VPDES PERMIT MANUAL

VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

2010

MANUAL GUIDE

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SECTION I
INTRODUCTION

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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. The 7 member State Water Control Board remains in existence as the citizen advisory body and permitting authority for water programs within the Department.

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 9 VAC 25-31-90, "the Board 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 Board 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 the:

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 guidance 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 the manual will be revised periodically to reflect newly issued VPDES permitting guidance memoranda. These revisions will also be posted on the agency's electronic network. Users should refer to the electronic version of the manual on the network if they are in doubt whether or not they have the latest pages.

DISCLAIMER

This document provides procedural guidance to the DEQ permit staff. This document is guidance only. 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 basis for this manual.

1. Clean Water Act (CWA) (PL 92-500 as amended)
2. State Water Control Law (SWCL) (Code of Virginia 62.1-44.2 et seq.)
3. VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
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 (9 VAC 25-260-00 et seq.)
8. State Water Control Board Approved Policies and Procedures
9. Sewage Collection and Treatment Regulation (9 VAC 25-790-10 et seq.)

WATER GUIDANCE MEMORANDA

MEMO NUMBER	SUBJECT	AUTHOR/ SIGNATOR	DATE
** 91-002	Use of WQS in the VPDES Permit Program	L. Lawson	1/l5/91
91-004	Permits/Certificates Approved at Board Meetings	R. Ayers	2/01/91
** 91-010	Final Version of the VPDES Permit Manual	C. Turner	3/18/91
** 91-011	Selection of Sample Types for VPDES Monitoring	B. Purcell	3/21/91
** 91-013	Single Family Home (SFH) VPDES Permit	L. Lawson	4/30/91
* 91-014	New Application Form for Fish Farms & Hatcheries	R. Ayers	7/12/91
* 91-015	Revised Procedure for Public Notice Mail List	R. Ayers	7/23/91
** 91-016	Use of Existing WQSA Criteria for Silver and Phenol	F Holt	7/24/91
91-019	Solids Disposal Plans for Sand & Gravel Operations	F. Holt	9/04/91
* 92-001	Flow Measurements	B. Purcell	1/14/92
* 92-003	Testing Waivers for VPDES Application Forms	R. Ayers	2/18/92
* 92-004	VPDES Permit Major/Minor Work Sheet	R. Ayers	2/25/92
92-006	Authorization to Issue Certifications for Tax Exemptions	L. Lawson	3/9/92

* 92-007	Public Notice Format for Combining Permit Issuance, Reissuance or Modification & Approval or Modification of Final Pretreatment Program	R. Ayers	3/19/92
92-008	Modifying Existing VPDES or VPA Permits to Incorporate CAP Requirements	D. Chance	3/25/92
* 92-009	Additional Guidance on Use of the NPDES Permit Rating Work Sheet	R. Ayers	3/26/92
** 92-012	Guidance on Use of WQS for Toxics in VPDES Permits	F. Holt	4/13/92
92-013	Reporting of BOD_5 Results for VPDES Monitoring	B. Purcell	4/21/92
** 92-017	Permit Transmittal Letters Appeal Language	R. Allen	7/28/92
** 92-019	VPDES Permit Part I.A., Effluent Limitation	R. Allen	9/14/92
* 92-022	Boldfacing Compliance Items & Due Dates in VPDES and VPA Permits	R. Ayers	12/7/92
**93-004	VPDES Permitting & Compliance Strategy for Permit Limits & Monitoring Results that are Less Than Detection	F. Holt	2/23/93
**93-010	VPDES Permitting Strategy for Storm Water Discharges Associated with Industrial Activity	C. Boatwright	5/21/93
*93-011	Guidance on Calculating Stream Flow Frequencies & Other Hydrologic Analysis for the VPDES Permitting Process	C. Martin	6/9/93
*93-012	Revised VPDES Permit Part I.A., Effluent Limitations pages	C. Wells	6/14/93
*93-013	Application Forms for Federal Facilities	C. Wells	6/15/93
**93-015	Guidance on Preparing VPDES Permits Based on the Water Quality Standards for Toxics	LGL/AJA/JVR	06/22/93
93-016	Revised Chemical Translator for Metal Standards	AJA/LGL/ED	06/23/93
*93-017	Documentation of Public Notice to the Mailing List	C. Wells	07/07/93
**93-018	Local Gov't. Ordinance Form (LGOF) Revisions	C. Wells	07/07/93
**93-019	Reissuance Reminder Letter Revisions	C. Wells	07/12/93
*93-020	VPDES & VPA Permit Manual DEQ revisions	C. Wells	07/26/93
**93-021	Antidegradation Implementation Guidance	J. Gregory/LGL	07/27/93
*93-026	Permitting Strategy for Wood Preserving	L. Choi	12/01/93

*93-027	Application Transmittal & Reissuance Reminder Letter	C. Wells	12/14/93
*93-028	Regional Director Authorization to Process VPDES Permits to Include the Toxics Management Program	L. Lawson	12/17/93
93-029	Procedures for Implementing the TMProgram	L. Lawson	12/20/93
93-030	Procedures for Approving Plans & Specifications for Sewerage Systems & Sewage Treatment Works & Concept Engineering Designs for Industrial Facilities	L. Lawson	12/21/93
**94-001	Revised VPDES Major Permits List	R. Ayers	01/12/94
94-003	Classification of Effluent/Water Quality Limiting Segments & Relationship with Antidegradation Tiers	D. Phillips	03/22/94
*94-004	Revised Industrial Reopener Clause For VPDES Permits	C. Wells	03/22/94
*94-006	Revision to LGOF Requirement of the SWCL	R. Ayers	05/19/94
**94-008	Metals Monitoring, Monitoring Special Condition TMP Revisions, & Di-2-Ethylhexyl Phthalate	F. Holt	05/19/94
94-012	Calcium Carbonate Equivalence (CCE) Testing Requirements	F. Holt	10/20/94
**94-015	VPDES Permits Majors List	R. Ayers	12/21/94
95-003	VPDES and VPA Permit Part II Telephone # Changes	R. Ayers	05/23/95
95-005	Local Government Ordinance Forms (LGOF)	R. Ayers	06/20/95
95-008	General Permits	R. Ayers	11/03/95
95-011	Sludge Reopener Clause for VPDES Municipal Permits, Public Hearing Procedures, EPA Contact, Termination Procedure, DEQ Program Delegations Associated VPDES Permit Manual Revisions	M. Gregory	11/17/95
**95-012	pH Limits in the VPDES Permits for Cooling Water Outfalls	M. Phillips	11/20/95
96-001	Storm Water Permitting	M. Ferguson	03/15/96
96-002	O&G/TPH Limits for Certain Effluents	M. Phillips	04/09/96
96-004	Revised Boilerplate Pages for VPDES and VPA Permits	R. Ayers	08/06/96
96-006	Wastewater Works Licensed Operator Requirements	J. Vanderland	09/10/96

96-008	Revised Public Notice Procedures for VPDES, VWP and VPA Permits	R. Ayers	09/30/96
96-009	Obtaining Dissolved Metals Data	M. Phillips	11/19/96
96-009	(Amendment #1) Obtaining Dissolved Metals Data	M. Phillips	12/02/96
97-001	VPDES Toxic Management Program	D. DeBiasi	1/03/97
97-004	Sewage Sludge Permitting & Implementation of VPDES Permit Regulation Part VI - Standards for the Use or Disposal of Sewage Sludge	L. Choi	5/27/97
97-004	Addendum #1 Discharge Monitoring Report Forms (DMRs) and Instructions for Sewage Sludge	L. Choi	5/15/98
97-2001	Changes to State Water Control Law re: Notification of Local Government & Riparian Landowners	R. Ayers/JMD	9/09/97
97-2002	VPDES Procedural Manual Revision Bulk Oil Storage Limits and Special Conditions	R. Ayers/JMD	9/10/97
97-2005	Development of Total Maximum Daily Loads (TMDL)	M. Phillips/JMD	10/16/97
97-2006	Revised Local Government Ordinance Form	R. Ayers/JMD	11/24/97
98-2003	Public Notice of Termination of VPDES Permits	R. Ayers/JMD	3/05/98
98-2005	Reduced Monitoring	M. Phillips/JMD	5/04/98
98-2010	VPDES Permit & VPA Permit Ground Water Monitoring Plans	R. Goode/JMD	9/30/98
99-2003	Use of Method 1664 for Total Petroleum Hydrocarbons (TPH) Determination in VPDES Permits	B. Ziomek/LGL	2/26/99
00-2007	Listing Bypass Points in VPDES Permits	LGL	5/10/00
00-2011	Guidance on Preparing VPDES Permit Limits	M. Phillips/LGL	8/24/00
00-2015	Implementation Guidance for July 2000 Revisions to the VPDES Permit Regulation	R. Ayers/LGL	9/27/00
01-2002	Implementation Guidance for Financial Assurance Regulation	J. VanSoestbergen/LGL	1/10/01
01-2007	Implementation Guidance for December 2000 Revisions to the VPDES Permit Regulation	R. Ayers/LGL	3/15/01
01-2008	Numbering of Outfalls	LGL	3/27/01
01-2027	EPA Review of VPDES Permits	M. Phillips/LGL	12/4/01
01-2027	Addendum 1- EPA Review of VPDES Permits for Federal FY 03	M. Gregory/LGL	11/19/02

03-2006	Permitting ISTEA Exempt SW Discharges	LGL	3/19/03
03-2007	Implementation of Bacteria Standards in VPDES Permits**	J. VanSoestbergen	3/27/03
03-2008	Significant Figures	Ziomek/LGL	4/10/03
04-2008	EPA Review of VPDES Permits for Federal FY 04**	LGL	2/20/04
04-2012	Guidance on Coordination of Water Permit Programs with the Virginia Department of Health** (with regards to sludge management reviews)	LGL	5/25/04
04-2013	June 2004 VPDES Manual Revisions**	LGL	5/14/04
04-2020	Significant Figures for Discharge Monitoring Reports	Gilinsky	10/29/04
05-2002	Procedure for Terminating Uncontested Permits	Gilinsky	2/4/05
05-2005	EPA Review of VPDES Permits for 2005	Gilinsky	4/7/05
05-2010	CEDS Date Entry Rules	Gilinsky	6/24/05
05-2011	TMDL Modifications in Response to New or Expanding Discharges	Gilinsky	7/26/05
07-2007	Threatened and Endangered Species Screening for VPDES	Gilinsky	5/2/07
07-2009	VPDES Permit Applications for Discharges in Shellfish Growing Areas	Gilinsky	6/15/07

* Included in July 1995 VPDES Permit Manual
** Out-of-Date or Superseded

D. Abbreviations

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
DGIF Department of Game and Inland Fisheries
DSS Division of Shellfish Sanitation
DMR Discharge Monitoring Report
DPL Division of Policy and Legislation
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
LUST Leaking Underground Storage Tanks
MGD Million Gallons per Day
MOA Memorandum of Agreement
NMFS National Marine Fisheries Service
NOV Notice of Violation
NPDES National Pollutant Discharge Elimination System
NSPS New Source Performance Standards
OEC Office of Enforcement Coordination
OIS Office of Information Services
OWP&CA Office of Water Permit & Compliance Assistance
OWQS Office of Water Quality Standards
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
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
TRE Toxicity Reduction Evaluation
TWTDS Treatment Works Treating Domestic Sewage
TSS Total Suspended Solids
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

E. Definitions

Administratively Complete - an application is considered administratively complete when all necessary blanks are accurately filled in, the proper signature applied, all necessary documents are attached, and the permit fee paid.

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

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 (9 VAC 25-31-100 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, э 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) - technology-based 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.

Best Professional Judgement (BPJ) – limitations or conditions developed on a technology or water quality basis for a category of discharges or for individual discharges. Case-by-case BPJ 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 BPJ limitations and conditions should be provided in the FS.

Bypass (9 VAC 25-31-10) - 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).

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.

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 (9 VAC 25-31-10) - 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.

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 (eg. total suspended solids, BOD, pH, oil and grease).

Daily discharge (9 VAC 25-31-10) - 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 (9 VAC 25-31-10) - 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) (9 VAC 25-31-10) - a form provided to the permittee by DEQ or an equivalent form developed by the permittee and approved by the Board 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 (9 VAC 25-31-10) - 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.

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

Effluent Limitation (9 VAC 25-31-10) - any restriction imposed by the Board 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 (9 VAC 25-31-10) - 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, 9 VAC 25-260-140 C, for specific designations of estuarine waters in Virginia.

Facility or activity (9 VAC 25-31-10) - 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 9 VAC 25-31-170 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 (9 VAC 25-31-10) - 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.

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 (9 VAC 25-31-10) - 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 9 VAC 25-31-400)

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 (9 VAC 25-31-10) - the highest allowable average of "daily discharges" over a calendar month, 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 (9 VAC 25-31-10) - 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 (9 VAC 25-31-10) - 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 (9 VAC 25-31-10) - 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 (eg. 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, 9 VAC 25-260-350.

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.

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.

Point Source (9 VAC 25-31-10) - 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 (9 VAC 25-31-10) - 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 used either to facilitate production or for disposal purposes is approved by the Board, and if the Board determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Pollution (э 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 Board, 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) (9 VAC 25-31-10) - 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 (9 VAC 25-31-10) - 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) (9 VAC 25-31-10) - 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 - 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.

