve the intent of the Law or when effluent limits are not feasible.

The Shipyard BMPs have selections to be made based on whether the facility has floating drydocks, graving docks and/or marine railways. Select the appropriate language for the facility being permitted:

The permittee shall comply with the following:

1) The permittee shall provide adequate disposal services for all sanitary wastes generated by vessels moored or docked at the permitted facility to remove and dispose of all sewage from the vessels by discharge into the permitted facility's sanitary waste system or other appropriate collection means, in compliance with the Virginia Department of Health Regulations.

2) Vessels which have been fitted to collect gray water, either with sewage or separately, shall not discharge the gray water into surface waters unless specifically addressed as a permitted discharge in Part I.A. effluent limitations.

3) The yard, affected piers and shoreside support areas shall be cleaned on a regular basis to minimize the possibility that runoff will carry spent abrasives, paints, solvents, cleaners, anti-corrosive compounds, paint chips, scrap metal, trash, garbage, petroleum products or other debris into the receiving water. Items such as welding rods, wood, plastic, miscellaneous trash, paper, glass, packaging, industrial scrap, insulation and scrap metal must be routinely removed from the general yard area for reuse or disposal. Cleanup of areas contributing runoff shall consist of mechanical or manual methods to sweep up

and collect the debris.

Mechanical cleanup may be accomplished by mechanical sweepers, front end loaders, vacuum cleaners or other innovative equipment. Manual methods include the use of shovels and brooms.

4) Drydock decks shall be cleaned before flooding or launching, respectively, to prevent the discharge of pollutants to the waterway. The drydock shall also be cleaned on a regular basis while a vessel is in the drydock so as to prevent rain from washing material into receiving waters. Drydock collection and treatment of storm water and/or wastewater may be effective in lieu of frequent, extensive and labor intensive cleanup requirements.

OR

Marine railway carriages shall be cleaned before lowering and launching to prevent the discharge of pollutants to the waterway. They shall also be cleaned on a regular basis while a ship is on the railway carriage so as to prevent rain from washing material into receiving waters.

OR

Drydock decks and marine railway carriages shall be cleaned before flooding, lowering or launching, respectively, to prevent the discharge of pollutants to the waterway. They shall also be cleaned on a regular basis while a vessel is in the drydock on upon the railway carriage so as to prevent rain from washing material into receiving waters. Drydock collection and treatment of storm water and/or wastewater may be effective in lieu of frequent, extensive and labor intensive cleanup requirements.

[Select the appropriate one, delete the other two]

5) Acceptable methods of control shall be utilized during abrasive blasting and spray painting, with the intent of preventing blast dust and overspray from falling into the receiving water or any storm sewer system.

   a) For drydocks, these include the following: downspraying of blast materials and paint; barriers or shrouds beneath the hull; barriers or shrouds between the hull and the wing walls of the drydock; barriers or shrouds hung from the flying bridge to the drydock, from the bow and stern of the vessel, or from temporary structures erected for that purpose.

   b) For marine railways, these include the following: downspraying of blast materials and paint; barriers or shrouds beneath the hull; barriers or shrouds between the hull and temporary/ permanent support structures, from the flying bridge to temporary/permanent support structures, or from the bow and stern of the vessel to temporary support structures erected for that purpose.

[If only drydocks, combine with first paragraph (ie. "...receiving water. For drydocks, these include...") and make last paragraph part of it also (ie. One big paragraph). If only marine railways, combine with first paragraph and last paragraph as noted above. If both, use as is.

Use the following paragraph for all.

The bottom edge of free hanging barriers shall be weighted to hold them in place during a light breeze. When abrasive blasting vessel superstructures,

openings and open areas between decks shall be covered (including but not limited to scuppers, railings, freeing ports, ladders, and doorways) if they allow discharge to State waters.

6) Fixed or floating platforms shall be used as work surfaces when working at the water surface. These platforms shall be used to provide a surface to catch spent abrasive, slag, paint, trash and other debris/pollutants, and shall be cleaned at the end of each work shift.

7) Dust and overspray from abrasive blasting and painting in yard facilities shall be controlled to minimize the spreading of wind blown materials. Frequent cleanup of these areas shall be practiced to prevent abrasive blasting waste from being washed into storm sewers or the adjacent waterway.

8) Pressure washing used for the purpose of vessel maintenance or removing marine growth, marine salts and sediments for the hulls are defined process wastewaters subject to Part I.A. effluent monitoring. The resulting wastewater shall be contained in a manner to prevent or minimize the discharge of marine growth, sediments, paint particles and metal scale to the waterway.

9) When water blasting, hydro-blasting, or water-cone blasting is used to remove paint from surfaces or reprofile properly adhering coatings, the resulting process wastewater and debris shall be collected in a sump or other suitable device. This mixture then will be either delivered to appropriate containers for removal and disposal or subjected to treatment to concentrate the solids for proper disposal and prepare the water for reuse or discharge through an authorized outfall subject to Part I.A. effluent monitoring, as may be appropriate.

10) When in drydock or upon a railway, all shipboard cooling water and process water shall be directed away from contact with spent abrasive, paint and other debris. Contact of spent abrasive and paint with water will be prevented by proper segregation and control of wastewater streams, unless using suitable wastewater collection or treatment systems.

11) Where possible, water leakage from graving dock gates (caissons) shall be directed away from contact with spent abrasives, paint and other debris.

[Use condition 11 only when there are graving drydocks. If deleted, adjust numbering accordingly]

12) The sediment traps in the stormwater drainage systems for [floating drydocks, graving drydocks, areas around marine railways] and other industrial areas where solid pollutants such as blast grit, paint and welding slag and spent rods can accumulate shall be inspected on a monthly basis and cleaned as necessary to ensure the interception and retention of solids entering the drainage system. Inspection logs and cleaning records must be maintained.

13) During the drydocked period, oil, grease or fuel spills shall be prevented from reaching State waters. Cleanup shall be carried out promptly after an oil, grease or fuel spill is detected. Oil containment booms shall be conveniently stored so as to be immediately deployable in the event of a spill.

14) Drip pans or other protective measures shall be required for all oil or oily waste transfer operations to catch incidental spillage and drips from hose nozzles, hose racks, drums or barrels.

15) Oil contaminated materials shall be removed from the [drydock, marine railway

area] as soon as possible, and in all cases prior to submersion of the [drydock, railway carriage].

16) The permittee shall prepare and maintain current all plans and contingency documents required by State and Federal Laws and regulations addressing oil storage facilities and or petroleum product spills. These plans shall be retained at the facility for immediate implementation in the event a petroleum spill occurs. Emulsifiers and dispersants are not suitable cleanup agents to facilitate cleanup and/or remediation of petroleum product spills into State waters. The requirements and cleanup referenced above shall also apply to any hazardous substances which may be stored at, and/or transshipped through this facility.

17) Solid chemicals, chemical solutions, paints, oils, solvents, acids, caustic solutions and waste materials, including used batteries, shall be stored in a manner which will prevent the entry of these materials into waters of the State, including ground water. Materials should be plainly labeled for easy identification. Storage shall be in a manner that will prevent entry into State waters by overfilling, tipping, rupture, or other accidents within the storage area.

18) All metal finishing chemical solution, caustic wash, and rinsewater tanks shall be stored in such a manner so as to prevent introduction of spills into State waters and plainly labeled for easy identification. Any intercepted chemical spill shall be recycled back to the appropriate chemical solution tank or disposed of. The spilled material must be handled, recycled or disposed of in such manner as to prevent its discharge into State waters.

19) Drip pans or other protective devices shall be required for all paint mixing and solvent transfer operations, unless the mixing operation is carried out in controlled areas away from storm drains, surface waters, shorelines and piers. Drip pans, drop cloths or tarpaulins shall be used whenever paints and solvents are mixed. Sorbents must be on hand to soak up liquid spills. Paints and solvents shall not be mixed in areas where spillage would have direct access to State waters unless containment measures are employed.

20) Paint and solvent spills shall be prevented from reaching storm drains or deck drains and subsequent discharge into the water and shall be cleaned up promptly.

21) The amount of paint stored [on the drydock, in the graving drydock, within the marine railway area] and/or on a lighter floor shall be kept to a minimum.

22) Trash receptacles shall be provided on each pier and on board each vessel being repaired. These receptacles shall be emptied as necessary to prevent trash from entering State waters.

23) Leaking connections, valves, pipes, hoses and soil chutes carrying wastewater shall be replaced or repaired immediately. Soil chute and hose connections to vessels and to receiving lines or containers shall be tightly connected and leak free.

24) Any water testing shall be conducted in a manner to preclude spent abrasives, paint residues, debris and other pollutants from areas of the [drydocks, marine railways] from entering the adjacent waterway.

25) Floatable and low density waste such as wood and plastic, as well as miscellaneous trash such as paper, insulation, and packaging, etc., shall be

removed [from the floating drydock floor prior to flooding or sinking, from the graving drydock floor prior to flooding, from the marine railway carriage and ramp before launching].

26) The permittee shall provide adequate disposal services for all oil contaminated bilge and ballast water generated from vessels moored or docked at the permitted facility. Bilge water which has been mixed with industrial wastes shall not be discharged directly to State waters and must be collected, treated and disposed of through a permitted shoreside industrial waste treatment facility, or as appropriate, handled as a hazardous waste as required by Virginia's Solid Waste Regulations.