Schedule of Compliance (9 VAC 25-31-10) - 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 mean low 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 $\leq$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. All DEQ Regional Offices have a copy of the 1987 edition of this manual.

State Waters (ə 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.

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

Storm Water Associated with Industrial Activity (See the definition at 9 VAC 25-31-10)

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.

Technically Complete – an application is technically complete when no further information from the permittee is necessary to develop the fact sheet and draft permit.

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.

Tier - 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 non-persistent 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 waste water 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 waste water from humans or household operations that are discharged to or otherwise enter a treatment works.

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 (9 VAC 25-31 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.

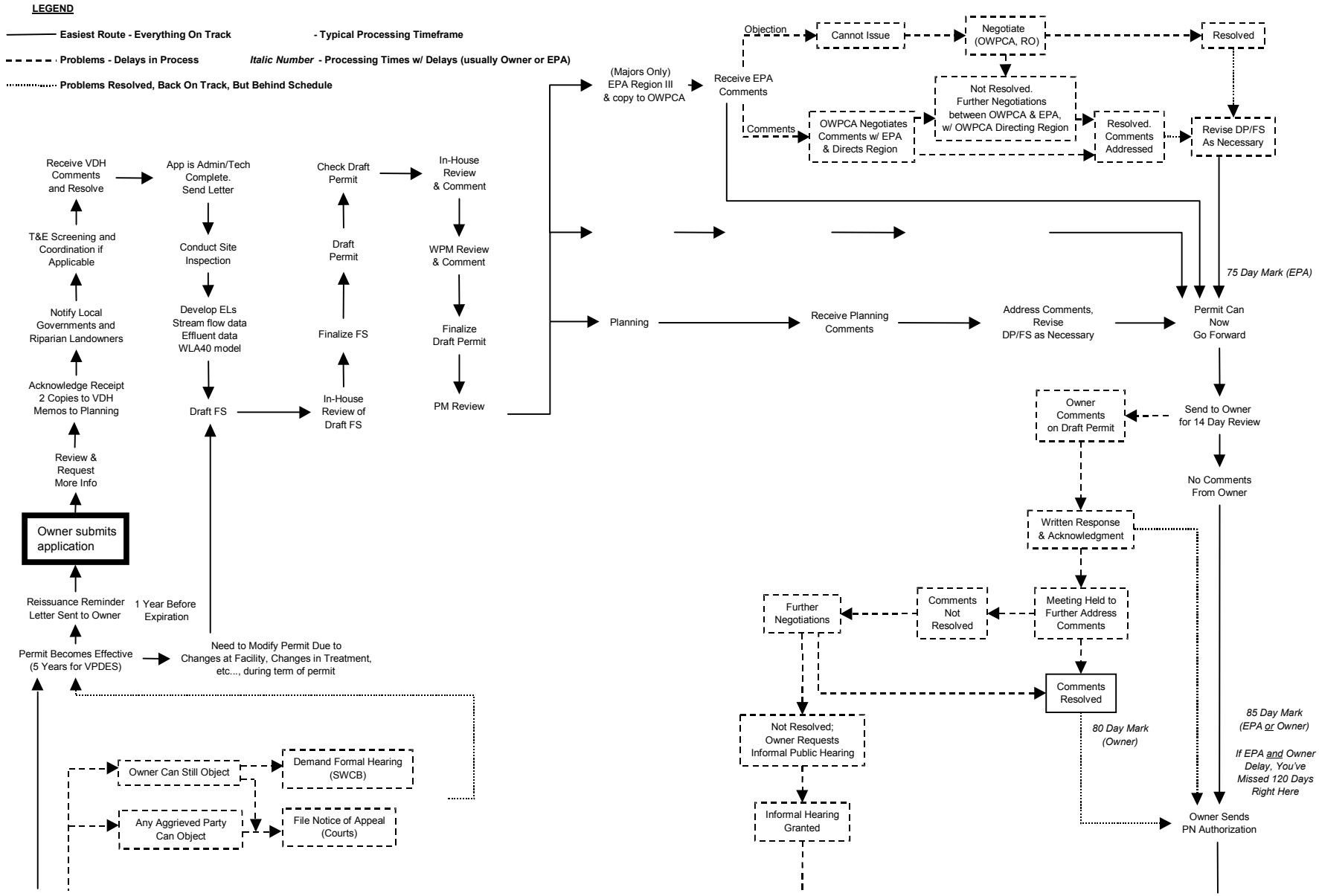
Wet season - The contiguous months that have a monthly average flow greater than the period of record average flow.

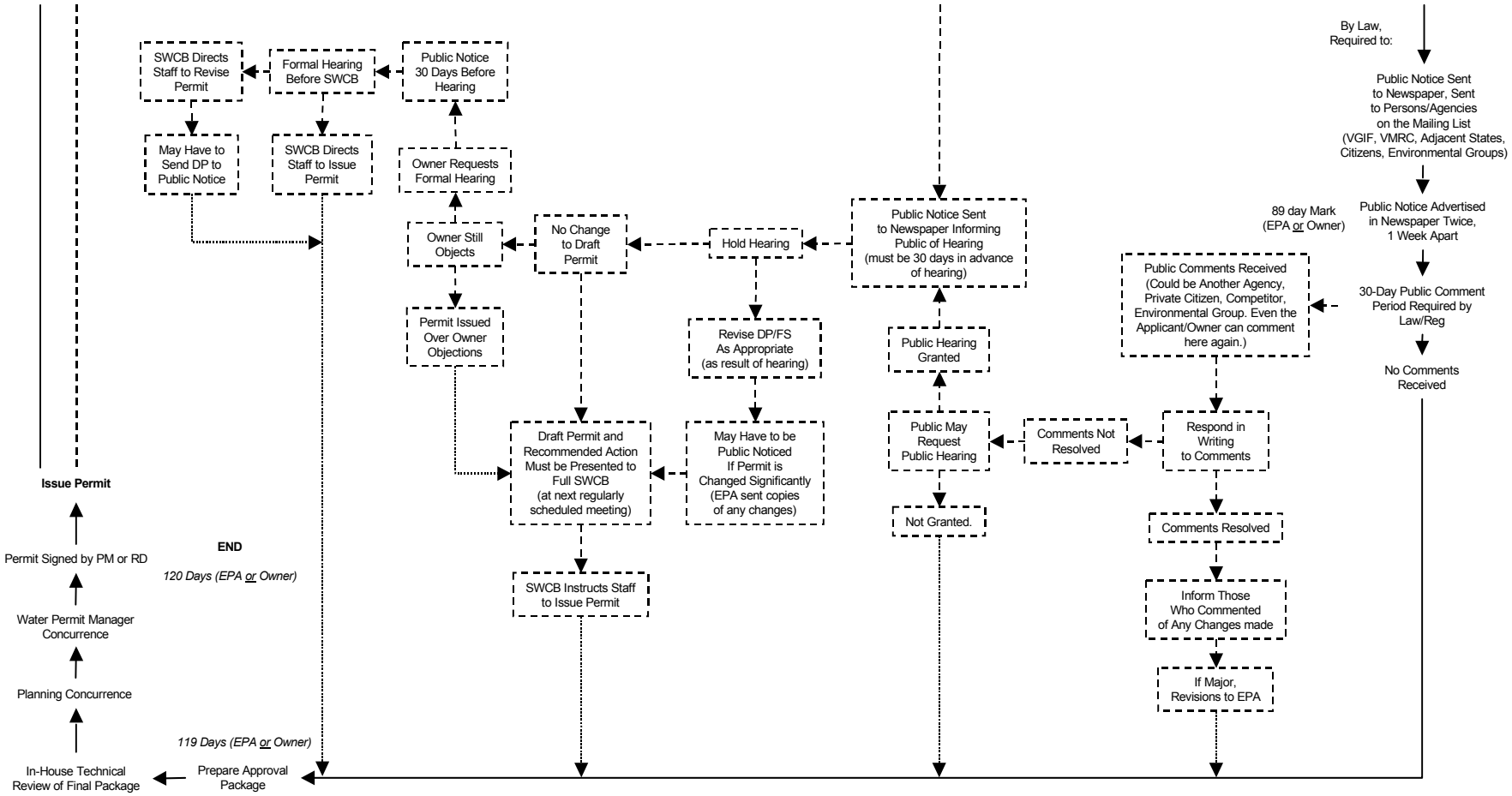
PERMIT PROCESSING TRACKING SHEET

	Industrial		Municipal		Issuance		Reissuance		Modification
Facility Name:				Permit Number: VA00					
Application Due: / /				Projected Effective Date: / /					

	DATE		DATE
Owner Notified		Draft Permit to Planning	
Stream Flows Requested		Draft Permit from Planning	
Stream Flows Received		Draft Permit to Regional VDH-(Sanitary waste ∃ 10%)	
Application Received (Modification Request) including Public Notice Billing Information Form		VDH Comments Received	
SCC Registration (PvOTWs, ∃50 connections)		Draft Permit to EPA	
Water Permit Manager Memo Signed		EPA Comments Received	
Additional Information Requested		Draft Permit Package to Owner	
Additional Information Received		Public Notice Authorization Received from Owner	
Additional Information Requested		Public Notice to Newspaper	
Additional Information Received		Public Notice to OWPS Mailing List	
Application Deemed Administratively Complete (**14 days**)		Permit Package to: VIMS (Issuance in Tidal Areas only)	
Application to Regional VDH		DGIF (Issuance, Class V & VI waters)	
Notification to Riparian Owners (Issuance & Expansion)		Adjacent States (if applicable)	
Application to Locality (Issuance & Expansion)		Other:	
Application to VDH-DSS (below fall line)		Notification to Localities Particularly Affected Chief Elected and Chief Administrative Officials (all permits)	
Application to VMRC (Shellfish waters: Issuance & Expansion)		Notification to Planning District Commission (all permits)	
Begin Threatened and Endangered Species Coordination with DGIF, DCR, USFWS if Applicable		First Public Notice Publication Date	
VDH Comments Received		Second Public Notice Publication Date	
Site Inspection		Public Notice Comment Period Ends	
Site Inspection Report		Verification of Publication Received	
Application Deemed Complete (**45 days - begin 120 day clock**)		OWPS Mailing List Notification Received	
Permit Number Obtained		Financial Assurance/Closure Documents Approved	
Permit Number Confirmation Memo Received		Final Package Prepared	
Industrial Rating Worksheet Completed (If ∃80, copy OWPS)		Permit Signed on	
Fact Sheet Prepared		CEDS Updated	
Draft Permit and CEDS DMR Prepared		Permit Package Distributed	
Draft Permit Peer Review			
Draft Permit Management Review		**PERMIT WRITER:**	
Draft Permit Revised			

VPDES PERMIT PROCESS FLOW CHART





VPDES Permit Process

Rev. 01/10

SECTION II
APPLICATION PROCEDURES

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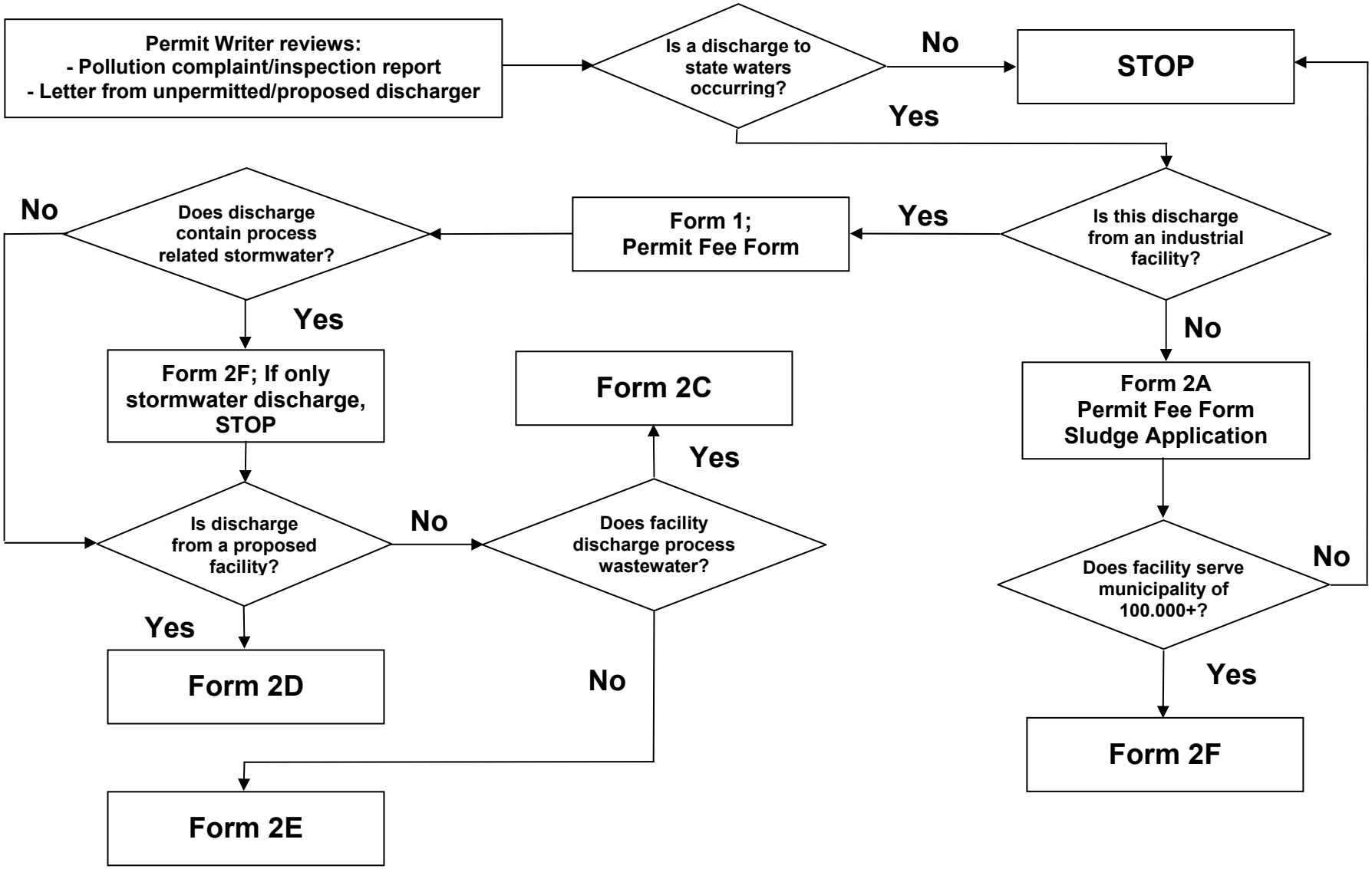
Permit Applications Flow Sheet