27) All vessels that are hauled shall be beyond the normal high tidal zone. In the event of vessel overhang during abnormally high tides, all exterior abrasive/water blasting and coating work on the overhanging portion of the vessel shall be discontinued. Exterior work on vessels will not be in areas that extend beyond [the length and width of the drydock, the length and width of the marine railway], unless appropriate precautions are taken to successfully prevent discharge of pollutants into State waters.

28) Docking and launching time intervals shall not be considered as a rationale for not cleaning a [drydock or marine railway].

29) Innovative measures for collecting spent abrasives may be presented to the DEQ for evaluation.

30) Material (spent abrasives, paint chips, etc.) shall be cleaned up from the area in the vicinity of marine railways before the incoming tide.

[Use condition 30 only when there are marine railways. If deleted, adjust numbering accordingly]

31) For defined Vessels of the Armed Forces, Section 325 of the National Defense Authorization Act for Fiscal Year (FY) 1996 amended Section 312 of the Clean Water Act (CWA) by adding a section on Uniform National Discharge Standards (UNDS) for Vessels of the Armed Forces. Phase I of the UNDS rulemaking was completed in FY99, with the Environmental Protection Agency (EPA) and the Department of Defense jointly identifying 25 specific liquid discharges that require shipboard marine pollution control devices (MPCDs). Phase II of the UNDS is presently on-going and DoD and the USEPA plan to promulgate performance standards for seven UNDS discharges, including underwater ship husbandry, during the term of this permit.

[Use condition 31 where the permittee's client base includes or is restricted solely to defined Vessels of the Armed Forces. Use this condition in conjunction with conditions 32 or 33 as appropriate.]

[Use condition 32 where the permittee agrees to perform this activity only on vessels that are known to be coated with biocide-free foul-release anti-foulant coatings]

[Use condition 33 where the permittee usually performs this activity on vessels with unknown hull coatings or hull coatings that contain copper, zinc and/or other biocides]

32) For all vessels other than Vessels of the Armed Forces as defined by the UNDS, the in-water cleaning of a vessel's submerged hull (underwater ship husbandry,

scamping, etc.) coated with ablative anti-foulant (AF) and anti-corrosion (AC) paints is prohibited.

Vessels known to have biocide-free foul-release or other super-slick hull coatings may be cleaned while waterborne subject to the following conditions:

a) On vessels with soft, blistered or sloughing coating systems, only the vessel's running gear (propellers, shafting, etc.) can be cleaned while waterborne.

b) For rotating hull cleaning equipment, use long bristle soft brushes passed quickly and lightly over the coating's surface.

c) If performed without mechanical assistance, use only soft materials to clean the hull (carpet, sponge, etc.) and avoid hard tools such as chisels, scrapers as these could damage the underlying coating systems.

d) Zinc anodes may be replaced, but the scrap anodes shall be brought ashore for recycling or proper disposal.

OR

33) For all vessels other than Vessels of the Armed Forces, as defined by the UNDS, acceptable methods of operational controls shall be no less stringent than those currently developed and promulgated by the U.S. Navy or U.S. Coast Guard under the UNDS. At a minimum, these operational controls shall be utilized during any cleaning of a vessel's hull while waterborne at a ship repair and maintenance facility, with the intent of preventing or reducing to the maximum extent practicable contamination of receiving waters and underlying sediments.

[**Monthly**, **Quarterly**] reports of all individual in-water hull cleaning activities shall be filed with the BMP compliance reports. This information shall include the type and size of vessel, the amount of hull cleaned in square footage, the type of AF/AC paints involved, the number of divers and equipment used, and complete description of any BMPs used.

To verify that this industrial practice is not having an adverse environmental impact, the permittee shall prepare a marine sediment sampling plan for all areas along the facility's waterfront where this practice may be performed. The plan shall be comprehensive and performed no less than once-per-year during the term of the permit. Once developed, the marine sediment sampling plan shall be submitted to the Department for review and approval. The plan must be approved prior to conducting any activities in this regard.

Additional management practices that shall be followed include:

a) Whenever practicable, in-water vessel hull cleaning shall be performed with equipment specifically designed for this purpose and capable of collecting the resulting debris (slimes, soft/hard biological growth, paint, scale, debris) for treatment and approved discharge at the facility or elsewhere.

b) Activities performed for this purpose shall not cause a slick, sheen or discolored plumes indicative of hull paint removal. Should distinct plumes result from in-water hull cleaning activities, the cleaning shall cease immediately and an assessment performed to determine if the in-water activity can continue without disturbing the underlying hull coatings. If it is

determined that cleaning will continue to remove or otherwise disturb the hull coating, the in-water activities must cease.

c) The underwater cleaning, hydro-blasting, sanding or stripping of hull coatings formulated with any amount of organotin (tributyltin, TBTO, TBT, etc.) is prohibited.

d) Wait a minimum of 90-days after the application of a new hull coatings formulated with copper, zinc and/or other biocides before performing in-water cleaning.

e) On vessels with soft, blistered, sloughing, or any ablative coating systems, only the vessel's running gear (propellers, shafting, etc.) can be cleaned while waterborne.

f) Stainless steel brushes or pads can only be used on non-painted and/or metal surfaces.

g) For rotating hull cleaning equipment, use long bristle soft brushes passed quickly and lightly over the coating's surface.

h) If performed without mechanical assistance, use only soft materials to clean the hull (carpet, sponge, etc.) and avoid hard tools such as chisels, scrapers as these could damage the underlying coating systems.

i) Zinc anodes may be replaced, but the scrap anodes shall be brought ashore for recycling or proper disposal.

Reporting

The permittee shall submit, with the DMR's, a (pick one monthly/quarterly) (if quarterly, include reporting schedule with this part) report certifying compliance or noncompliance with all conditions of the preceding BMP's pertaining to [drydocks, marine railways,] piers, wetslips, and shore side work areas. The report shall include a weekly audit checklist for these areas and a narrative description of observations. The audit shall be conducted by personnel not routinely associated with the aforementioned activities. The reporting forms are provided as Attachments A to this permit.

ATTACHMENT A

SHIPYARD BMP COMPLIANCE REPORT

Facility Name:
Address:

VPDES Permit No.: VA00

Report Period: From __/__/___ To __/__/

OUTFALL NO. (check as appropriate)	**COMPLIANCE**	**NONCOMPLIANCE ***
001	_____	_____
002	_____	_____
002	_____	_____
004	_____	_____
005	_____	_____

*Comments on Noncompliance

_____

Name and Title of Principal Executive Officer or Authorized Agent

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. See 18 U.S.C. § 1001 and 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

_____

Signature of Principal Officer or Authorized Agent Date

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to discharge from outfall(s): 001 (TBT Wastewaters).

   Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS [a]			
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NL	NA	NA	NL	1/D-D	Estimate
pH (S.U.)	NA	NA	6.0	9.0	1/D-D	Grab
Total Suspended Solids(mg/l)[b]	30	NA	NA	60	1/D-D	Grab
Tributyltin (ug/l) [b] [c]	NA	NA	NA	0.72	1/D-D	3G/24HR
Dissolved Copper (ug/l) [b]	NA	NA	NA	NL	1/3 Months	Grab
Dissolved Zinc (ug/l) [b]	NA	NA	NA	NL	1/3 Months	Grab
Tributyltin (grams/yr) [c]	NA	NA	NA	5.0	1/Year	Calculated

NA = Not Applicable. NL = No limitation, however, reporting is required.

1/D-D = Once per discharge-day, once each day or partial day that a discharge occurs.
1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31); 2nd quarter (April 1 - June 30); 3rd quarter (July 1 - September 30); 4th quarter (October 1 - December 31).
1/Year = Between January 1 and December 31.
3G/24HC = For tributyltin, a minimum of three separate grab samples of wastewater treatment plant effluent representative of the discharge shall be collected within one 24-hour period, and combined for final analysis and reporting.

[a] See Part **I.X.X.** for effluent sampling procedures.
[b] See Parts **I.X.X.** and **I.X.X.** for quantification levels and reporting requirements, respectively.
[c] To be sampled each day when tributyltin wastewaters generated. See special condition I.E. for additional information on tributyltin reporting.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

d. Tributyltin (TBT) - Special Conditions *(use when permit contains TBT limit)*:

As the State has a water quality standard for TBT, and this material can be found on vessels visiting the State for repair and/or maintenance, effluent limitations and other special permitting conditions may be necessary.

1) TBT Limitations and Special Conditions

Through cooperative effort with the regulated and environmental community DEQ has developed a multi-faceted strategy to address discharges of TBT into State waters. This strategy includes the imposition of numeric limitations on both mass (annual limit derived from previous limit) and concentration (based on the State's acute WQS), as well as defining what constitutes a TBT wastewater, a minimum level of wastewater treatment and other permit special requirements.

a) TBT Limitations

The Part I.A. page proposed for point source discharges of treated TBT wastewater from shipyards is provided below. As TBT's toxicity has been well established, at this time additional testing in this regard is not recommended based on other requirements of this section.

Special Condition Language

Tributyltin Exclusion (*Use where permittee agrees not to handle TBT and permit contains no TBT limit, to appear as a separate permit condition)*

The removal and/or application (hereafter referred to as use) of hull coatings which contain the biocide tributyltin are prohibited at this permitted facility. Should the permittee consider using hull coatings and/or paints which contain this toxin, this permit must be modified or, alternatively, revoked and reissued to incorporate a limit which addresses the State's water quality standard for tributyltin prior to its use.

TBT Related Special Conditions - (*To be used whenever TBT limitations are imposed, paragraph identifiers provided for example only*)

1. TBT Notification Requirements, Definitions, and Analysis

a. Notification of TBT Use

Each time paints and/or other hull coating materials which contain TBT are either applied and/or removed (hereafter referred to as "used"), the permittee shall notify the XXX Regional Office prior to their use. This notification shall be in writing and contain the following information, as a minimum:

(1) estimated quantity to be removed (square footage) and/or applied (gallons); and

(2) anticipated duration of use, estimated quantity of TBT wastewater to be generated and measures to be taken by the permittee (BMPS, collection and treatment, etc.) to minimize release of this toxic pollutant into the receiving stream.

b. TBT Wastewater.

For the purposes of this permit, TBT wastewater shall mean the following:

(1) process wastewater generated during repair and maintenance of surfaces coated with TBT anti-foulants, as defined in Part I.A.;

(2) precipitation (rainfall/snowmelt) that commingles with process wastewater defined in (1) above;

(3) sonar dome water containing TBT; or

(4) any other waters that may contain a detectable TBT residue.

c. TBT Analysis

The analytical method for TBT shall be either NBSR 85-3295 or DEQ approved method (see A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, November 1996). Upon approval by the Environmental Protection Agency, alternative analytical methods for TBT may be incorporated into this permit by reference, and used for testing required by this permit.

2. General TBT Requirements

a. Within the constraints imposed by State and Federal funding, the permittee shall actively and in good faith pursue, investigate and report modifications to system components, supplemental chemicals or feed rates, operation methods and/or other processes involving the current technology that have a potential to increase treatment efficiency or effectiveness. In addition, the permittee shall, within constraints imposed by State and Federal funding, actively and in good faith research and investigate alternative technology options for TBT wastewater treatment that have the potential to consistently and economically treat TBT wastewater to meet a concentration of 0.050 micrograms per liter (µg/l).

Such research and investigations may include, but not be limited to, literature or internet searches, equipment supplier inquiries, wastewater sample testing by equipment suppliers and laboratories, networking with trade associations members, research by universities, laboratories or commercial entities, utilization of co-op students or interns and other similar related activities.

b. Should a practical and economical alternative treatment technology and/or wastewater management practice be developed capable of consistently achieving the 0.050 µg/l effluent goal, the permittee shall take prompt action to utilize that alternative treatment technology in lieu of the current treatment

3. TBT Wastewater Treatment and Quantification

a. The permittee shall demonstrate good faith efforts to capture all wastewater associated with TBT operations at their facilities and to achieve the 0.050 µg/l effluent goal for wastewater discharged from TBT operations. In no case shall the annual cumulative mass of TBT discharged to State waters, as a result of TBT wastewater treatment activities, exceed 5.0 grams per year. Only TBT at a concentration at or above the recognized Quantification Level (QL) of 0.030 µg/l in the wastewater discharged from TBT operations shall be included in determining compliance with this mass limitation.

b. The permittee shall treat all TBT wastewater with a treatment system no less effective than the best available and economical technology and practices. For the purpose of this permit, best available technology and practices means the processing of collected TBT wastewater through a dissolved air floatation treatment plant and final filtration/adsorption using activated carbon.

4. TBT Compliance Reporting

a. The permittee shall collect and report data on TBT effluent levels and treatment system effectiveness for each vessel from which TBT wastewater is discharged to State waters**.** These data will include, at a minimum, influent TBT concentrations, effluent TBT concentrations, calculation of the TBT removal efficiency, quantities of wastewater collected, treated and discharged, the calculated mass of TBT discharged for each vessel repair or maintenance job, and the annual cumulative mass of TBT discharged.

b. All reports required by this permit shall be submitted to the DEQ's XXXX Regional Office by not later than March 1 and September 1, of each year. The March 1 report shall include data obtained between July 1 and December 31. The September 1 report shall include data obtained between January 1 and June 30.

Within thirty days of receipt of the reports identified in the previous condition above, the DEQ, the permittee and other signatories to the Letter of Agreement may meet to discuss the contents of the reports and other issues relative to TBT.

5. Water Treatment Plants

a. Permitting Strategy

These discharges may qualify for coverage under the potable water general permit. Permit writers should evaluate the operation to determine whether or not the general permit is appropriate. The limits presented in this section for Water Treatment Plants must be effective immediately upon permit issuance/ reissuance.

b. Form 2C Minimum Testing Requirements

The applicant must test for and report all parameters in Form 2C unless a written waiver request has been submitted and granted. The applicant may request and be granted a waiver for all except the following parameters:

(1) Table A - TSS, Flow, and pH

(2) Table B and C - Facilities utilizing Alum or Aluminum Sulfate must provide test results for Chlorine, Aluminum and any other parameters "believed present"

For facilities utilizing manganese greensand filters the applicant must provide results for the following: Manganese, Iron, Color, and any other parameters "believed present"

Facilities using reverse osmosis to treat well water must provide test results for radioactivity and any other parameters "believed present".

Must report any parameters "believed present". Without data showing conclusively that these parameters are absent, the applicant should test for:

Cadmium, Chromium, Copper, Lead, Mercury, and Zinc. **The RO may request that application test data for metals also be reported as dissolved.**

Additionally, for facilities using reverse osmosis, the RO should request TDS testing on the application.

c. Suggested Effluent Limitations & Basis

(1) Facilities other than reverse osmosis or nanofiltration plants

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Month	Estimate
Total Suspended Solids	BPJ	30 mg/L	NA	60 mg/L	1/Month	Composite[a]
Total Residual Chlorine	1	0.011 mg/L[b]	NA	0.011 mg/L [b]	1/Month	Grab
pH (S.U.)	1	NA	6.0 [c]	9.0 [c]	1/Month	Grab

Technology-based Limits: BPJ
Water Quality-based Limits:1. Water Quality Standards
NL = No Limitation, monitoring required
NA = Not Applicable
Reported estimated flow may be based on the technical evaluation of the sources contributing to the discharge.

[a] For continuous discharges, five grab samples collected at hourly intervals. For batch discharges, five grab samples taken at evenly placed intervals for the duration of the discharge, or until a minimum of five grab samples have been collected. For batch discharges, the first grab shall occur within 15 minutes of commencement of the discharge.

Composite sample procedures for batch discharges unable to meet the requirements in this table may be approved by DEQ on a case-by-case basis.
[b] Total residual chlorine limit shall only be applicable if chlorine is present in the process wastewater. Include the limits listed above contained in 9VAC25-860-70 or more stringent limits based on the reasonable potential analysis which will maintain Water Quality Standards. If the discharge is short duration, apply acute TRC/CPO limits only.
[c] Where the Water Quality Standards (9VAC25-260) establish alternate standards for pH in waters receiving the discharge, those standards shall be the minimum and maximum effluent limitations.

(2) Reverse osmosis and nanofiltration plants

Reverse osmosis plants do not require limitations or monitoring requirements for TSS. RO plants treating water sources other than estuaries or seaside intakes should be evaluated for water-quality based limits for Total Dissolved Solids. Water Quality Standards apply to the discharge to PWS. If WQ-based limits are not necessary for TDS, a TDS monitoring requirement should be included as follows:

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Month	Estimate
Total Suspended Solids[b]	BPJ	30 mg/L	NA	60 mg/L	1/Month	Composite[a]
Total Dissolved Solids	BPJ	NA	NA	NL	1/Month	Composite[a]
Dissolved Oxygen	1	NA	4.0[c]	NA	1/Month	Grab
Total Residual Chlorine	1	0.011 mg/L[4]	NA	0.011 mg/L[d]	1/Month	Grab
pH (S.U.)	1	NA	6.0[e]	9.0[e]	1/Month	Grab

Technology-based Limits: BPJ
Water Quality-based Limits: 1. Water Quality Standards
NL = No Limitation, monitoring required
NA = Not Applicable
Reported estimated flow may be based on the technical evaluation of the sources contributing to the discharge.

[a] For continuous discharges, five grab samples collected at hourly intervals. For batch discharges, five grab samples taken at evenly placed intervals for the duration of the discharge, or until a minimum of five grab samples have been collected. For batch discharges, the first grab shall occur within 15 minutes of commencement of the discharge. Composite sample procedures for batch discharges unable to meet the requirements in this table may be approved by DEQ on a case-by-case basis. .
[b] Applicable when conventional filtration treatment discharge is part of drinking water treatment and present in the process wastewater.
[C] Where the Water Quality Standards (9VAC25-260) establish alternate standards for dissolved oxygen in waters receiving the discharge, those standards shall be the minimum effluent limitations.
[d] Total residual chlorine limit shall only be applicable if chlorine is present in the process wastewater. Include the limits listed above contained in 9VAC25-860-70 or more stringent limits based on the reasonable potential analysis which will maintain Water Quality Standards. If the discharge is short duration, apply acute TRC/CPO limits only.
[e] Where the Water Quality Standards (9VAC25-260) establish alternate standards for pH in waters receiving the discharge, those standards shall be the minimum and maximum effluent limitations.

d. Special Conditions

The following special conditions should be included in permits for water treatment plants.