A. Application Processing

Whenever possible, practical and legal use electronic transmission of information, letters, etc…. The letters themselves may be on letterhead, signed, dated, scanned and attached to an email or the body of the form letter may be inserted in the body of the email. There are some sections of the Code that require 'in writing' or 'by mail' that have been informally interpreted to mean hard copy by regular mail but we have been advised that if the recipient (e.g. the locality) agrees to electronic transfer of information (e.g. public notices), we can use an electronic mailing. It is not advisable to use email with riparian land owners, primarily because the information is not available with the tax commissioner. Two notable exceptions are that the permit application must be returned to the regional office as an original, hard copy signed (certified) version with all the appropriate original signed forms (e.g. local government ordinance form, public notice billing information form) and permit application denials must be sent via certified mail (see H below).

1. Reissuance Reminder Letter and Pre-application Meeting

The CEDS contains a master file of all VPDES permits within each region, including permit expiration dates. This database is maintained by each Regional Office and a master list for all regions can be obtained through OWP&CA. CEDS prints a letter one year in advance of permit expiration, informing the permittee that they must file for reissuance of their permit not 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 included in Section L of this manual. Note the different formats for the notification letters.

To minimize deficiencies in applications, it is recommended that when transmitting application forms to a permit applicant, the permit writer offer to meet with the applicant in order 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.

NOTE: While the standard procedure to send out reminder letters to permittees is one year, the region may send the letter out earlier than one year if deemed necessary. It is recommended letters not be sent out any earlier than two years before expiration.

2. Initiate Tracking Sheet

Initiate a Tracking Sheet upon transmittal of the reissuance reminder letter or upon receipt of the application. It is important to document in the permit file the completion of the steps in the permitting process. The tracking sheet is a convenient way to have that documentation in one place. The RO may use any tracking sheet form but it should contain, as a minimum, the items on the tracking sheet in CEDS. See the example tracking sheet in Section I.

Indicate the date of completion of each item on the tracking sheet. File the tracking sheet upon completion of the permit action. Tracking sheets are optional and the RO may rely on CEDS for tracking permit processing. Note that it is important to keep CEDS up to date regardless of whether or not it is used for tracking.

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 - All applications must include this form and the appropriate fee

Public Notice Billing Information Form – All applications must include this form that is signed by an authorized agent. See Section 4.f. for further information.

Form 2A – All POTWs and other TWTDS

Sludge Use and Disposal Application – 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 - Storm Water Associated With Industrial Activity

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. Many times 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 can be found in Section L.

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. See Section L for the notice format.

c. 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 is provided in Section L.

d. 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 Section L for an example.

e. Local Government Ordinance Form

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. Note that this requirement only applies to issuance, not reissuance or modification. The permit application cannot be considered complete without this local government certification. An example LGOF is

in Section L. 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.

f. Public Notice Billing Information 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.E. allows the board 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

a. Municipal Applications

The owner or owner's agent files an original and an electronic version (or at least four paper copies), complete and current application with the appropriate DEQ regional office. Forward one copy of the application form to the Virginia Department of Health (VDH) Office of Drinking Water Field Office. If the discharge is below the fall zone (except in the Chowan Basin) an extra copy should be obtained and forwarded to the VDH Division of Shellfish Sanitation. See further discussion of permits to send to DSS under the "Application Review by Other Agencies" heading in this section. Refer to Section L for VDH addresses, email and telephone numbers.

b. Industrial Applications

The owner or owner's agent of an industrial discharger files an original and an electronic (or at least four paper copies), complete, and current application to the appropriate DEQ regional office. Forward one copy of the application form for all industrial discharges to the VDH Office of Drinking Water Field Office. If the discharge contains 10% or more sewage and is below the fall zone (except in the Chowan Basin) an extra copy should be obtained and forwarded to the VDH Division of Shellfish Sanitation. See further discussion of permits to send to DSS under the "Application Review by Other Agencies" heading in this section. Refer to Section L for VDH addresses, email and telephone numbers.

6. Testing Waiver Procedures

a. All applicants are to provide all of the information 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 <u>written</u> request specifying which pollutants or parameters should be waived and the reasons for requesting the waiver. Permit writers may inform applicants of the availability of waivers when sending application forms. The waiver provisions apply to the parameter to be tested (e.g. EPA's priority pollutant list vs VA water quality criteria list for toxics), the sample type (grab vs composite), the number of samples or sample frequency, and the test method (e.g. dissolved vs total recoverable metals). Waivers fall into two categories:

- Waivers that are granted because the information required by the application is already on file at DEQ (previously submitted by the permittee or substantially identical data), the Board can grant a waiver to avoid making the permittee resubmit or duplicate data. This type of waiver could be used for parameters that the permittee was required to monitor and report during the previous permit term.
- Waivers that are granted because the information required on the application is not of material concern for a particular permit. These waivers are for data that is not already on file, but is not needed to draft the permit. They may also be granted for sample type and sample frequency requirements. When granting

this type of waiver request, the regional office assumes all responsibility for assuring that the permit can be written so that water quality standards will be maintained in the receiving waters without complete effluent characterization data. **EPA must concur on a decision to grant this type of waiver for major municipal permits. See the detailed procedures later under municipal applications**.

b. The regional office has the authority to grant application testing waivers described above for industrial permits and minor municipal permits with the following conditions:

- Some application forms have application testing requirements for certain parameters which cannot be waived. See the application instructions for more information.
- 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. Once a testing waiver has been granted, the original waiver is valid upon subsequent reissuances and/or modifications if the facility conditions supporting the original waiver remain valid. Bring the waiver justification forward to the new permit file. (**Form 2A waivers for major municipals, when EPA concurrence is required, are not automatically renewed on reissuance. They must be resubmitted to EPA each time.)**

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. (This sampling variance is allowed for Forms 2A, 2C and 2E.)

B. Municipal Permit Application Forms

1. Privately Owned Treatment Works (PVOTW) 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. 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. PVOTWs expanding to serve 50 or more residences who apply for modification of an existing permit are also required to provide this notice. Applications from these facilities cannot be deemed complete unless their registration is verified.

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.

2. Financial Assurance/Closure Requirements

The Financial Assurance Regulation, 9VAC 25-650-10 et seq., 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, duplexes, condominiums, mobile homes, and apartments. Private residences do not include hotels, motels, seasonal camps, 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 gallons per day 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 9VAC 25-650-150. The waiver has to be approved by the local governing body after a public hearing is held. The Board 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
- Draft financial assurance mechanism

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 OWP&CA. Contact OWP&CA for further guidance on these

requirements.

3. 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 is in 7 parts. Parts A and C are required for ALL applicants. Discharges with a design flow of 100,000 gpd or more will also complete Part B. 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 Parts D and E. Those TWTDS that accept process wastewater from Significant Industrial Users or that receive RCRA or CERCLA waste must complete Part F. If the system has combined sewer overflows (CSOs), the applicant must also complete Part G. Detailed instructions are provided with Form 2A. Note that federal facilities that receive 50 percent or more industrial waste use Form 2C.

a. 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 Questions A 10 d and e, 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. If a testing waiver is not granted as described below the application testing requirements may necessitate sampling (beyond that required by the permit) during the permit term prior to the reissuance reminder letter. It is suggested that this be called to the attention of the permit holder in the final permit transmittal letter (see Section L).

b. Form 2A Testing Waivers (9 VAC 25-31-100 E 4 and J)

If information required by the application is already on file at DEQ (previously submitted by the permittee or substantially identical data), the RO can grant a waiver to avoid making the permittee resubmit or duplicate data. This type of waiver could be used for parameters that the permittee was required to monitor and report during the previous permit term. These waivers can be made without EPA's concurrence. **However, if the data is not already on file and the permittee asks for a waiver and the permit writer determines that the information is not of material concern for this particular permit, then the EPA must concur on the decision to waive it. These waiver procedures apply to all applications that come in on the new Form 2A.** This restriction only applies to TWTDS, not industrial permit applications.

- **Reissuance applications for Major Permits:** The decision to grant Form 2A waivers for information the RO determines is not of material concern for a particular permit reissuance must be made jointly by DEQ and EPA, and it must be made on a permit-by-permit basis. In addition, the request for a waiver at permit reissuance must be filed with EPA at least 210 days before the existing permit is due to expire. However, if EPA does not respond to the waiver request by 181 days before permit expiration, the application can be considered complete without the required information. Thus, EPA has to have at least 29 days to review and decide on the waiver request. If the request is sent to them on time and they do not respond on time, then the waiver is granted by default.

The key to this process is the submittal of the waiver request by the 210 day deadline. This will require that the permittee be made aware of the new waiver requirements in the reissuance reminder letter (365 days before expiration) and that he send his waiver request to the RO soon enough for the RO to process it and get it to EPA by the 210 day deadline. The permittee's request should get to DEQ not later than 240 days prior to expiration so the RO will have enough time to send it on to EPA. The RO would then submit the waiver request to the Regional Administrator on behalf of the Director.

The waiver request to the Regional Administrator must specify what application testing requirements are proposed for waiver and it must include the justification for the waiver. In most cases, the waiver justification will be that "the information being waived is not of material concern for this specific permit".

If EPA approves the waiver request or fails to act prior to their 29 day deadline, the application can be considered complete and EPA cannot object to the permit on the basis of the application completeness. However, if EPA denies the waiver request, and the RO processes the application anyway, EPA can object to the permit because it is being issued without consideration of the required information. If EPA denies the waiver request, the permittee should be notified that the waiver is not granted and the information must be submitted before the application can be considered complete.

- **Minor Municipal Permits:** In the MOU that authorizes the Board to administer the NPDES program, EPA has waived its right to comment on draft permits for minor municipal discharges. This intent to delegate decisions on minors to the Board applies to application testing waivers. Therefore, when a minor municipal discharger asks for a waiver from a Form 2A application testing requirement, the region may grant the waiver without receiving EPA approval. The complete rationale for the waiver must be documented in the fact sheet for the permit so that when the final permit package is sent to EPA, they will have the documentation for the waiver.

- **New discharges:** Since a new or proposed discharge will not be able to provide effluent test data, there is no need to grant a waiver from Form 2A application testing requirements or to obtain EPA approval to determine the application complete. Applicants may simply write "NA" in the testing data blocks of the application. Applicants will still have to give as much information as they can regarding discharge location, receiving stream, etc. Permit writers may ask for estimated values if this information will be useful in drafting the permit. Special conditions may also be included in the new permit requiring the permittee to submit the application data once the discharge commences if the permit writer believes it will be beneficial to have that information. Otherwise, the permit should contain the special conditions recommended by this manual. On reissuance, the procedures described above for major and minor discharges will apply.

4. VPDES Sewage Sludge Permit Application Form

All TWTDS are required to submit the applicable parts of the sludge application form (9VAC 25-31-100 P). The form is divided into 4 sections. Section A is for all applicants. Section B applies to facilities that generate sludge or derive material from sludge. Section C is must be completed by any facility that land applies sludge or whose sludge is land applied by another person. Section D is for applicants who dispose of sludge in a surface disposal unit. Details on completing the form are provided in the instructions.

This form was revised on September 27, 2000. After September 27, 2001, only the revised form can be accepted.

The testing waiver procedures for Form 2A also apply to the sludge application form, including the EPA review requirements for waivers for major permit reissuance.

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

5. Form 2F

TWTDS with a design flow $\geq$ 1.0 MGD or required to have an approved pretreatment program are considered by the VPDES storm water regulations to generate "storm water associated with industrial activity" if they have a point source storm water discharge from the treatment plant site. Treatment plants so classified are required to submit Form 2F for storm water characterization as part of the permit application process. See Section III for more information on storm water permitting requirements for TWTDS.

- **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 storm water 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%).

6. 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. If the discharge is below the fall zone (except in the Chowan Basin) a copy should be forwarded to the VDH Division of Shellfish Sanitation. Refer to Section L for VDH addresses and telephone numbers

7. Water Quality Criteria Monitoring Form

This form may be required as part of an application submittal as an option to requiring water quality monitoring as a permit requirement.