- Chlorine Monitoring and Compliance (*if applicable, See Section IN Part E*)
- Notification Levels
- Operation and Maintenance Manual Requirement (*modify to specifically mention that the O&M needs to include sludge disposal, filter medium disposal, etc.*)
- Quantification Levels (*Include for water quality-based parameters, if applicable*).
- Ground Water Monitoring (*if necessary*)
- Monitoring Frequency Reduction
- WET Testing - Owners with a daily maximum flow rate greater than or equal to 50,000 gallons per day that have not conducted whole effluent toxicity (WET) testing to demonstrate there is no reasonable potential for toxicity from their discharge shall conduct WET testing. Owners with changes in treatment technology or chemical usage that change the characteristics of the discharge and with a daily maximum flow rate greater than or equal to 50,000 gallons per day shall conduct WET testing as described in subdivisions a through e of this subsection.

The WET testing shall consist of a minimum of four sets (set = vertebrate and invertebrate) of acute or chronic tests that reflect the current characteristics of the treatment plant effluent using the following tests and organisms:

For an intermittent or batch discharger	**48 hour static acute toxicity tests**
Freshwater organisms	Pimephales promelas or Oncorhynchus mykiss (for cold water) (vertebrates) Ceriodaphnia dubia (invertebrate)
Saltwater organisms	Cyprinodon variegates (vertebrate) Americamysis bahia (invertebrate)
For continuous discharger	
Freshwater	7-Day Chronic Static Renewal Larval Survival and Growth Test with Pimephales promelas (vertebrate)
	3-Brood Chronic Static Renewal Survival and Reproduction Test with Ceriodaphnia dubia (invertebrate)
Saltwater	7-Day Chronic Static Renewal Larval Survival and Growth Test with Cyprinodon variegatus (vertebrate)
	7-Day Chronic Static Renewal Survival, Growth and Fecundity Test with Americamysis bahia (invertebrate)

> Freshwater organisms are used where the salinity of the receiving water is less than 1.0‰ (parts per thousand). Where the salinity of the receiving water is greater than or equal to 1.0‰ but less than 5.0‰ either freshwater or saltwater organisms may be used. Saltwater organisms are used where the salinity is greater than or equal to 5.0‰.

There shall be a minimum of 30 days between sets of tests, and test procedures shall follow Title 40 of the Code of Federal Regulations, Part 136 (40 CFR Part 136), which references the EPA guidance manuals for WET testing.

This testing shall be completed, at a minimum, during the first year of coverage under the permit or within one year of commencing discharge. The department will evaluate all representative data statistically to see if there is reasonable potential for toxicity in the facility discharge. If the department determines that no reasonable potential for toxicity exists in the facility discharge, no further WET testing is required unless changes in treatment technology or chemical usage are made at the plant that change the characteristics of the discharge. If there have been changes to the effluent characteristics, then four sets of WET testing, either acute or chronic tests as applicable, must be performed to recharacterize the discharge.

If such reasonable potential exists and cannot be eliminated, the owner will be notified that he must apply for an individual VPDES permit at next reissuance and a WET limit will be included in that individual permit. If the potential cause of the toxicity is eliminated during the five year term of this general permit, the owner may conduct additional WET testing to demonstrate that there is no longer reasonable potential for toxicity and an individual permit will not be required at the next reissuance.

Any WET testing data will be submitted with the next required discharge monitoring report.

6. Wood Preserving Operations

a. Permitting Strategy

The wood preserving operation may be the source of toxic pollutants that are 1) discharged to surface waters via a point source, 2) potentially introduced to groundwater, or 3) both. Although the facility may have a covered storage area for raw and processed wood, previous and current operational activities, access, and egress may still impact on surface water. The broadest possible definition of point source should be used. Many of these operations will qualify for coverage under the industrial stormwater general permit. Permit writers should evaluate the operation to determine whether or not the general permit is appropriate. Those wood preservers that discharge only stormwater and do not have the potential for groundwater contamination due to current or past practices, may be covered under the general permit. For operations that employ creosote or pentachlorophenol preservation or that have an existing individual permit with limits not included in the general permit, an individual permit is appropriate. A VPA permit should only be considered if the storage woodyard is covered and bermed to divert runoff around the site and there is no defined point source discharge from the site.

(1) Technology Based Limits

Under the Effluent Guidelines established for timber products, 40 CFR Part 429, for the Water-Borne or Nonpressure and Boulton subcategories, discharges of process wastewater from wood preserving operations are prohibited. Other activities at the wood preserver operation such as log washing and wet storage, may be subject to other effluent limitations guidelines. Permit writers should carefully evaluate the application and the site to determine if these mandatory limitations are applicable.

(2) Water Quality-Based Limits

Toxic substances may be limited, providing suitable effluent data exists for evaluation. Stormwater or other intermittent discharges require only a review of acute wasteload allocations. Continuous discharges of nonprocess wastewaters will require an evaluation of acute and chronic wasteload allocations. Permit limits should be expressed only as daily maximum concentrations (no monthly average or mass limits). Refer to technical guidance for further development of toxics limits and monitoring requirements.

The above strategies do not apply to facilities using fire retardant chemicals/processers. In these cases, only stormwater discharges are permitted, and the BMP control strategy must include monitoring to show the effectiveness of the stormwater pollution prevention plan.

(3) Stormwater Management

Stormwater discharges from wood preserving operations are classified as dischargers of stormwater associated with industrial activity. Because of this designation, the individual VPDES permit must contain a Stormwater Management section. This will include effluent limitations and monitoring; analytical (benchmark) monitoring; stormwater management evaluation; general stormwater special conditions; and the sector A stormwater pollution prevention plan (SWPPP) requirements. Permit writers should refer to Section IN-2 for further guidance.

Additional parameters may be considered for stormwater monitoring based on the formulation of the preservatives used currently on the site or in the past. The Material Safety Data Sheet (MSDS) may provide information to determine the respective pollutants of concern. Facilities using fire retardant chemicals should also test for NH_3-N, TKN and PO_4^{-3} (as P).

(4) Groundwater Monitoring

The decision to require groundwater monitoring will be based on an evaluation of site history, type of treatment facilities used, method of wood preservation, existing or proposed housekeeping practices, proximity of treatment facilities to surface and groundwater, on-site soil type and texture, geologic and hydrogeologic features of the site, exposure of treated wood to rainfall, tracking of contaminants by vehicles, and other factors that may be pertinent. See GM18-2013 for more details. Acceptable design and operation techniques that may eliminate the need for a plan include a leachate detection sump or other means of detecting potential seepage or leakage of pollutants into ground water.

For proposed facilities or existing facilities without a groundwater monitoring program in place, the groundwater monitoring plan may be developed, and submitted to the Regional Office for approval through a permit special condition. At a minimum, the groundwater monitoring plan should include one well hydrologically upgradient from the operation and two wells hydrologically downgradient from the potential sources of contamination. Justification for monitoring well location will be the responsibility of the owner.

Due to the complex layout of some facilities, there may be cases where the groundwater monitoring has been conducted or addressed by other requirements set under the RCRA rules. The permittee may justify such, however the permitting process should not be delayed due to pending approval of other plans (such as closure or post closure plans) from the Waste Division. It should be noted that the groundwater monitoring plan required for the surface impoundment closure (under the RCRA rules) often does not serve the need of the groundwater protection measure for the storage woodyard.

Minimum sampling frequency should be semi-annual. Sampling method, testing parameters, and reporting requirements should be addressed in the draft permit on a case-by-case basis. Background samples should be required prior to start-up for proposed new facilities. Metals should be analyzed for dissolved form.

(5) Surface Water Monitoring

Under certain circumstances, surface water (in-stream) monitoring may be warranted for a VPDES permit. Such site-specific monitoring requirements should be placed under Part I B Other Requirements and Special Conditions.

(6) Requirements for Closure

Due to the potential for long-term environmental contamination, through the O & M Manual submittal, a facility closure plan should be provided by the owner of both existing and proposed facilities that are issued individual permits. The plan should address the entire facility closure, except those RCRA regulated units, with the following specifics:

(a) Temporary shutdown conditions - how process water or wastewater will be handled during this period, and

(b) Final shutdown - closure of operation areas including, but not limited to, disposition of contaminated soils and ground water, and disposal of all wastewater and process chemicals.

The Regional Office may require a detailed plan be submitted and approved prior to facility closure. This requirement can be carried out through a conditional approval of the O & M Manual. The owner will be responsible to coordinate with the Waste Division any closure actions which are regulated under the "Virginia Hazardous Waste Management Regulations".

b. Form 2F Minimum Testing Requirements

The applicant must test for and report all parameters in Form 2F unless a written waiver request has been submitted and granted. The applicant may request and be granted a waiver for all except the following parameters:

(1) Table A - Oil and Grease, pH, Chemical Oxygen Demand, Total Suspended Solids

(2) Part B - Refer to 40 CFR Part 429 - Timber Products Processing Point Source Category, to determine which pollutants are limited in effluent guidelines

(3) Part C -The principal pollutants of concern, based on the type of preservatives commonly used, are as follows:

Creosote Preservative Process

Acenaphthene	Acenaphthylene	Anthracene
Benzo(a)anthracene	Benzo(b)fluoranthene (or 3,4-Benzofluoranthene)	
Benzo(a)pyrene	Benzo(ghi)perylene	Benzo(k)fluoranthene
Chrysene	Dibenzo(a,h)anthracene	Fluoranthene
Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene
Phenanthrene	Pyrene	

Pentachlorophenol Preservative Process

4-Chloro-3-methylphenol (or p-Chloro-M-Cresol)	
2,4-Dichlorophenol	2-Chlorophenol
2,4-Dimethylphenol	2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol (or 4,6-Dinitro-O- Cresol)	
4-Nitrophenol	2-Nitrophenol
Pentachlorophenol	Phenol
2,4,6-Trichlorophenol	

c. Suggested Effluent Limitations & Basis

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Month	Estimate
COD	NA	NL	NA	NL	1/3 Months	Grab
Total Suspended Solids	NA	NA	NA	NL	1/3 Months	Grab
Oil & Grease	NA	NA	NA	NL	1/3 Months	Grab
Dissolved Chromium III[2]	1	*	NA	*	1/3 Months	Grab

Dissolved Chromium VI[2]	1	*	NA	*	1/3 Months	Grab
Dissolved Copper[2]	1	*	NA	*	1/3 Months	Grab
Dissolved Arsenic[2]	1	*	NA	*	1/3 Months	Grab
Hardness (mg/l as $CaCo_3$)	NA	NA	NL	NA*	1/Month	Grab
pH (s.u.)	1	NA	6.0[1]	9.0[1]	1/Month	Grab

Technology-based Limits: BPJ
Water Quality-based Limits:3. Water Quality Standards
NL = No Limitation, monitoring required
NA = Not Applicable

[1] Where the Water Quality Standards (9VAC25-260) establish alternate standards for pH in waters receiving the discharge, those standards shall be the minimum and maximum effluent limitations. Specify values for metals and pH which will maintain Water Quality Standards.
[2]Do not include metals monitoring for wood preserving facilities using only oil-based preservatives.

Note to permit writers: If water quality-based limits have been developed for an outfall, they are effective at all times and must be included here. Add additional water quality-based limits or monitoring requirements for pollutants of concern based on the activities at the facility.

d. Special Conditions

The following special conditions should be included in permits:

- Notification Levels
- Materials Handling/Storage
- Operation and Maintenance Manual Requirement. (*The manual should include sample collection, preservation and analysis techniques for ground water and effluent water, preventative maintenance plan, and facility closure plan)*
- Restrict operations such that treated lumber is retained on the drip pad until drippage has ceased before removing it to a storage area.
- Quantification Levels
- WET Testing
- Groundwater Monitoring Plan

Additional special conditions language:

Discharge of Process Wastewater

There shall be no discharge of process wastewater pollutants to State waters. The term "process wastewater" specifically excludes material storage yard runoff (either raw material or processed wood storage).

Fact Sheet Rationale: Process wastewater from wood preserving operations will contain additional toxic pollutants (prohibited or limited by the Clean Water Act). Process wastewater from wood preservers is regulated under 40 CFR PART 429.

Treated Wood Storage

Treated wood shall be held on the drip pad until drippage has ceased.

Fact Sheet Rationale: Groundwater and surface water contamination can be minimized by containing the chemicals that will initially drip from the lumber following treatment.

SECTION L

LETTERS

Table of Contents

A. Application Correspondence

Reissuance Reminder Letter *(Send Two Years Prior to Expiration for Majors. One Year for Minors)*

Regional DEQ Letterhead
Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

Re: VPDES Permit No. VA0000000 Reissuance, [Facility Name]

Dear :

This letter is to remind you that your VPDES permit will expire on **[date]**. If you wish to continue discharging, you must reapply for the permit. The VPDES Permit Regulation requires that we receive a complete application at least 180 days before the existing permit expires. We recommend you submit your application by ***[INSERT** date – 240 days prior to expiration**]***, to facilitate a complete application by the deadline ***[INSERT** date - 180 days prior to expiration.**]***

You may submit your application electronically through myDEQ Portal. **Submittal through myDEQ Portal is highly encouraged**. The steps to submit through myDEQ Portal are provided below:

1. Register with myDEQ Portal (if you are not currently registered to submit electronic Discharge Monitoring Report (eDMR).
2. Request and receive DEQ approval to access VPDES permits you own or operate.
    a. During this step, you will select from one of three permission levels. Please note the permission level of "Sign/Submit" is reserved for those persons who have signatory authority in accordance with 9VAC25-31-110.
    b. Check approval status by visiting your account in myDEQ Portal.
    c. Once access to your permit has been granted, you may go to the form and start entering the permit number for the permit you are applying for reissuance. Only those permits you are associated with will populate.
3. Complete the appropriate permit application forms and submit to DEQ for review.
    a. Click "Begin Form" and the system will populate from DEQ's database the current information that we have for your permit(s).
    b. Complete the remaining fields in the form. Do not leave any fields blank.
    c. Submittal of a permit application is required to be completed by those persons authorized to sign permit applications and reports for the permittee as stipulated in 9VAC25-31-110.

An instructional training video and how-to guides for registering for myDEQ Portal, requesting access to permits and how to submit Registration Statements can be found at: https://www.deq.virginia.gov/permits/water/surface-waters-vpdes/e-dmr-submissions .

Please complete the following forms that are applicable to your outfall(s): *[**INSERT** applicable forms]*

- EPA Form [X]
- EPA Form [X]
- VPDES Permit Application Addendum
- VPDES Public Notice Billing Information Form
- Water Quality Criteria Monitoring Form *(as needed)*

***(For industrial facilities (as applicable) and all municipal facilities)*: Given that the Water Quality Standards for ammonia are dependent on the pH and temperature of both the receiving stream and the effluent, pH and temperature data play a crucial role in establishing ammonia limitations. To facilitate this process, please provide a minimum of *one year's worth* of daily effluent temperature and pH data (in a spreadsheet) with your permit application. In the absence of such specific data, the DEQ will utilize five years of monthly effluent pH DMR data and a default temperature value of 28 ºC to derive conservative approximations.**

Please note that any sections of the application that are not applicable to your activity should be marked "N/A." Blanks in the application may result in the application being deemed incomplete.

Upon completing the application, return the original and an electronic copy (use PDF if signatures or handwriting is present) to the **[XXXX]** Regional Office at the above address.

There is no application fee for a regularly scheduled reissuance of an individual permit; that fee has been replaced by an annual permit maintenance fee which is to be paid by October 1 of each year**.** No permit will be reissued unless all maintenance fee payments are up to date.

*[**INSERT** when financial assurance applies for privately owned sewerage system to treat sewage generated by private permanent residences discharging more than 1,000 gallons per day and less than 40,000 gallons per day.]*

Upon reissuance of this permit, it is required to review the facility's closure plan and cost estimate concurrently with the application (with any needed updates based on inflation). This update must be sent to the DEQ Financial Assurance Office at Department of Environmental Quality Office of Financial Responsibility and Waste Programs, P.O. Box 1105 Richmond, VA 23218,

Please contact me at **[phone number]** or **[email]** if you have any questions.

Sincerely,

[Permit Writer]

Enclosures
[Include all applicable application forms, the VPDES Permit Application Addendum, Public Notice Billing Authorization Form, the Paperwork Reduction Act notice, the List of Common Application Errors, and the Pollution Prevention Flyer.]

(Note to permit writers: Permit application forms are available on DEQnet).

Application Transmittal Letter to VDH - ODW

Regional Letterhead

Date

VDH Regional Director
Virginia Department of Health
Office of Drinking Water
Regional Field Address

Transmitted electronically to [email address; see Section VII]

RE: VPDES Permit No. VA0000000, Facility Name, County;
[*choose one:* Issuance/Reissuance/Modification]

Dear :

Attached is a copy of the referenced VPDES permit application for your review and concurrence. Please submit a response to this office **within 14 days** with your comments or objections or a statement verifying that the Virginia Department of Health has no comments on the application.

Sincerely,

[Permit Writer]

Enclosure: Permit Application

Application Transmittal Letter to VDH - Division of Shellfish Sanitation

Regional Letterhead

Date

Division of Shellfish Sanitation
109 Governor Street, Rm. 614B
Richmond, VA 23219

Transmitted electronically to [email address; see Section VII]

RE: VPDES Permit No. VA0000000, Facility Name, County;
[*choose one:* Issuance/Reissuance/Modification]

Dear :

Attached is a copy of the referenced VPDES permit application for your review. Please submit a response to this office **within 14 days** with your comments or objections with regard to shellfish impacts and indicate if you would like to receive a copy of the final permit.