8. Chlorine Demonstrations

For reissuances, if the applicant proposes to demonstrate that bacteria standards for enterococci are met through chlorine limitations during the application process, demonstration data and results and conclusions of the demonstration should be submitted with the application. For issuances, the data can be submitted with the application if available, or if there is no effluent to sample the data can be required as a permit condition (bacteria limits will apply until it is demonstrated that chlorine limits are sufficient to maintain enterococci criteria). The agency has already analyzed sufficient data to determine that chlorine limitations also maintain *E. coli* criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation. More information about the demonstration requirements appear under Municipal Special Conditions and "Chlorine Demonstration Requirements for Bacteria Limits" in Section MN-3. For major permits and minors with an EPA approved TMDL that has a wasteload allocation for bacteria for that facility, chlorine demonstrations are not allowed. Although chlorine residual is still considered the primary assurance of adequate disinfection, bacteria limits must be placed in these permits.

C. Industrial Application Forms

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.

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 in order 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 can not 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 Requirements/Waivers

Parts V-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.

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.

- Part 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 storm water (the Form 2C sampling must be performed during dry weather [i.e. no or minimal storm water 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

- Part 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). 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. A waiver to test for these pollutants may be requested in writing.

- Part C - This part requires the applicant to check one of three applicable columns, 2a, b or c. These include "testing required", "believed present" or "believed absent". All industries identified in 40 CFR 122 Appendix D must test and report data for all toxic metals, cyanides and total phenols. Appendix D also indicates which of the four GC/MS fractions the applicant must test. If all four are indicated, the applicant must test for all organic pollutants in Part C. Appendix D of 40 CFR 122 is consistent with 9 VAC 25-31-100.
- If the facility can qualify as a small business, the Part C testing and reporting requirements are automatically waived. A small business is a business in which the gross annual sales average less than $100,000 per year (in second quarter 1980 dollars).
- For all other industries not named in Attachment 1, the applicant must indicate whether the pollutant is "believed present" or "believed absent". For every pollutant believed to be discharged in concentrations of 10 ug/l or greater, the applicant must provide quantitative data. For the pollutants acrolein, acrylonitrile, 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, the applicant must only provide quantitative data when the discharge concentrations are expected to be 100 ug/l or greater.
- If the pollutant is expected to be discharged in quantities less than the thresholds, the applicant must either submit quantitative data or describe the reasons why the pollutant is expected to be discharged below threshold levels. This gives the staff flexibility in determining if additional testing is warranted. It is the responsibility of the applicant to document that discharge levels are below these thresholds. Again, the applicant may request a waiver of testing.
- Note that the following parameters under Part C -GC/MS Fractions - Volatile Compounds have been "delisted" from the priority pollutant list. Therefore sampling and reporting for these parameters will not be required.

Bis(Chloromethyl)Ether Trichlorofluoromethane Dichlorodifluoromethane

- Part D - Here the applicant must list any pollutants in Table 2C-3 of the application that are believed present and explain why they are present. Analysis is not required, but if data are available, they must be reported.

For parameters listed in Item V, Parts B and C, the applicant must submit, with the waiver request, data which demonstrate that:

- Similar industries within a particular industrial category or subcategory discharge substantially identical levels of the pollutant and as a result individual testing by each discharger is unnecessary or;
- The facilities discharge the pollutant uniformly at sufficiently low levels.

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".

5. Form 2D

This form is to be completed by industrial applicants for new sources and new discharges of process wastewater. Those industrial facilities that discharge only non-process wastewater not regulated by an effluent limitation guideline or new source performance standards (NSPS), use Form 2E. 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 storm water runoff.

6. Form 2E

This form is to be completed by applicants for industrial facilities which discharge only non-process wastewater not regulated by an effluent limitation guideline or NSPS (primarily noncontact cooling water). It is not for use by dischargers of storm water runoff or by existing educational, medical, or commercial chemical laboratories. These facilities must use Form 2C or 2F.

- **Form 2E Testing Requirements/Waivers**

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

BOD
TSS
Fecal Coliform (if believed present or if sanitary waste is discharged)
Total Residual Chlorine (if used)
Oil & Grease
COD*
TOC*
Ammonia
Flow
pH (give range)
Temperature (winter and summer)

*For discharges of noncontact cooling water add these parameters.

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 storm water associated with industrial activity. (See 9 VAC 25-31-10 for the definition of storm water associated with industrial activity.) Form 2F can also be used for permitting discharges of storm water that are not included in the definition as long as the discharge is composed exclusively of storm water. Storm water runoff which occurs as sheet flow and does not discharge through a distinct outfall does not require completion of Form 2F or a permit.

Storm water 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 storm water and other types of discharges. See below for more information on Form 2F applicability.

- **Discharges consisting solely of storm water** associated with industrial activity require submission of Form 2F and Form 1.
- **Existing discharges consisting of storm water associated with industrial activity and process water** require submission of Form 2F, Form 2C, and Form 1.
- **Existing outfalls consisting of commingled storm water 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 storm water with sampling during a representative storm event.
- **Existing discharges consisting of storm water associated with industrial activity and nonprocess water** require submission of Form 2F, Form 2E, and Form 1.
- **Existing outfalls with commingled storm water associated with industrial activity and nonprocess water** require that Form 2E be used to characterize the nonprocess water with dry weather sampling and Form 2F be used to characterize the storm water with sampling during a representative storm event.
- **New or proposed discharges consisting of storm water associated with industrial activity and other industrial waste water** require submission of Form 2F, Form 2D, and Form 1. These discharges can be commingled or separate.

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.

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 storm water 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

This form may be required as part of an application submittal as an option to requiring water quality monitoring as a permit requirement.

9. Chlorine Demonstrations

For reissuances, if an industrial facility will require limits to meet bacteria standards for enterococci and the applicant proposes to demonstrate the standards are maintained through chlorine limitations during the application process, demonstration data and results and conclusions of the demonstration should be submitted with the application. For issuances, the data can be submitted with the application if available, or if there is no effluent to sample the data can be required as a permit condition (bacteria limits will apply until it is demonstrated that chlorine limits are sufficient to maintain enterococci criteria). The agency has already analyzed sufficient data to determine that chlorine limitations also maintain *E. coli* criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation. More information about the demonstration requirements appear under Industrial Special Conditions and “Chlorine Demonstration Requirements for Bacteria Limits” in section IN-3. For major permits or minors with an EPA approved TMDL that has a waste load allocation for bacteria for that facility chlorine demonstrations are not allowed. Although chlorine residual is still considered the primary assurance of adequate disinfection, bacteria limits must be placed in these permits.

D. Administrative Review of Application

1. Receipt of Application and Fee

a. Date stamp the permit application upon receipt. When fees are required, include copies of the Daily Deposit Receipt log in the RO permit file. 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) that Accounting sends to Permit staff *should be destroyed* once the "DEQ Daily Deposit Receipt Transaction" report can be verified and matched to a specific permit number or permit application to support a complete application determination.

b. Permit Fee Schedule (9VAC25-20-10 et seq.)

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. Intra-governmental transfers can be arranged for other state agencies requesting permits (VDOT, VDOC, etc). (Intra-governmental transfers do not show up on the receipt log sent by Finance.)

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.

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.

2. Application Review

a. Determine whether or not an application is administratively complete within **14 days** of receipt of the application. An application is considered administratively 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.

b. 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. See Section L, Application Comment Letter to Owner.

c. The RO has the authority, by 9VAC 25-31-100, to request additional information not identified on the application. The Public Notice Billing Information 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. This may also involve such items as Concept Engineering Reports (CER's), Plans and Specifications, Operation and Maintenance Manuals, stream sample results, or influent sample results.

d. 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.

e. A site inspection of the facility should be conducted by the permit writer prior to permit drafting. In the case of new permit issuances, it may be helpful to perform this inspection prior to deeming the application complete. See Section II E for additional information on site inspections.

3. Application Signatures

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

> 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.
>
> 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).
>
> 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 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 a complete application for reissuance, advise the regional compliance auditor. Provide the compliance auditor with a copy of the application deficiency letter. CEDS may be used to notify the compliance auditor.

E. Technical Review of Application

Review the application for technical completeness concurrently with the administrative review as much as possible. Technical reviews, especially those involving evaluation of land applications sites, may take up to 45 days after deeming the application administratively complete. 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 technical review reveals deficiencies and documents cannot be developed from the information provided, the application may be deemed incomplete.

1. Technical Details

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?

2. Site Inspection

Ensure that an inspection of 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 inspection 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 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.

Site inspections are not required for single family homes and for sewage discharges $\leq$ 1,000 gpd. However, even with these facilities, consider a site inspection in the case of discharges into protected or prohibited waters.

3. Permit Numbers

Once the application for a new or proposed discharge is determined to be complete, call OWP&CA to obtain a VPDES permit number.

4. Application Complete

Applications may be considered complete following the administrative and technical review process and receipt of all required information from the applicant. Application completeness in not dependent on the receipt of information from VDH. Once the application has been deemed complete, send the applicant an application complete letter. This letter may be generated by CEDS. See Section L for an example.

F. 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 may be concurrent. This should be done via email attachments or email using the ftp site. See L for sample letters and contacts.

1. Virginia Department of Health (VDH)

The VDH Office of Drinking Water Field Offices have **14 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.

2. VDH-Division of Shellfish Sanitation (DSS)

Send the application (municipals, industrials with 10% or more sewage, and Single Family Home General VPDES Permit Registrations) to the VDH-Division of Shellfish Sanitation (DSS) for 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 (9 VAC 25-260-270), unless the applicant voluntarily withdraws the application. If DSS comments that a proposed new or modified discharge will require a 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.

3. Virginia Marine Resources Commission (VMRC)

VMRC review is necessary for discharges (municipal and industrial with $\geq$ 10% sewage, based upon the long-term average flow), into shellfish waters, if the application involves a permit issuance or modification for increased discharge (plant expansion).

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.

4. 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 [DEQ] 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."

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), staff initiated modifications or minor modifications.

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. See Section L for an example notification letter. NOTE: These notices may be sent via email but only if the locality officials have indicated that email notification is acceptable to them (this acceptance must be kept on file) and this acceptability of email notification must be verified with any subsequent notifications.

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 topo map from the application that identifies the discharge location. Alternately, it may be possible to obtain riparian land owner 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. See Section L for an example request letter. Notification to the riparian owners should be via regular mail primarily because the information is not available with the tax commissioner.

If the information is not received after 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

Check the DGIF or DCR Reissuance Review list for the year (on DEQNET) to see if they have requested to review the permit at reissuance for threatened and endangered species coordination. If the facility is on the list, screen the receiving stream for threatened and endangered species using the DGIF 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 DGIF) or near lat/long coordinates and mixing zone (for DCR), begin coordination with DGIF, DCR and USFWS as appropriate (see coordination form in section

L). All issuances should be screened at this point also and begin coordination if threatened and endangered aquatic species are present. See GM No. 07-2007 for additional details.

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 storm water 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 OWP&CA if there are questions.

8. Land Application for Municipals

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

G. Continuation of Expiring Permits

(9VAC25-31-70)

Permits expire at the end of their term. However, expiring permits are automatically continued pending issuance of a new permit if:

a. The permittee has submitted a timely and complete application as required by the regulations, unless the Board has given permission for a later submittal, which cannot extend beyond the expiration date of the original permit; and

b. The Board is unable, through no fault of the permittee, to issue a new permit before the expiration date of the previous permit.

c. Coordinate with Central Office (Fred Cunningham) on administratively continued permits that are controversial.

H. 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 are in section III F of this manual. Any questions about procedures should be directed to Cindy Berndt, Office of Regulatory Affairs.

1. Reasons for new permit denial

According to 9VAC 25-31-50 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:

- 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 determines permit issuance to be in the public interest; or
- 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:

- There are sufficient remaining pollutant load allocations to allow for the discharge; and
- The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards. The Board may waive the submission of information by the new source or new discharger required by this subdivision if the Board 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 in Section L.

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 shown in Section L.

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. (9VAC25-31-260 B) Permit fees are not refunded when applications are denied. The Regional Director should concur on the tentative decision to deny prior to the publishing of the public notice.

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. The intent to deny a permit application must be public noticed. Follow the format for a public notice for a permit issuance, except that the PN states that the Board does <u>not</u> intend to issue the permit to the applicant. The reasons for denial should be clearly listed in the notice.

The decision to hold a public hearing and public hearing procedures have changed as of December 2008. Because of this, it is recommended that public notice for intent to deny 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 III F to see 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. Comments from the hearing will be presented to the Board for consideration. For an explanation and description of the Hearing Procedures, see Section III F.

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:

- EPA (for Major Facilities, if denial was after public notice of a draft permit)
- VDH-RO (for municipals only)

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

a. After the Board meeting, return the denial package to the applicant with a copy of the minute from the Board meeting 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:

- EPA (for Major Facilities, if the hearing followed public notice of a draft permit)
- VDH-RO (for municipals only)

7. Applicant Petition Procedures

If an applicant wants to appeal the Board's decision, he may petition for a separate formal hearing before the Board. The petition must be filed within **30 days** following the denial decision, and according to the requirements of the Board's 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. (SWCL §§62.1-44.16, 62.1-44.17, 62.1-44.19, 9VAC 25-31-70 C and 9VAC 25-31-260 B).