Sincerely,

[Permit Writer]

Enclosure: Permit Application

Commissioner of the Revenue Letter

Regional DEQ Letterhead

DATE

Commissioner of the Revenue
[Address] *(Or use email)*

[INSERT if appropriate] Submitted via email to:

Dear Commissioner:

Section 62.1-44.15:4.D. of the Code of Virginia requires DEQ to: a) notify landowners in the vicinity of this discharge point; and b) to request their names and addresses from the Commissioner of the Revenue or tax assessor from the local tax rolls. We are in receipt of the following permit application:

VPDES Permit No. VA00 Applicant:
Facility: Tax Map Parcel:

Please provide me with a list of the names and addresses of all property owners and holders of deeded easements on both sides of [**name of the stream**] to a distance one-half mile downstream of the discharge point identified on the enclosed map. **[For tidal waters:** Please provide me with a list of the names and addresses of all property owners one quarter mile upstream and downstream from the discharge point.] Also, in accordance with the recent change in requirements of the U.S. Postal Service, only the "911" street address (house number and street name) format is acceptable.

If you have any questions regarding this request, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure

(*Note to permit writers: If the receiving stream is the boundary between two localities, contact the Commissioners for both localities.)*

Application Receipt Letter to Localities and Riparian Landowners

Regional DEQ Letterhead

Date

[Name]
[Address]

Dear :

Your name was provided to DEQ by [the Commissioner of Revenue]. Section 62.1-44.15:4 of the Code of Virginia requires DEQ to notify localities and adjoining landowners when a permit application is received. This is to inform you that the Department of Environmental Quality has received an application for a Virginia Pollutant Discharge Elimination System (VPDES) permit from [**applicant's name**]. The applicant proposes to discharge treated wastewater from a [**type of facility**] located at [**facility address**].

The Department will review the application and may draft a permit for this discharge. If the Department drafts a permit a notice will appear in [**local newspaper**] announcing our intention to issue the permit and inviting public comment on its content. This public comment period will run for 30 days from the date the notice first appears in the newspaper. In the meantime, you are welcome to review the permit application at our office during normal business hours.

(If a LGOF was not received add the following note to the letter to localities) Please note that a Local Government Ordinance Form has not been received as required for new issuances.

Please contact me at **[phone]** or **[email]** if you have any questions about this notification.

Sincerely,

[Permit Writer]

Application Comment Letter to Owner

Regional DEQ Letterhead

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: Permit Application for VA00, [Facility Name]

Dear :

This is to advise you that your application for a VPDES Permit is considered incomplete. We cannot process your permit application until you provide the following information:

a. .....

b. .....

(For Reissuances) A complete application for reissuance is due at least 180 days before a permit expires. **In the event a VPDES permit expires as a result of failure to reapply in a timely manner, a facility may be considered as discharging without a valid VPDES permit**.

This letter is intended to provide context on what information the DEQ believes is needed to fully evaluate your permit application and is not a final determination or case decision under the Administrative Process Act. If you would like to discuss the information contained in this letter, please contact me at [staff phone number].

In the event that discussions with staff do not lead to a satisfactory resolution of the contents of this letter, you may elect to participate in DEQ's Process for Early Dispute Resolution (Agency Policy Statement No. 8-2005).

If you have any questions about this letter, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

cc: Compliance Auditor

(*Note: Permit writers may also use this letter to grant or deny any testing waivers requested by the applicant.)*

Application Complete Letter

Regional Office Letterhead

Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: VPDES No. *(if applicable)*, [Facility Name],

Dear :

Your application has been reviewed and appears to be complete. (**Insert language regarding granting testing waivers if applicable.**) Other reviews of the application will be required by state and federal agencies to ensure that public health and the environment will be protected. These reviews may require that you submit additional information.

The next steps involve assembling the information necessary to develop the permit limitations and then drafting the permit. I expect to have the draft permit prepared in the next two to three months. Once the draft permit is prepared and the appropriate reviews are performed, I will transmit the draft permit and supporting documentation to you for review.

If you have any questions about our procedures or the status of your draft permit, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Notice of Intent to Deny Application

Regional Letterhead

Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: Application for VPDES permit, [Facility Name]

Dear :

The Virginia Department of Environmental Quality intends to recommend denial of your request for a VPDES permit based on the information contained in your application. You may modify the application to comply with the conditions as stated below, or you may withdraw the application.

Requirements needed to obtain approval:

If you intend to modify the application, please notify this office. Processing will stop until we receive the requested modifications. If you agree to withdraw the application, please sign and date the attached form and return it to this office. If you take no action, the staff will process the application with the recommendation for denial.

Please contact me at **[phone]** or **[email]** if you have any comments or questions.

Sincerely,

[Permit Writer]

Revoke and Reissuance in Lieu of Modification

Regional Letterhead

Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: Request for Modification of VPDES Permit No. VA0000000, [Facility Name]

Dear :

The Virginia Department of Environmental Quality has received your request for permit modification. Rather than modifying and subsequently reissuing the permit, we request that you consider revocation and reissuance of your permit. By pursuing this course, you and the staff can avoid the time-consuming duplication of paperwork and the expense of a permit fee for an additional permit action and a second public notice. This permit action can incorporate the changes you proposed in your modification request and others which may be required by the Clean Water Act and State Water Control Law. In addition, the life of the permit will be extended for five more years.

In order to reissue your permit, it is first necessary to revoke the current permit. If you agree with the proposed revocation and reissuance and wish the prescribed hearing to be dispensed with, please sign and date the attached agreement form in the spaces provided and return it to this office.

Attached are VPDES Permit application forms and instructions. The fee for this permit action is [ ]. Please follow the instructions on the permit fee form concerning fee payment. Permit application processing cannot begin without payment of this fee*. (Note to permit writers: 9VAC25-20-40.B states "An applicant for a permit, permit authorization or certificate involving a permit that is to be revoked and reissued shall be considered an applicant for a new permit. The fee due shall be as specified under 9VAC25-20-110.")*

If you have any questions, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure

(*Note to permit writers: Send all enclosures that would be part of a permit reissuance package.*)

The following forms are available on DEQnet.

- **Local Government Ordinance Form**
- **Permit Revocation Agreement Form for Revocation and Reissuance**
- **Threatened and Endangered Species VPDES Coordination Form**

B. Draft Permit Correspondence

Draft Permit Transmittal to EPA ***(This letter is optional when draft permit package is submitted to EPA via PRMTS Portal)***

Dear [EPA Contact]:

In accordance with the Memorandum of Understanding regarding permit and enforcement programs between the State Water Control Board and the Regional Administrator, Region III, U.S. Environmental Protection Agency, documentation supporting **[issuance/reissuance/modification]** of the VPDES permit for the **[facility name]**, VPDES Permit **[VPDES permit no.]** is posted at **[FileShare link *or* is attached]**. The following documents **[are posted** *or* **attached]** for your review: application, draft permit, Fact Sheet, and Fact Sheet attachments.

(Insert explanatory language below where applicable)
This proposed permit **[issuance/reissuance/modification]** is for a **[major/minor]**, **[municipal/industrial]** facility in the **[name of river]** Basin located in **[name of county]**, Virginia. *[For TMDL facilities, explain the situation* e.g. "A Total Maximum Daily Load (TMDL) for copper was approved for a downstream segment in the [**named]** River Watershed by the U.S. EPA on **[date]**. The facility is identified in the copper TMDL for the **[named river]** Watershed and the permit includes a WLA and permit limit for **[parameter]**."

(and/or) "The facility was not given a waste load allocation in the TMDL as it was not permitted at the time the TMDL was drafted. However, the TMDL does allow an allocation for future growth. This allocation is large enough to satisfy a permitted **[parameter]** load for the proposed facility.
(and/or) A Total Maximum Daily Load (TMDL) for Aquatic Life-Total Nitrogen/Total Phosphorus/Total Suspended Solids (Chesapeake Bay TMDL) was approved for the Chesapeake Bay Watershed by the U.S. EPA on December 29, 2010. The facility is identified in the TMDL and has been assigned WLAs for Total Nitrogen, Total Phosphorus, and Total Suspended Solids in the TMDL.
(and/or) The facility contains a discharge belonging to one of the 21 industrial categories listed in Appendix A to part 122.
(and/or) <u>The facility contains [a Best Technology Available (BTA) 316(b) determination/a Professional Judgement (PJ) determination/is subject to the full provisions of the existing 316(b) facility rule].</u>

If EPA does not comment or object within 30 days of receipt of this notification, processing of the referenced permit will be deemed acceptable to the Regional Administrator.

Please let us know if you need additional information to complete your review.

Respectfully,

Permit Writer or WPM

(*Note to permit writers: Minor permits submitted for TMDL review should have the TMDL related parts of the permit and fact sheet clearly labeled, marked, or highlighted to facilitate EPA review.*

Minor permits with bacteria TMDLs do not need to go to EPA for review.)

Example: *This proposed permit reissuance is for a major, municipal facility in the Potomac River Basin located in Fairfax County, Virginia. There are three approved TMDLs downstream of this discharge.*
A Total Maximum Daily Load (TMDL) for Benthic Macroinvertebrates was approved for the Bull Run Watershed by the U.S. EPA on September 26, 2006. The facility is identified in the benthic TMDL for the Bull Run Watershed and the permit includes a permit limit for Total Suspended Solids. The WLA for TSS (97.42 tons/year) for this facility is based on a design flow of 64 MGD with a monthly average concentration of 1.0 mg/L.