Send the Notice of Intent to Deny letter under the authority in 9VAC 25-31-70 C. If the applicant signs and returns the application withdrawal form, let the existing permit expire. This ends the process without Board action or public notice.

If the permittee does not return the signed form, contact the Regulatory Affairs Office as this may require a more formal process than a new application denial.

SECTION III
ISSUANCE AND REISSUANCE PROCEDURES

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A. Permit Drafting

The issuance/reissuance of VPDES permits is an action that is performed entirely at the Regional Office. Headquarters support groups such as OWP&CA are available for consultation on permitting technical and procedural issues, but their concurrence on permit actions is neither expected nor required. However, several areas of permit processing may have headquarters involvement. These include involvement of OWP&CA as EPA liaison and mailing list coordination, OWQS assistance on water quality variances and DPL 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:

- Storm Water from Industrial Activity; Regulation: 9VAC25-151
- Cooling Water Discharges; Regulation: 9VAC25-196
- Car Washes; 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
- Coin Operated Laundries; Regulation 9VAC25-810

(General permits for Storm Water from Construction Activity and Storm Water from Small MS4s are now issued by the Department of Conservation and Recreation and applicants should be directed to that agency.)

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 **120 days** as the standard for completion of permit processing for new discharges of industrial waste, sewage and other wastes. The **120 day** 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 management review of the final permit package prior to the issuance or reissuance deadline.

d. Note the date of the complete application on the tracking sheet. Inform the applicant of the application complete status by sending an Application Complete Letter (refer to Section L for an example).

e. Problems noted anytime during the permitting process that seriously contradict the application may be cause to return the application to the owner. If this occurs, the 120 day clock stops and starts at zero when the issue is resolved.

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, Fact Sheets, and applications for review and concurrence.

a. For 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. For industrial facilities, any facility that scores 80 or more points on the NPDES Permit Rating Worksheet is considered a major.

c. Treat changes to the permit status as follows:

Industrial – For previous majors which the worksheet now indicates as minors (<80 points): Continue to treat the permit as major through the submittal of the application, draft permit, and Fact Sheet to EPA. Include a copy of the rating worksheet in the draft permit package. Indicate the status change in the draft permit transmittal letter. EPA will then reclassify the permit as minor and discontinue their review. At this point, the permit can be processed as a minor permit.

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 worth of DMRs and the last inspection report in the draft permit package.

Municipal – For previous majors being downgraded to minors, send the draft package to EPA and indicate the change in status and flow in the transmittal letter. EPA will then reclassify the permit as minor and discontinue their review. At this point, the permit can be processed as a minor permit.

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 to EPA. Indicate the change in status and flow to EPA in the draft permit transmittal letter and include a copy of the last 3 months worth of DMRs and the last inspection report.

All - Copy OWP&CA 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. Complete NPDES Permit Rating Worksheet

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 for additional information on the Rating Worksheet.

4. Outfall Numbering

Number outfalls as follows:

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

b. Begin internal 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. Designate outfalls comprised solely of storm water associated with a regulated industrial activity in numeric order with the other outfalls (i.e. 001, 002 etc.). For outfalls which have discharges of process water commingled with storm water where the storm water regulations dictate sampling of the outfall during a storm event, designate the outfall as indicated in **a.** above for normal sampling and substitute the leading 0 with a 9 for the storm event sampling. For example, outfall 001 is designated 901 for storm event monitoring. Use this mechanism for DMR development also.

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 Sxx outfall 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.

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.

5. Fact Sheet Preparation

(9 VAC 25-31-280)

a. 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 Section MN for municipals or Section IN for industrials. These examples follow the FS content requirements of 9 VAC 25-31-280 B.

b. Use standardized language identified by OIS for sample units, sample frequencies, sample types, tiering processes and parameter codes in the FS.

6. Effluent Limitations

Establish permit effluent limitations, standards or conditions in compliance with all applicable Effluent Limitations Guidelines, Water Quality Standards and Best Professional Judgement (9 VAC 25-31-220 and 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 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. Apply the more stringent of the two values.

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.

a. Effluent Limitations Guidelines (ELG's)

ELG's are established by EPA regulations and are used when they will not violate water quality standards. These discharges are called "technology-based". In some cases, particularly for toxic pollutants, technology-based limits may also be reached as a result of in-process controls during production. The applicable parts of the federal regulations are listed in the VPDES permit regulation at 9 VAC 25-31-30 A and in Section IN-2 of this manual, but as these documents may not be updated with recently promulgated ELGs 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

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

(2) 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.

(3) 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.

(4) 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.

b. Water Quality Standards (WQS) (9 VAC 25-260-00 et seq.)

Many situations require the development of limitations according to water quality considerations.

(1) Water quality based 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. 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. See the latest OWP&CA technical guidance for more information. It will be necessary in most cases for the region to determine critical stream flows in order to

calculate water quality based limits. This information is no longer calculated at the central office but OWP&CA may be contacted for technical assistance if necessary.

(2) Evaluate mixing zones and calculate wasteload allocations/permit limits using the following standard DEQ protocols. Calculate limits for all materials 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.EXE (for flowing streams only) and STATS.EXE.

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 in order to provide the basis for the limits in the new permit.

(a) If a model other than one identified in (2) above is utilized, transmit the stream model to OWP&CA for review. OWP&CA will review all stream analyses submitted and provide comments in writing, within **14 days**. The review will be completed prior to continuing permit processing.

(b) If the same model used in the previous issuance is used for the reissuance, OWP&CA review is not required, unless the model is outdated. Contact OWP&CA for more information on model applicability.

(c) OWP&CA review is not required if a consultant utilizes any of the models identified in (2) 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 OWP&CA for review.

(3) 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.

(4) **Antidegradation** (9 VAC 25-260-30) Whenever a discharge permit is issued, reissued, or modified, a waterbody antidegradation review must be performed on the discharge and documented in the Fact Sheet. Consult the most recent guidance and the Water Quality Standards for more information. This review is also required for new sources or new discharges to impaired waters (9 VAC 25-31-50 C 9).

(5) **Antibacksliding** (9 VAC 25-31-220 L) Permits may not be renewed, reissued or modified to contain effluent limitations which are less stringent than the comparable effluent limits in the previous permit except in specific instances. In no event may a less stringent limit result in a violation of an applicable water quality standard. Consult the latest guidance on antibacksliding for details about exceptions.

Antibacksliding does not generally apply to BPJ limits. The only restriction on backsliding from BPJ limits is that they cannot be made less stringent if the reason for the change is newer, less stringent effluent guidelines promulgated according to Section 304(b) of the Clean Water Act. These changes should be fully documented in the fact sheet.

(6) For storm water 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 affects.

c. Secondary Treatment Regulation

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. In general, the discharge from secondary treatment facilities must fall within the pH range of 6-9, and meet BOD_5 and TSS limits of 30 mg/l monthly average and 45 mg/l weekly average. All POTW effluents must, at a minimum, meet these effluent limitations for BOD, TSS and pH. Note that for BOD and TSS the guidelines impose an 85% removal standard as well as numeric limitations. The 85% removal standard pertains to the monthly average concentration. This requirement for 85% removal must be specified in the permit for POTWs unless there is a more stringent water quality-based limit and that limit is documented in the fact sheet to result in at least 85% removal. It is recommended that POTW permits that have only secondary treatment limits include a footnote on the Part I A page that requires at least 85% removal based on monthly average concentration. The footnote should be "At least 85% removal for BOD and TSS average concentrations must be attained for this effluent."

Additionally, limits for facilities considered "equivalent to secondary" (typically trickling filters and lagoons) are also delineated. See Section MN for more discussion on equivalent to secondary requirements.

d. Best Professional Judgment (BPJ)

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 Board 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 Best Professional Judgment (BPJ) limits. Virginia regulations don't have any requirements as to what basis needs to be considered when a BPJ 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 permit limit that is needed establish a BPJ or to protect the quality and beneficial uses of a specific receiving stream.

BPJ 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*. BPJ 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.

This guidance will not address further those BPJ limits that are adopted as regulations since the proper application is generally specified in the regulation.

This guidance focuses on the BPJ limit that is developed for a specific facility. In this regard, a BPJ limit 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.

The agency often issues guidance documents that are intended to assist with determining BPJ limits. In many cases, these documents address a category of discharger and contain recommendations regarding a consensus of agency opinion and judgment regarding the substances that should be limited and suggests numerical values. Such documents are guidance only and are not regulatory nor are they mandatory. 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 BPJ 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 his or her 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 BPJ 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.

e. 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 <u>not</u> authorized to grant FDF variances; however, EPA may grant an FDF variance. Consult OWP&CA for assistance on FDF variance requests.

(3) Monitoring waivers (9 VAC 25-31-220 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 in order for it to continue. 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.

f. 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 (1) through (5) below. See the Generic Public Notice format in Section III F.

(1) 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 assure 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 assure 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.

(2) Halogen Ban Variances (socio-economic demonstrations): Halogen ban variances are described in 9 VAC 25-260-110 and in Section MN.

(3) Water Effect Ratio (WER) (9 VAC 25-260-140 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. OWQS is responsible for reviewing and approving the WER study. 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 is considered a permanent change to the water quality criterion. It 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.

Changes to stream use designations, halogen ban variances or establishing water effect ratios should follow these basic procedures.

A completed use attainability study, halogen ban variance (socio-economic demonstration), or WER 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 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, halogen ban variance or water effect ratio essentially changes the Water Quality Standards, EPA must approve all of these 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 Section L 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. (A WER is a permanent change to the criterion.) 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 variances from water quality-based 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.

(4) 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.

(5) Metals Translator for Metals Limits: Water quality-based limits for heavy metals are to be written as total recoverable whenever practicable (9 VAC 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 OWQS for details on chemical translator studies. This permit provision does not have to be specifically identified in the public notice.

g. TMDL Limits

New or modified VPDES permits must be consistent with 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 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 three options available to process a permit or modification that is affected by a TMDL WLA. In all cases, the permit staff and the TMDL staff must coordinate activities to ensure that no permit is issued in violation of the TMDL.

(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:

(a) 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.

(b) 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 05-2011.

(c) 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).

(d) After EPA approval (preliminary approval for 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 05-2011.

(e) Obtain final approval for the TMDL modification from EPA TMDL staff upon completion of the comment period.

(f) 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.

(g) Issue the final permit, deferring issuance until after the regulatory amendment has been approved by the Board.

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

(a) 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.

(b) 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.

(c) 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.

7. 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 and IN. 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.

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 the EPA document, for routine consideration of reduced monitoring frequency during processing of all VPDES permit reissuance applications. The three steps of the protocol are:

- Upon receipt of an application for permit reissuance, determine if the facility qualifies for reduced monitoring.
- Determine the degree of monitoring reduction that should be allowed.
- 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.

8. Permit Special Conditions

a. Standard Special Conditions

9 VAC 25-31-190, 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 Section MN for the language for standard municipal special conditions and Section IN for industrial permit standard special conditions. 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 OWP&CA before modifying the language of Part II.

b. Toxics Management Program (TMP)

The guidance on the toxics management program says when a TMP may be needed. If a permit requires a TMP, develop the TMP Special Condition according to the latest TMP Implementation Guidance and with the assistance of the regional TMP 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 (9 VAC 25-31-800.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:

(A) Pass Through or Interfere with the operation of the POTW **or**
(B) 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 IU survey and be evaluated for Pretreatment programs. The 40,000 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, which are included in MN-3 and published in Virginia's Pretreatment Procedures Manual. 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:

- insufficient receiving stream water quality data
- site inspections/test results provoke suspicion of a water quality violation
- significant change in stream flow frequency data (i.e. 7Q10 value)
- modeling controversy regarding relationship and/or effects of TKN and NH_3-N

Instream monitoring is incorporated into the VPDES permit Part I B as a Special Condition. Refer to Section MN and Section IN for further information.

e. Ground Water The purpose of this condition is to protect state waters in accordance with the ground water standards in 9-VAC 25-260-190. Ground water 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 ground water impacts are suspected, the permit writer should require the permittee to submit a ground water monitoring plan through a permit special condition. This condition is incorporated into Part I under Other Special Conditions of the permit. Decisions on the need for remedial action can be made after the ground water monitoring data are submitted. The language for the special condition is in Sections MN and IN.

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. The guidance on implementing the sludge requirements can be found in Section MN.

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. This monitoring should be required whenever it is necessary to characterize a wastewater discharge with respect to water quality criteria and the required EPA application

forms do not provide the information you need. As a minimum, it is recommended that Attachment A monitoring be required for new, expanded or altered discharges from municipal facilities with a design flow over 40,000 gpd and industrial permits with a TMP. Facility discharge variability should be evaluated and if necessary the monitoring should be required at every reissuance. The entire list of water quality parameters that appear in the Water Quality Criteria Monitoring form shown in sections IN and MN does not have to be included in every case. The parameter list should be edited based on the type of discharge (municipal, industrial, type of industry, etc.), receiving waters (fresh water, saltwater, public water supply, shellfish waters, etc.) and previous data submittals. Monitoring data that is submitted as part of an application may be used to satisfy this monitoring requirement. The monitoring data is for evaluation of the need for limits. It is not necessary to require monitoring for parameters that will already be limited or monitored in the permit based on the type of discharge, receiving water or other policies or procedures.

The format for a special condition can be found in Sections MN and IN. A reporting form that goes with the special condition is also in those sections. 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. Storm Water.

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

Under **Phase 1**, five types of storm water discharges are required to be permitted. They are:

- Discharges which were issued a permit associated entirely with storm water prior to February 4, 1987;
- Discharges associated with industrial activity;
- Discharges from municipal separate storm sewer systems serving a population of 250,000 or more;
- Discharges from municipal separate storm sewer systems serving a population of 100,000, but less than 250,000; and
- Discharges that contribute to a violation of water quality standards.

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 storm water permitting requirements by way of a "No Exposure" certification.

DEQ first incorporated EPA's storm water regulations into the VPDES Permit Regulation (9 VAC 25-31) in the mid-'90s. We have been issuing industrial activity storm water permits (including construction site permits) since 1993, and MS4 permits since 1996. In 2004, the General Assembly transferred the MS4 and construction site storm water permitting responsibilities from DEQ to the Department of Conservation and Recreation (DCR). EPA approved DCR's program on December 30, 2004, and DCR's program became effective on January 29, 2005. DEQ remains responsible for industrial activity storm water discharge permitting (excluding construction sites).

Ten categories of industrial activity are required to apply for storm water discharge permits from DEQ. Basically, the term "industrial activity" now covers manufacturing facilities; hazardous waste TSD facilities; landfills that receive or have received industrial wastes; recycling facilities; steam electric power generating facilities; transportation facilities; and domestic sewage treatment plants greater than 1.0 MGD (or with an approved pretreatment program). (See "Selected Definitions" below for the exact categorical descriptions).

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 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 industrial activity storm water must contain the requirement for the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). On an industry sector-specific basis, these permits may also be required to contain technology-based effluent limitations and/or storm water monitoring for pollutants of concern. **Detailed guidance on developing storm water management conditions for municipal and industrial permits can be found in Sections IN and MN.** 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 storm water discharges should be similar to those applicable under the general permit.

(1) Selected Definitions. The VPDES Permit Regulation at 9 VAC 25-31-10, defines "storm water", and "storm water discharge associated with industrial activity" as follows:

"**Storm water**" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"**Storm water discharge associated with industrial activity**" means the discharge from any conveyance which is used for collecting and conveying storm water and which 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. For the categories of industries identified in this definition, the term includes, but is not limited to, storm water 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 waste waters; 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 storm water. 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 storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, state, or municipally owned or operated that meet the description of the facilities listed in paragraphs 1 - 10 of this definition) include those facilities designated under the provisions of 9 VAC 25-31-120 paragraph A 1 c. The following categories of facilities are considered to be engaging in industrial activity for purposes of this subsection:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (except facilities with toxic pollutant effluent standards which are exempted under category 10;
2. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;
3. Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) 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 Part 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal 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 storm water 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/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);

4. Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under subtitle C of RCRA;

5. 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 subsection) including those that are subject to regulation under subtitle D of RCRA;

6. 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 5015 and 5093;

7. Steam electric power generating facilities, including coal handling sites;

8. Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221 - 25), 43, 44, 45, and 5171 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 operations, airport deicing operations, or which are otherwise identified under paragraphs 1 - 7 or 9 and 10 of this definition are associated with industrial activity;

9. 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 are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program. 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 Section 405 of the CWA;

10. Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221 – 25.

(2) Exceptions and Clarifications. There are several exceptions and clarifications to discuss relative to the above definitions:

(a) The storm water 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 storm water 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) Storm water discharges to ground water are exempt from the permitting requirements, unless there is a hydrological connection between the ground water and a nearby surface waterbody.

(f) State and federal facilities (including facilities classified as SIC Code 9711 – National Defense), regardless of their size, are required to obtain permit coverage for those operations at the facility which discharge storm water associated with industrial activity.

(3) Permit Options. There are three options for satisfying the VPDES permitting requirements for facilities discharging storm water 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 storm water discharges even if they have an individual permit for their non-storm water discharges. The current industrial general permit, VAR05, became effective on July 1, 2009. 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, ***SWGP-VAR05-RS*** (7/09), or they may submit the information to us 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 storm water requirements should be incorporated into that permit. To obtain coverage, facilities must submit ***EPA Forms 1 and 2F***. Form 2F (the storm water form) requires the facility to sample at least one representative storm event and submit the results with the application (NOTE - the region can waiver 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 storm water permit can be exempted from VPDES permitting if they certify that all their storm water discharges meet the definition of "no exposure". If all industrial materials and activities at a facility are protected by a storm resistant cover so that they are not exposed to rain, snow, snowmelt, or runoff, then the facility can qualify for the "no exposure" exemption. Facilities should use the DEQ form ***SW-NEC*** (8/09) 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.

(4) Permit Requirements.

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

There are eight types of facilities that are subject to storm water 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 storm water 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 storm water discharges. This monitoring is called "analytical monitoring" or "benchmark monitoring" and it also is placed on the Part I A page for the storm water 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 storm water general permit, VAR05, they can be dropped from the individual permit for this facility.

The applicable storm water limits and monitoring requirements are to be applied at outfalls that are comprised solely of storm water or that have storm water 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 storm water associated with industrial activity must develop and implement a storm water pollution prevention plan (SWPPP). To accomplish this, the permit writer should include a permit special condition section entitled "Storm Water Management". There is generic SWPPP language that applies to all industrial storm water discharges. In addition, there are some industrial sectors which have specific requirements that are added to the generic SWPPP. 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 Section IN The storm water management special condition should be the last sequential Part I "*x*" after the other requirements and special conditions have been placed in the permit.

(b) Municipal Storm Water - Municipally Owned Facilities having Storm Water Associated with Industrial Activity. Municipally owned industrial facilities may be subject to the storm water management special condition due to their classification as generating "storm water associated with industrial activity".

Category (9) 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. Storm water permit special conditions for these facilities are detailed in **Section MN**.

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

9. Draft Permit Preparation

Upon completion of the Fact Sheet, develop the draft permit using the applicable format in either Section MN or Section IN (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. Permit Page Header

Each permit page after the cover page has the following header in the upper right corner. Permit writers should ensure that the header is present and that the appropriate permit number and Part and Page numbers are printed.

Permit No. VA00**XXXXX**
Part I
Page of

b. 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.

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.

All effluent limitations should be written using two significant figures except bacteriological limits, BOD limits WET limits or federal effluent guideline based limits that are expressed otherwise.

Any outfall comprised solely of storm water associated with a regulated industrial activity should be identified on a Part I A page to authorize the discharge of storm water only. An application waiver to sample one outfall as representative can be continued in the draft permit as follows: monitoring of solely storm water outfalls which are expected to have substantially similar characteristics can be rotated yearly among outfalls as long as all outfalls are monitored during the permit term. Accomplish this by adding appropriate language to the bottom of the Part I A. page for the solely storm water outfalls.

c. **Other Part I pages:** Label all other Part I pages sequentially beginning with "B". The recommended order for these pages is:

Part I B: Effluent Limitations and Monitoring Requirements for Total Residual Chlorine
Part I C: Special Conditions, includes all permit conditions not listed separately
Part I D: Sludge Management Plan, for municipal permits with large sludge conditions, otherwise, place in Part I C
Part I E: Pretreatment:
Part I F: Toxics Management Plan
Part I G: Storm Water Management
Part I H: Compliance Schedules
Attachment A Water Quality Monitoring

If an item is not used, the paragraph letter rolls to the next item on the list. Permit writers may expand or consolidate this recommended list as appropriate.

d. **Compliance Schedules:** Develop and include schedules of compliance in permits, when appropriate (9VAC25-31-250). See Sections IN and MN for formats and examples of compliance schedules. 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, but the permit can allow up to 5 years for compliance with new water quality-based limits (9 VAC 25-31-250 A 3).

(3) Time periods between progress reports cannot be more than one year apart.

(4) A schedule of compliance cannot extend beyond the effective term of the permit.

(5) Review enforcement files for existing enforcement actions/orders which may contain schedules.

10. Discharge Monitoring Report (DMR) Preparation

a. Using CEDS, develop a separate DMR for each outfall that requires monitoring and is listed on an effluent limitations page. The DMR should reflect the limitations and monitoring requirements (including TMP monitoring 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. When final limits are effective, have CEDS reprint the DMR to reflect the final limits and transmit it to the permittee. 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 DMR should match "NL" on the limits page. Where "NA" appears on the limits page, "******" should be on the DMR.

b. All permits require, at a minimum, once a year reporting of monitoring results (9 VAC 25-31-220 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 DMR.

For facilities not built that require 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 PCS is seamless with this option. To avoid monthly DMR via mail submittals, encourage permittees to participate in eDMR.

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 in accordance with Part IIC. 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 PCS coordinator (for majors) 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 as the regional compliance auditor will be required to delete the skeleton records on a monthly basis until discharge. For major permits, also notify the central office PCS 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. Refer these requests to enforcement.

c. 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 OWP&CA. OWP&CA will forward the request to OIS. OIS will create the parameter code and copy all regions and OWP&CA with the changes.

d. 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.

e. Identify Tiered DMR Parameter Codes: Take note of the following when developing tiered limits.

(1) 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.

(2) 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].

(3) 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.

f. DMR Parameter Codes for Chlorine

(1) 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 BPJ (see Sections IN-3 and MN-3 for examples). This is the primary DMR code for chlorine effluent limits and are not usually expressed as minima (those are used for determining adequate disinfection).

(2) 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.

(3) 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).

(4) Codes 165 Instantaneous residual maximum and 166 Instantaneous residual maximum technology – While popular codes among the staff, do not use without explanation in a comment in CEDS and in the fact sheet.

(5) 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.

g. CEDS/PCS 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 developed in Guidance Memo No. 05-2010, CEDS Data Entry Rules, are listed below. For more information please reference this guidance memo on DEQNET GM05-2010.CEDS_Data_Entry_Rules) If anyone finds problem areas that are not addressed below please pass them on to OWP&CA.

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: (Deleted)
Rule 8: 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 9: Check all the monthly check boxes regardless of reporting frequency unless there are seasonal parameters.
Rule 10: In compliance schedule events, DATE RECEIVED = the date that a compliance schedule requirement is received or met but not necessarily completed.
Rule 11: In compliance schedule events, DATE COMPLETED = date event is complete (all requirements met - may be the same as date received).
Rule 12: In compliance schedule events, DATE REVIEWED = date reviewed by appropriate DEQ staff.
Rule 13: Flag the "ADMINISTRATIVELY CONTINUED" box in the general information screen when permits are continued.
Rule 14: When representative outfalls are allowed note in the DMR comments section which outfalls are being sampled.
Rule 15: GIS information should be added under the GIS tab on the CEDS facility screen as well as on the outfall screen.
Rule 16: 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 table.

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 rules listed in Guidance Memo 05-2010, "CEDS Data Entry Rules". Rule 2 and 3 from the guidance, appearing below, apply as always.**

Rule 2: The MONITORING START DATE must be 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.

11. Public Notice Preparation

a. Public notice format:

Once the permit has been drafted, the permit writer should prepare the newspaper public notice. The example public notice found in this section contains the language that has been developed and authorized by the Policy Division in order to provide information that follows the intent of 9 VAC 25-31-290 D but is more easily understood by the public. 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 also be found on DEQNET at public_notice_templates

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of {treated}{wastewater}{storm water} into a water body in CITY/COUNTY, Virginia.
PUBLIC COMMENT PERIOD: MONTH DAY, YEAR to TIME {p.m.} on MONTH DAY, YEAR
PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – {Wastewater}{Storm water} issued by DEQ, under the authority of the State Water Control Board
APPLICANT NAME, ADDRESS AND PERMIT NUMBER: NAME OF APPLICANT; ADDRESS; NUMBER
{FACILITY NAME AND LOCATION: NAME; ADDRESS *NOTE TO WRITER: USE THIS IF INFO IS DIFFERENT FROM THE APPLICANT EXCEPT IN CASE OF VPDES DRAFT GENERAL PERMITS*}
{This facility is an {Environmental Enterprise}{Exemplary Environmental Enterprise}{Extraordinary Environmental Enterprise} participant in Virginia's Environmental Excellence Program.}
PROJECT DESCRIPTION: NAME OF APPLICANT has applied for {a new}{a modified}{reissuance of a} permit for the {public}{private} NAME OF FACILITY/NAME OF PROJECT. The applicant proposes to

release {cooling water, a type of wastewater}{treated sewage wastewaters} {from residential areas} {treated industrial wastewaters}{storm water}{at a rate of NUMBER AND UNIT (NOTE: SPELL OUT UNIT; OPTION IS FOR WASTEWATER)} into a water body. {The modification of the process would allow DESCRIPTION.} Sludge from the treatment process will be used DESCRIPTION. {The sludge will be disposed by DESCRIPTION.} The facility proposes to release the {cooling water}{treated sewage}{treated industrial wastewaters}{storm water} in the NAME OF RECEIVING STREAM in CITY/COUNTY in the NAME watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: {nutrients}{metals}{organic matter}{solids}.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: NAME; NAME OF REGIONAL OFFICE, STREET, {POSTAL ADDRESS IF DIFFERENT FROM STREET ADDRESS}, CITY, VA ZIP CODE; Phone: PHONE NUMBER; E-mail: E-MAIL ADDRESS; Fax: FAX NUMBER. The public may review the draft permit and application at the DEQ office named above {by appointment} or may request copies of the documents from the contact person listed above.