A Total Maximum Daily Load (TMDL) for Aquatic Life-Total Nitrogen/Total Phosphorus/Total Suspended Solids (Chesapeake Bay TMDL) was approved for the Chesapeake Bay Watershed by the U.S. EPA on December 29, 2010. The facility is identified in the TMDL and has been assigned WLAs for Total Nitrogen, Total Phosphorus, and Total Suspended Solids in the TMDL.

There is also a Total Maximum Daily Load (TMDL) approved for Recreation - Bacteria for the Bull Run Watershed in the Potomac River Watershed. The TMDL was approved by EPA on November 15, 2006. The permit includes a permit limit for E. coli to demonstrate compliance with the Water Quality Standards for Bacteria. This TMDL was submitted for delisting in 2008.

If EPA does not comment or object within 30 days of receipt of this notification, processing of the referenced permit will be deemed acceptable to the Regional Administrator.

Draft Permit/PN Transmittal Letter to Owner when the PN Billing Authorization Form is Submitted with the Application

Regional Letterhead
Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: VPDES Permit No. VA00000, [Facility Name]

Dear :

The State Water Control Board is considering issuing/reissuing/modifying the referenced permit. Please review the enclosed public notice and draft permit package carefully. You have 14 days from receipt of this letter to comment and/or object to the draft permit provisions. During this period, you may also request a meeting to discuss the proposed permit conditions or may elect to withdraw the application and thereby discontinue permit processing.

Certain public notice procedures must be complied with before the actual permit can be approved. They are as follows:

1. The attached public notice must be published once a week for two consecutive weeks in a newspaper of general local circulation. We have your signed Public Notice Billing Authorization Form, which will allow the newspaper to bill you for the public notice.
2. A minimum of 30 days will be allowed for public response following the date of the first public notice. You may also submit comments during the 30-day public comment period. If no public response is received, or the public response can be satisfactorily answered, then the permit will be processed. However, if there is significant public response, then we may hold a public hearing. You will be advised if this occurs.

I plan to contact the newspaper the week of Month, Day, Year, to publish the public notice. **[For reissuance:** In order for you to continue to discharge under state and federal laws, a new permit must be issued by the expiration date of the current permit. The term of the current permit cannot be extended beyond its expiration date if the owner is the cause of the delay in permit reissuance.]

[**For proposed facilities:** If development of a proposed site will disturb a total of X **[insert 0.1 for Bay watershed or 1 for all other watersheds]** or more acres and will also result in a point source discharge of storm water from the site, applicants or permittees are also required to obtain coverage under the storm water general permit for construction activities prior to site development. If you believe that you will need this permit, contact the Department's Central Office Storm Water Management Program Director.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure:
Draft Permit, Draft Fact Sheet and Fact Sheet Attachments
Public Notice and Public Notice Billing Authorization Form

Draft Permit/PN Transmittal Letter to Owner when the PN Billing Authorization Form is not Submitted with the Application

Regional Letterhead
Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: VPDES Permit No. VA00000, [Facility Name]

Dear :

The Department is considering issuing/reissuing/modifying the referenced permit. Please review the enclosed public notice and draft permit package carefully. You have 14 days from receipt of this letter to comment and/or object to the draft permit provisions. During this period, you may also request a meeting to discuss the proposed permit conditions or may elect to withdraw the application and thereby discontinue permit processing.

While we have drafted a permit for this 14-day review, your application was incomplete since itdid not include the Public Notice Billing Authorization Form. Certain public notice procedures must be complied with before the actual permit can be approved. They are as follows:

1. The attached public notice must be published once a week for two consecutive weeks in a newspaper of general local circulation. Please complete, sign, and return the attached Public Notice Billing Authorization Form which will allow us to mail the notice to the newspaper and allow the newspaper to bill you for the public notice.
2. A minimum of 30 days will be allowed for public response following the date of the first public notice. You may also submit comments during the 30-day public comment period. If no public response is received, or the public response can be satisfactorily answered, then the permit will be processed. However, if there is significant public response, then we may hold a public hearing. You will be advised if this occurs. Therefore, please return the Public Notice Billing Authorization Form as soon as possible so that we can continue processing your permit. If you have not submitted the form within 14 days, permit processing will cease.

[**For reissuance:** In order for you to continue to discharge under state and federal laws, a new permit must be issued by the expiration date of the current permit. The term of the current permit cannot be extended beyond its expiration date if the owner is the cause of the delay in permit reissuance. If you do not return the Billing Authorization Form, your application shall be deemed as incomplete and will be returned to you and the matter referred to the regional compliance and enforcement staff for further action.]

[**For proposed facilities:** If development of a proposed site will disturb a total of X **[insert 0.1 for Bay watershed or 1 for all other]** or more acres and will also result in a point source discharge of storm water from the site, applicants or permittees are also required to obtain coverage under the storm water general permit for construction activities prior to site development. If you believe that

you will need this permit, contact the Department's Central Office Storm Water Management Program Director.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure:
Draft Permit
Draft Fact Sheet and Fact Sheet Attachments
Public Notice
Public Notice Billing Authorization Form
Public Notice Transmittal Email to Newspaper

Water Quality Standards Variance Form

The form is available on DEQnet.

Public Notice Transmittal Email to Newspaper

Subject: Public Notice VPDES Permit No. VA0000000

Greetings,

Please publish the attached public notice in the earliest possible edition of your paper once a week for two consecutive weeks as follows:

1) Publish it in the legal section in the smallest print possible; and

2) Forward the bill for your services to:

[**Facility Contact Name, Address, Email Address, and Phone Number**]

3) Complete and return the attached sheet to DEQ certifying that the public notice has been published as requested.

If you have any questions, please contact me at **[phone]** or **[email]**.

Sincerely,
[Permit Writer]

Enclosure:
Public Notice Verification Sheet
Public Notice

Draft Permit/Optional PN Transmittal Letter to Owner when the PN Authorization Form is not Required (Owner Contacts the Newspaper)

Regional Letterhead
Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: VPDES Permit No. VA00**00000**, VPDES Permit [**Issuance/Reissuance/Modification**]

Dear :

This is to advise you that the State Water Control Board is considering the above referenced VPDES Permit action. In order for us to continue processing your permit, there are three things that you should do:

1. Review the attached public notice and draft permit package carefully. If you have any questions, comments, or objections concerning the draft permit or public notice, please contact this office within the next 14 days. If you agree to accept the draft permit conditions, proceed to the next paragraph.
2. Publish a notice in the [**Newspaper Name**] as soon as possible. This notice must be published once a week for two consecutive weeks. Following the first public notice appearance in the newspaper, a minimum of 30 days will be allowed for the public to comment. If no public response is received, or if the public response received can be satisfactorily answered, then the permit will be issued. However, if there is significant public interest, then it may be necessary to initiate public hearing procedures. If a public hearing is necessary, you will be notified.
3. Provide us with proof that the notice has been published in the newspaper. Proof of publication shall consist of one of the following:
   - The attached public notice verification sheet completed and signed by the newspaper, or
   - The actual copies of pages from the newspaper showing the notice and the date of the newspaper.

We are required by the State Water Control Law to process this permit within a certain time, therefore, we must limit you to 35 days to complete the above steps. If you have not completed all the above steps by _____ , permit processing will cease.

[**For proposed facilities:** If development of a proposed site will disturb a total of 5 or more acres and will also result in a point source discharge of storm water from the site, applicants or permittees are also required to obtain coverage under the storm water general permit for construction activities prior to site development. If you believe that you will need this additional permit coverage, please let me know and we will send you the appropriate permit application forms.]

If you have any questions about the draft permit or the public notice procedures, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure:
Draft Permit, Draft Fact Sheet, Fact Sheet Attachments
Public Notice,Public Notice Verification Form

Draft Permit Transmittal Letter to DWR, F&WS, NMFS, VIMS, VMRC & Adjacent States

Regional Letterhead

Date

[Agency Name]
[Address of Agency] *(or use email)*

RE: VPDES Permit No. VA0000000, [Facility Name]

Dear [Name]:

This letter **[or email]** transmits a copy of the VPDES draft permit and supporting documentation for your review. [OR Documentation supporting the referenced VPDES permit is posted at http://www.deq.virginia.gov/fileshare/wps/]

The State Water Control Board intends to **[issue/reissue/modify**] this permit. Public notice of this proposed action is also being published in a local newspaper. That publication will establish a 30-day public comment period for this proposal. If no response is received within the 30-day public notice period, it will be assumed that your agency has no objections to the proposed action.