Additional Public Notice Information Required by Regulation in Specific Circumstances

If alternate thermal effluent limitations are proposed (9 VAC 25-31-290 D 3):
The discharge is subject to thermal effluent limitations, as required under Section 301 (or 306) of the Clean Water Act. A request for less stringent thermal effluent limitations has been made and is incorporated into the proposed permit, as allowed by the Law and Section 316(a) of the Act.

If a Section 316(a) variance has been requested:
The applicant has filed for an early screening request to obtain a thermal effluent limitation variance as allowed by Section 316(a) of the Clean Water Act.

If a use designation variance, halogen ban variance or water effect ratio has been requested or is proposed (9 VAC 25-260-140 E and F):
The discharge is subject to a [**(PARAMETER) concentration limitation OR halogen ban**] based on the Water Quality Standards regulation. A [**variance OR water effect ratio]** for **[(PARAMETER) OR the halogen OR chlorine ban**] has been approved by the Department based on procedures set forth in [P**ICK ONE OF THE FOLLOWING: 9 VAC 25-260-140 E (for variances) OR 9 VAC 25-260-140 F (for WERs) OR 9 VAC 25-260-110 (for halogen ban)**].

If PN is for a Revoke and Reissuance:
This permit is being issued for a full five year term and will supersede the previous VPDES permit no. VA00**00000**.

b. 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 by the Policy Division, again in an attempt 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., nutrients, metals, organic matter, solids, organics) with the associated quantities listed as "amounts that protect water quality".

The public notice 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.

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 for outside review on the public ftp site ftp://ftp.deq.virginia.gov/wps (see OWP&CA for instructions) 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 ftp site link (e.g. ftp://ftp.deq.virginia.gov/wps/EPA/SWRO/VA0026298/) reference the ftp site link in an email. 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. Preferably 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 in the regional office should evaluate the permit package to assure 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. Regional inspection staff may also be useful in identifying potential problems with implementing the permit.

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 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. 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. OWP&CA Review

The staff of OWP&CA is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to OWP&CA for review and indicate which program areas (technical, TMP, pretreatment, storm water, groundwater, etc.) need review. Consult OWP&CA staff for additional guidance as needed.

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 (Major permits, permits for minor discharges with an EPA approved TMDL where the facility contains an effluent limit based on the TMDL and SDL permits) (40 CFR 123.44; 9 VAC 25-31-50 C)

An EPA Transmittal Checklist must be prepared for all VPDES permits that are to be reviewed by EPA. In addition, this checklist should be prepared for all individual VPDES permits in order to assure that the

permits address mandatory requirements, are consistent among the regional offices and in order to assist in-house reviews.

a. After completing the EPA Transmittal Checklist attach it to the fact sheet. Forward to EPA the checklist, a copy of the application, draft permit and Fact Sheet for all:

- major facilities
- minors discharging to waters with an EPA approved TMDL if the permit contains an effluent limit based on the TMDL
- facilities that are listed on the Chesapeake Bay Significant Dischargers List (SDL)

This may be concurrent with the submittal of this information to VDH. OWP&CA will still be the main point of contact for EPA, but it is no longer necessary to send a copy of the EPA draft transmittal package to OWP&CA. OWP&CA will request an electronic copy of specific draft package items from the region if necessary for discussions with EPA. The region will submit the final permit to EPA (see Section III.D.3). EPA will review the permit to assure that the effluent limits comply with the CWA requirements and to assure that proper procedures were followed in drafting the permit. For the TMDL minors, EPA will only review the TMDL issues. A format for the Transmittal Letter to EPA and the checklist are provided in Section L.

In order to maintain statewide consistency, contact with EPA should be coordinated between OWP&CA and the Regional Office. The liaison role for OWP&CA is intended to assure that the agency speaks consistently about our regulations and procedures. In cases involving EPA, it is appropriate for OWP&CA 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 OWP&CA staff should be notified in advance and either participate in the discussion or be kept apprised of the discussion. OWP&CA will process requests for EPA assistance quickly and they will communicate information from EPA to the regional offices in a full and timely way.

Prior to 2009, EPA had agreed to reduced review periods for certain permits. While we can still negotiate this with EPA on a permit by permit basis, assume all permits to EPA will have a 30-day review as described below in III.B.4.b. EPA is generally willing to work with us on shorter review periods when needed. Contact OWP&CA for assistance on shorter review periods for a specific permit.

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, contact OWP&CA for follow-up with EPA. Comments and/or objections by EPA will be specified in writing and directed to OWP&CA. OWP&CA will coordinate the response to EPA.

c. The RO compiles the required additional information for the draft permit or corrections to the Fact Sheet and application, and immediately forwards the information to OWP&CA for concurrence and routing to EPA. EPA will advise OWP&CA in writing if the deficiencies have or have not been corrected to the EPA's satisfaction.

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

e. If EPA comments on a permit in writing and those comments are not incorporated into the permit, either incorporate EPA's comments into the Response To Comments memo and send a copy 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 permit is issued.

5. Owner Review

(9 VAC 25-31-290 C)

a. Forward a complete copy of the entire draft permit and Fact Sheet to the owner after receiving EPA concurrence (for major permits). Courtesy copies of draft permits may be sent to the owner prior to EPA review as long as they understand that EPA comments may result in changes.

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 Information 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 Information Form. There is also an optional procedure for owners that do the newspaper publication (see C.2 below) and no Public Notice Billing Information Form is needed. The sample transmittal letters in Section L for all the situations described (Public Notice Billing Information 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 information Form with the application, send it with the draft. A sample transmittal letter is in Section L. 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 Information 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 Central Office (Fred Cunningham) on administratively continued permits that are controversial. The region may decide to stop negotiations since the application is recorded as incomplete without the Billing Information 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.

d. 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 require review by other appropriate agencies.

C. Public Participation

1. Newspaper Public Notice

(§§ 62.1-44.16 and 62.1-44.19; 9 VAC 25-31-290)

a. Upon owner concurrence, give the draft permit 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. Contact DPL personnel for information concerning acceptable newspapers. The Transmittal Letter to the Newspaper and the Public Notice Verification Form are found in Section L.

b. The VPDES Permit Regulation at 9 VAC 25-31-290 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. These requests are not processed as requests under the Freedom of Information Act (FOIA). 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 so 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. Optional Public Notice Procedures (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. (See Section L, Draft Permit/Optional PN Letter to Owner).

3. 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 9 VAC 25-31-290 for the specific requirements concerning mailing lists for VPDES permits.

a. Send an electronic copy of the public notice to OWP&CA for inclusion on the mailing list at the same time the public notice is submitted to the newspaper. This list is maintained at headquarters by OWP&CA staff. The mailing list is distributed once every two weeks by OWP&CA. This procedural step will also trigger publication on the DEQ website since public notices received by OWP&CA for the permit mailing list will be forwarded to the DEQ waterweb contact for posting.

When using the optional PN procedure, send a copy of the public notice to OWP&CA list at the same time the public notice package is sent to the owner.

b. 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.

c. The mailing list is the mechanism by which the EPA (for minor permits), DGIF, 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.

d. Place a copy of the mailing list page(s) with the notification of permit action in the permit file.

4. Local Government Notification

As required by the State Water Control Law Section 62.1-44.15:01, the permit public notice must be mailed 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) <u>and</u> 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 should be sent to each of the local officials rather than a copy of the one sent to the newspapers or other agencies. This mailing should occur when the permit public notice is sent to the newspaper and the OWP&CA 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 to the localities do not have to be sent by certified mail. The regions should, however, document the fact that they sent the letters by keeping copies in their permit files. NOTE: These notices may be sent via email but only if the locality officials have indicated that email notification is acceptable to them (this acceptance must be kept on file) and this acceptability of email notification must be verified with each reissuance.

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 Section L for an example letter.

5. 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.

6. Other Agency Comments

(9 VAC 25-31-330)

a. Address comments from the Department of Game and Inland Fisheries 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.

7. Public Hearing

It is very important these exact procedures are followed as deviating from the procedures could result in litigation. Details of public hearing procedures are in section III F of this manual. Any questions about procedures should be directed to Cindy Berndt, Office of Regulatory Affairs.

a. In accordance with 9VAC25-31-310 (Public Hearings), 9VAC25-230 (Procedural Rule No. 1 – Public and Formal Hearing Procedures) and §62.1-44.15:02, action relative to a discharge proposal is generally delayed and a public hearing held when a public hearing is required by statute or the Regional Office (Originating Unit - OU) makes a determination as to whether the responses and requests received during the permit public comment period meet the following criteria:

(1) That there is significant public interest in the issuance, reissuance, denial, modification or termination of the permit in question as evidenced by receipt of a minimum of **25 individual requests** for a public hearing,

(2) That the requestors raise substantial, disputed issues relevant to the issuance, reissuance, denial, modification or termination of the permit in question, and

(3) That the action requested by the interested parties is not on its face inconsistent with, or in violation of the SWCL, federal law or any regulation promulgated thereunder.

b. The Regional Director may make the recommendation to hold a public hearing based on hearing requests from the public or the owner or at his discretion based on substantial issues raised during the comment period. The Regional Director is responsible for tracking the public hearing request and making the recommendation as to whether a public hearing is appropriate. The Regional Office may want to involve headquarters support groups if the hearing request involves disputed issues pertinent to them. See section III F 1 for determining the need for hearing.

c. If there are less than 25 individual requests for a public hearing, the permit is the Department's to decide and the OU may proceed to review and consider public comments and develop recommended final action on the permit. However, the OU is encouraged to contact requesters to discuss and attempt to resolve the requester's issues. This should occur within the 30 day public notice comment period. Also, the OU is encouraged, if there are several requests for a public hearing but less than 25, to schedule a public meeting in the locality to educate and explain the permit to the public. If a public meeting is to be held, the permit should not be issued until after the public meeting in order to be able to make appropriate changes to the permit based on the information received at the public meeting.

d. If at least 25 individual requests for a public hearing are received, the OU will proceed under subdivision F. 2 for authorization to convene or deny a hearing. The OU may contact the requestors to attempt to resolve issue and, if issues are resolved, can ask that requests be withdrawn. Within **30 days** after the public notice expires, advise the persons requesting the hearing in writing of the decision to either grant or deny a hearing. This option can also include a public meeting in the locality. If a public meeting is to be held, the permit should not be issued until after the public meeting in order to be able to make appropriate changes to the permit based on the information received at the public meeting.

The permit public comment period is automatically extended to the end of any public hearing comment period.

e. The applicant or permittee may request a public hearing under the following circumstances:

(1) Prior to the comment period for the draft permit in order to public notice the comment period for both the draft permit and the public hearing concurrently and within the same notice. This may occur when, for example, the facility or activity to be authorized by the draft permit is controversial, or for other cause and the applicant or permittee wishes to expedite the permit action. See F.3 for more information regarding arrangements for public hearings.

(2) Up to 30 days after the permit is issued (§62.1-44.25). If the permit was mailed to the owner, add 3 days to this.

f. When a public hearing is approved, the RO will make public notice of the hearing and make arrangements to hold the hearing. There must be at least 30 days public notice prior to the hearing date and the hearing record must be held open for at least 15 days after the hearing.

A public hearing requires the same notice as a draft permit (9VAC25-31-310 A 3), including publication for two successive weeks in a local newspaper.

g. Once a hearing is scheduled, the RO is responsible for preparing and making the staff presentation. Follow the Hearing Procedures in subsection F below.

h. 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 II H 6 of this manual.

i. Give EPA the opportunity to comment on a major permit that has been revised as a result of a public hearing.

8. Response to Comments

(9 VAC 25-31-320)

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.

- 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.
- 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.

D. 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 on the public ftp site ftp://ftp.deq.virginia.gov/wps (see OWP&CA for instructions) 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).** Forward the information to owners, EPA, VDH etc… using the public ftp site link (e.g. ftp://ftp.deq.virginia.gov/wps/EPA/SWRO/VA0026298/) via email and reference the link in the email.

1. Final Permit Package

Compile and forward the Final Permit Package for review and signatures 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 regional office 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 RO to the RD. All permits should be approved by the appropriate regional personnel including the Planning representative and Water Permit Manager. For an example final Permit Package Review Sheet, see Section L.

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 Regional Director. 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

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 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(5)). 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)) (at this time there is no email substitution for CERTIFIED MAIL):

- Transmittal Letter
- Permit
- DMR
- Response To Comments
- Fact Sheet if permit modified since draft package sent

b. EPA * Use link to public ftp site in an email

- Transmittal Letter
- Permit
- DMR
- Response To Comments
- Application (minor permits)
- Fact Sheet

c. RO & OWP&CA (follow Enterprise Content Management procedures)

- Transmittal Letter
- Permit
- DMR
- Response To Comments
- Fact Sheet
- EPA Checksheet
- Application

d. Regional Compliance Auditor:
- Transmittal Letter
- Permit
- DMR

* As of October 2009, all final permit packages for majors only go to Nancy Ford at EPA Region 3. In addition, all final major permits and minor permits that were approved by EPA (minors with applicable EPA approved TMDLs where the facility had an effluent limitation based on the TMDL) also go to Mark Smith at EPA Region 3. However, if the minor with a TMDL has not changed from draft to final, just send Mark Smith the signed cover page for that minor. Send him the entire final major permit regardless of changes from draft to final.

4. Update CEDS

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.