Please send any comments and/or objections regarding this package to:

[Permit Writer]
Virginia DEQ
[Regional Office]
[Address]

Sincerely,

[Permit Writer]

Enclosures:
Draft Permit
Draft Fact Sheet and Fact Sheet Attachments

Public Notice Transmittal Letter to Local Government (Note to permit writers: Contents of this letter can be sent via email instead of on DEQ letterhead on a PDF)

Regional Letterhead

Date

[Name]
[Address]

RE: VPDES Permit No. VA0000000 [Issuance/Reissuance/Modification/Denial]
[Facility Name]

Section 62.1-44.15:01 of the Code of Virginia requires DEQ to notify localities particularly affected when a permit action is pending. This letter transmits a copy of the public notice for a proposed permit action for your review. Public notice of this proposed action is also being published in a local newspaper. That publication will establish a 30-day public comment period for this proposal. If you wish to comment on this proposed action, please respond to:

[Permit Writer]
Virginia DEQ
[Regional Office]
[Address]

If no response is received within the 30-day public notice period, it will be assumed that you have no objections to the proposed action. If you have any questions, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosures: Permit Public Notice

C. Final Permit Correspondence

Final Permit Transmittal Letter Format (see OneDEQ templates)

D. Modification Correspondence

Change of Ownership Form Transmittal Letter

Regional DEQ Letterhead

Date

[Owner Contact]
[Title]
[Facility Name]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: Transfer of Ownership Modification of VPDES Permit No. VA0000000

Dear :

Enclosed is a form which may be used to request an ownership transfer for a VPDES permit. If you wish to have the permit ownership transferred, please complete the form and return it to this office.

If you have any questions, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosure

Additional Forms

The following forms are available on DEQnet.

Change of Ownership Form

Change of Facility Name Agreement Form

Permit Modification Request Form

Change of Ownership Approval Transmittal Letter (Note to permit writers: Note that Change of Ownership cannot be approved if financial assurance mechanism is not in place for certain facilities 9VAC25-650)

Regional DEQ Letterhead
Date

New Owner Contact
Facility Name **[New Name if applicable]**
Address

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Minor Modification: VPDES Permit No. VA 0000000; [Name of Facility]
Change in Ownership From [Name of Old Owner] to [Name of New Owner]

Dear:

The staff has reviewed the Transfer of Ownership request form for VPDES Permit No. VA0000000. The new owners, as listed above have been added to the permit cover page, added to DEQ records, and provided to the new owner.

*[***INSERT** *only if permittee does not have e-DMR]* DEQ requires electronic submittal of Discharge Monitoring Reports (e-DMR). If you have not already done so, please register for e-DMR participation now in order for the e-DMR application to be processed prior to the first DMR due date for this reissuance. The following website provides details, and our regional e-DMR administrator **[name, phone number, email]** can also assist you: https://www.deq.virginia.gov/permits-regulations/permits/water/surface-waters-vpdes/e-dmr-submissions

Should you have any questions, please contact **[Permit Writer]** of my staff at **[Phone Number]** or **[Email]**.

Sincerely,

[Water Permit Manager]

Attached: Permit No. VA0000000 and Fact Sheet

Cc: EPA Region III *[For Majors Only, via PRMTS portal]*
Office of Financial Management DEQ *[Nancy Perry]*
Permit File - ECM

E. Administrative Continuance Correspondence

Administrative Continuance Approval Letter

Regional Letterhead
Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: [Facility Name] – Virginia Pollutant Discharge Elimination System (VPDES Permit No. VA00XXXXX

Dear:

We have received your permit application for reissuance of the **[Name of Facility, permit number VA00XXXX]** dated **[DATE]**. The purpose of this letter is to inform you that you have satisfied the requirements of 9VAC25-31-70 for continuation of expiring permits. This continuation of the permit means that all requirements included in your current, active permit shall remain in place until the Department notifies you of the development of an updated VPDES permit.

In accordance with 9VAC25-31-70, the existing permit remains in effect and is fully enforceable. Please continue to adhere to all conditions in the permit, including monitoring, reporting, special conditions, and fee payments.

Feel free to contact **[insert contact information]** if you have questions.

Sincerely,

[Water Permit Manager]

cc: **[include compliance auditor and ICIS coordinator at CO]**

F. Termination Correspondence

Intent to Terminate Letter

Regional Letterhead

Date

[Owner Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

RE: Termination of Permit No. VA0000, [Facility Name]

Dear :

The Department of Environmental Quality intends to terminate the referenced permit for the following reason(s):

[**provide an explanation**]

If you agree with the proposed termination and wish to dispense with the prescribed hearing, please sign and date the attached agreement form in the spaces provided and return it to this office within 14 days.

If you do not agree with to the termination of this permit and wish a hearing under §62.1-44.15(5) of the Code of Virginia, please contact me as soon as possible.

If you have any comments or questions, please contact me at **[phone]** or **[email]**.

Sincerely,

[Permit Writer]

Enclosures:
Termination Agreement Form

Termination Agreement Form

The form is available on DEQnet.

Uncontested Termination Notification Letter

Regional DEQ Letterhead

Date

[Owner Contact Name]
[Title]
[Address]

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Permit No. VA0000, [Facility Name]

Dear :

The Department of Environmental Quality has approved the termination of the Permit referenced above. Termination of this permit is effective 30 days from the date of this notification unless you provide an objection in accordance with one of the two paragraphs below.

As provided by Rule 2A:2 of the Rules of the Supreme Court of Virginia, you have thirty days from the date of service within which to appeal this decision by filing a notice of appeal, signed by the appealing party or that party's counsel, with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. The notice of appeal must identify the regulation or case decision appealed from, must state the names and addresses of the appellant and of all other parties and their counsel, if any, must specify the circuit court to which the appeal is taken, and must conclude with a certificate that a copy of the notice of appeal has been mailed to each of the parties. Additional information regarding an appeal is in Part Two A of the Rules of the Supreme Court of Virginia.

Alternatively, any owner under §§ 62.1 - 44.16, 62.1 - 44.17, and 62.1 - 44.19 of the State Water Control Law aggrieved by any action of the Department of Environmental Quality (Department) taken without a formal hearing, or by inaction of the Department, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Department. Said petition must meet the requirements set forth in 9VAC25-230-130 of the State Water Control Board's Procedural Rule No. 1. In cases involving actions of the Department, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions, please contact [**permit writer**] at **[phone]** or **[email]**.

Sincerely,

[Water Permit Manager]

Enclosure

cc: Department of Health (ODW) (municipal facilities)
Department of Health (DSS) (shellfish waters facilities)

Contested Termination Notification Letter

Regional DEQ Letterhead

Date

[Owner Contact Name]
[Title]
[Address]

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

RE: VPDES Permit VA0000000, [Facility Name]

Dear :

The Department approved the termination of the VPDES Permit referenced above.

As provided by Rule 2A:2 of the Rules of the Supreme Court of Virginia, you have thirty days from the date of service within which to appeal this decision by filing a notice of appeal, signed by the appealing party or that party's counsel, with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. The notice of appeal must identify the regulation or case decision appealed from, must state the names and addresses of the appellant and of all other parties and their counsel, if any, must specify the circuit court to which the appeal is taken, and must conclude with a certificate that a copy of the notice of appeal has been mailed to each of the parties. Additional information regarding an appeal is in Part Two A of the Rules of the Supreme Court of Virginia.

Alternatively, any owner under §§ 62.1 - 44.16, 62.1 - 44.17, and 62.1 - 44.19 of the State Water Control Law aggrieved by any action of the Department of Environmental Quality (Department) taken without a formal hearing, or by inaction of the Department, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Department. Said petition must meet the requirements set forth in 9VAC25-230-130 of the State Water Control Board's Procedural Rule No. 1. In cases involving actions of the Department, such petition must be filed within thirty days after notice of such action is mailed to such owner by certified mail.

If you have any questions, please contact [permit writer] at [phone] or [email].

Sincerely,

[Water Permit Manager]

cc: Department of Health (municipal only)

Notice of Planned Change Letter

Regional DEQ Letterhead

Date

[DATE]

[Facility Contact]
[Title]
[Address]

[INSERT if appropriate] Submitted via email to:

Re: Notice of Planned Change – [Facility Name]
VPDES Permit VA00XXXXX

Dear :

The DEQ received your Notice of Planned Change letter on [DATE] regarding the proposed use of [CHEMICAL(s)] for, including the expected dosage rate(s) and final effluent concentration(s) of [CHEMICAL(s)] at [OUTFALL], which you have indicated will be representative of future wastewater discharges.

We are also in receipt of the associated SDS and the letter(s) you provided from [CHEMICAL MANUFACTURER(S)] [CHOOSE ONE: "*stating that none of the chemical(s) proposed to be used or their constituents are on the EPA priority pollutants list (40 CFR 423 Appendix A);*" OR, "*identifying the EPA priority pollutants (40 CFR 423 Appendix A) contained in the chemical(s) proposed to be used and the estimated concentration of each pollutant in the final effluent.*"]

We have no objection to the proposed use of [CHEMICALS] for [PROPOSED USE]. Based on the information that you have provided it appears that the use of [CHEMICALS] will not significantly alter the effluent characteristics at [OUTFALL] and will not present any water quality concerns provided it is used in the manner that you have indicated. Please be advised that effluent limitations and monitoring will continue per the current VPDES permit requirements.

Nothing in this letter relieves the permittee from the responsibility to comply with requirements set forth in VPDES Permit No. VA00XXXXX or from adhering to the Virginia Water Quality Standards (9VAC25-260).

Please contact [Permit Writer] at [Phone] or email at [Email] if you have any questions regarding this correspondence.

Sincerely,

[Water Permit Manager]

cc: Compliance Manager, DEQ