E. 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.

c. When a modification request falls within **15 months** of a permit expiration date, a Reissuance in Lieu of Modification letter may be sent (refer to Section L). Determination of the need for a revocation and reissuance versus a modification is generally done on a case specific basis. Contact OWP&CA 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 Section L, 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 State Water Control Board'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 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 OEC for appropriate action.

F. Public Hearing Procedures

PROCEDURES FOR INFORMAL PUBLIC HEARINGS – VPDES PERMIT ACTIONS

Set forth below are the internal 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 (see **Appendix B**), specific steps to be taken for authorizing and convening these hearings and acquiring Board action, and the responsibilities of the Originating Unit (OU) and other agency offices in the hearing process. In addition to the detailed procedures, there are several appendices which provide more guidance on certain steps in the hearing process, including **Appendix A.1** that provides a checklist-type listing of the hearing process. These procedures are to be used by all Water Division units. **It is very important these exact procedures are followed as deviating from the procedures could result in litigation. Cindy Berndt, Office of Regulatory Affairs should be contacted to ensure the correct procedures are followed.**

Key: PN - Public Notice OU - Originating Unit RAO – Regulatory Affairs Office

1. Determining Need for Hearing on Applications for Permits

a. OU reviews all responses to the public notice and requests for public hearing in order to make a recommendation on the need for a public hearing.

b. OU makes a determination as to whether the responses and requests meet the applicable provisions of Section II and III of **Appendix B**.

(1) If the responses and requests do not meet the provisions of Section II of **Appendix B**, but meet the provisions of Section III; the OU will proceed under subsection 2 below for authorization to deny holding a hearing.

(2) If the responses meet the applicable provisions of Section II of **Appendix B**, the OU will proceed under subsection 2 below for authorization to convene a hearing.

2. Authorization to Deny or Convene a Hearing (**NOTE**: Final decision on holding a public hearing must be made within 30 days after the close of the public comment period by the Director*. 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 or hearing denial memorandum to the Director* (see **Appendix A.2**) that includes:

(1) brief background (include a purpose statement, information on the project, draft permit development, compliance with notification requirements, etc.)

(2) copy of draft permit

(3) copy of draft permit fact sheet

(4) summary of comments and requests from public notices

(5) summary of OU's attempts to address comments from the public, including the OU's response to comments

(6) analysis of review of responses and requests as they apply to Sections II and III of **Appendix B**.

(7) recommendation for denying or holding a hearing

(8) rationale for recommendation (i.e., criteria in Sections II and III of Appendix B are not met)

(9) target date for Board action, if applicable

(10) copy of all responses received (if there are a large number of responses, send representative samples)

b. OU submits the hearing authorization or denial package electronically to the Chief Deputy, the Deputy Director and the RAO Director. (**NOTE:** the authorization package must be submitted within 21 days of the close of the comment period on the draft permit)

c. Chief Deputy, Deputy Director and RAO Director review package and consult with Director* with a decision from the Director* made within **30 days** of the close of the comment period on the draft permit. The Chief Deputy and Deputy Director are authorized to make the final decision to grant a public hearing, but the Director* retains the final decision authority to deny a public hearing.

d. Prior to the Director's tentative decision to deny a public hearing, the RAO Director will forward the package to the Board members in order to afford the Board members an opportunity to review the authorization package and provide comments to the Director. Within two days of a decision by the Director, Deputy Director or Chief Deputy to grant a public hearing, the RAO Director must forward~~s~~ the package to Board members in order to afford the Board members an opportunity to review the Director's decision.

e. Board members will be given **5 days** to individually advise the RAO Director that the member is requesting a meeting of the Board to be convened within **20 days** of the Director's* decision to grant or deny a public hearing in order to review such decision and determine by a majority vote of the Board whether or not to grant a public hearing or to delegate the permit to the Director* for his decision.

f. If the RAO Director receives requests from a majority (4) of the Board members, the RAO Director will, in consultation with the Board members, schedule a meeting of the Board such that at least **5 days** notice of the meeting can be provided to the public and a final decision on the granting or denying of the public hearing can be made within **20 days** after the Director's* decision to grant or deny a public hearing.

g. If the RAO Director does not receive requests from a majority of the Board members, the Director's* decision stands and the OU may proceed with the Director's* decision.

h. If the Director* or Board authorizes a public hearing, the permit is the Board's to decide and the OU will proceed to subdivision F.3 to arrange for a public hearing.

i. If the Director* or Board denies a public hearing, the permit is the Department's to decide and the OU may proceed with appropriate and necessary steps to finalize the permit action.

3. Arrangements for Public Hearing

a. OU determines legal requirements for notice of public hearing based on statutes and regulations.

b. OU notifies owner that a public hearing has been authorized and requests authorization to publish, with payment by owner, notice of hearing.

c. OU contacts the Board Member that is geographically nearest the hearing location to be the Hearing Officer and to arrange for a mutually acceptable date, time and place for the hearing that complies with all legal requirements. (NOTE: 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 information briefing immediately preceding the public hearing to provide information and answer questions. All informal public hearings authorized by the Director* or the Board shall be chaired by a Board member.)

d. OU provides to the owner notification that a public hearing has been authorized and information regarding the date, time and place of the public hearing; and encourages the owner to participate at the public hearing.
e. OU prepares draft using the public notice template in **Appendix C**).
f. OU establishes comment period start and end date in accordance with applicable laws and regulations. (**Note**: The public comment period for any permit subject to the locality particularly affected provisions of the water laws can not close in less than **15 days** after the public hearing.)
g. OU finalizes notice and forwards a copy to the RAO Director to post on the DEQ external website and the Commonwealth Calendar for the State of Virginia via the Virginia Regulatory Town Hall.
h. OU mails the notice to interested persons, including, but not limited to, those who requested a public hearing; any entities required by law or regulation to receive notice (see 9VAC25-31-290) and appropriate Agency staff (i.e., RAO).
i. OU sends notice to newspaper for publication in accordance with notice requirements in **Appendices B and C** and agency purchasing procedures, and verifies newspaper receipt and publication of notice.
j. RAO causes notice of hearing to be posted to the Virginia Regulatory Town Hall.
k. OU prepares opening remarks for Hearing Officer (See **Appendix E**).
l. OU prepares technical presentation (optional).
m. OU starts official hearing file (exhibit list--See **Appendices A.2 and D**). Originals should be used when possible. (**NOTE**: Material for the hearing file should include, at a minimum, the draft permit, responses to the public notice, hearing authorization memorandum, hearing notice certifications, and all technical documents necessary to support the staff's anticipated recommendation to the Board.)
n. OU sends public hearing package to Hearing Officer (See **Appendix A.2**) (opening remarks, travel arrangements, map, etc.) 10 days prior to hearing.
o. OU Director or appropriate staff member may contact the Hearing Officer approximately 7 days before the hearing in order to set up a meeting prior to the hearing, if the Hearing Officer deems necessary.

4. Conduct of 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. OU records proceedings or hires a court reporter and receives all written statements for inclusion in the hearing file. The OU may consider hiring a court reporter instead of recording the hearing if he OU has reason to believe the final decision will be challenged.
c. OU closes file in accordance with date specified in notice.

5. Final Action by Board (Note: A final decision regarding the permit action must be made within **90 days** of the close of the public hearing comment period. OU should assume a maximum of **45 days** after the close of the public hearing comment period to complete the material for this section.)

a. OU reviews all comments received relevant to the draft permit, including technical issues, and develops preliminary recommendations for concurrence by the OU Director.

b. OU prepares a package for the Board book. The package must include:

(1) A memorandum to the Board with a purpose statement, background information on the permit up through the authorization to convene a public hearing, and a staff person and contact information.

(2) A summary of the comments received and the agency response to the comments (The OU can do either a "by commenter" based summary or an "issue based" summary. If an "issue based" summary is prepared, a listing of the names of the commenters must be included as an attachment to the summary and each issue should include a listing of who made the comment).

(3) A statement that full copy of comments is available by contacting the appropriate staff.

(4) A copy of the draft permit. (**Note**: The draft permit fact sheet/engineering analysis is not required, but can be included if OU believes it is necessary for the particular permit.)

(5) A clear and concise statement of the legal basis and justification for the recommended action. (**Note**: The Policy Manager for water is available to assist staff in the development of this statement.)

c. The package is to be submitted for review to RAO as part of agenda development for the Board meeting and in accordance with the agenda development schedule released by the RAO.

d. Summary and recommendations are discussed, reviewed and concurred on by Director* through agenda review.

e. RAO sends material to Board members in accordance with established agenda development schedule.

f. OU prepares technical presentation and sends draft to appropriate Policy Manager at least **7 days** prior to meeting. Dry runs of staff presentations may be scheduled approximately **5 to 7 days** before the meeting.

g. OU presents permit and summary of the hearing to the Board and makes staff recommendations.

h. OU prepares minute setting forth Board action and submits to RAO in accordance with schedule established by RAO.

i. OU prepares documentation to carry out Board action for OU Director's signature (permit, transmittal letter, etc.) and transmits documents to owner and other appropriate parties.

6. Response to Comments and Files

a. OU maintains response to comments for public review.

b. OU maintains hearing file and recording/transcript of public hearing permanently.

APPENDIX A.1
PROCEDURE FOR INFORMAL HEARINGS

ACTIVITY	RESPONSIBILITY	DATE DUE (IF APPLICABLE)	DATE COMPLETED (IF APPLICABLE)
1. Maintain List of all PN commenters	OU		
2. Prepare "Response to comments" memo following close of public comment period and send to all responders to public notice	OU		
3. Prepare authorization memo to convene or deny public hearing for Director*	OU	Within 14 days after close of PN comment period	
4. Submit authorization memo (package) to Chief Deputy, Deputy Director and RAO Director	OU	Within 21 days after close of PN comment period	
5. For tentative decision to deny public hearing, forward memo (package) to Board to review and provide comments to Director*	RAO Director	Prior to Director's tentative decision to deny	
6. Acquire Directors* decision to grant or deny a public hearing	OU	Within 30 days after close of PN comment period	
7. Forward memo (package) and Director's* decision to Board for their review	RAO Director	Within 2 days of decision by Director*	
8. Notify RAO Director of request to hold Board meeting on Director's* decision regarding hearing	Individual Board Members	Within 5 days of decision by Director*	
9. Schedule meeting of Board (based on majority) vote to review Director's* decision ***[Skip to item 11 if there is not a majority vote by Board and Director's* decision is to grant public hearing]***	RAO Director		
10. Determine by majority vote of the Board whether or not to grant public hearing or to delegate the permit o the Director* for his decision	Board	Within 20 days of decision by Director*	
11. If Director* or Board authorize public hearing, contact Board Member to Serve as Hearing Officer and arrange date, time and location for public hearing	OU	Within 2 days after item 4	
12. Provide owner notice of the public hearing authorization, information on date, time	OU		

and place of public hearing and receive owner concurrence to publish notice of hearing in newspaper (once per week for 2 consecutive weeks); encourage owner participation at public hearing			
13. Prepare notice for public hearing and send to RAO and newspaper	OU	More than 30 days before public hearing	
14. Send notice of public hearing to: interested persons who requested a public hearing and any entities required by law or regulation to receive notice.	OU	At least 30 days before public hearing	
15. Verify receipt of notice by newspapers	OU		
16. Verify publication of notice by newspapers	OU	At least 30 days before the public hearing	
17. Prepare Opening Remarks for Hearing Officer (See **Appendix E**)	OU		
18. Prepare Technical Presentation (optional)	OU		
19. Establish Official Hearing File/Exhibit List (See **Appendix A.2** and **Appendix D**)	OU	Exhibit List for display at public hearing	
20. Send public hearing package to Hearing Officer (See **Appendix A.2**)	OU		
21. Contact Hearing Officer to schedule a meeting prior to the hearing at discretion of Hearing Officer	OU	7 days before public hearing	
22. Determine need for hiring a court reporter instead of recording hearing. (Consider hiring a court reporter instead of recording the hearing if there is reason to believe the final decision will be challenged. If it is likely that decision on a permit is to be appealed, consider hiring a court reporter for the hearing.)	OU		
23. Hold public hearing	OU/Hearing Officer	At least 30 days after the first date of publication of notice of hearing and not less than 15 days before close of public hearing comment period	
24. Close public hearing file	OU	In accordance with date in notice of	

		hearing (at least 15 days after hearing)	
25. After file closed, complete file (see **Appendix D**) (prepare transcript, if required)	OU	Final decision required within 90 days of close of public hearing comment period (or close of public hearing file). OU has 45 days to prepare materials	
26. Prepare summary of public comments and develop preliminary recommendations for concurrence by the OU Director	OU		
27. Submit to RAO package for Board Book (See **Attachment A.2**)	OU	Per Board agenda development schedule released by RAO	
28. Acquire Director's* concurrence on agenda item (Agenda Review)	OU		
29. Prepare Technical Presentation for Board meeting and send to Policy Manager	OU	7 days before Board meeting	
30. Make technical presentation and staff recommendations to the Board	OU	Within 90 days of close of public hearing comment period	
31. Prepare Minute of Board action and submit to RAO	OU	Per schedule released by RAO	
32. Transmit approved permit/certificate to owner & other appropriate parties	OU	Within 14 days of Board action	
33. Have response to comments available for the public (9VAC25-31-320)	OU	Within 14 days of Board action	
34. Maintain hearing file and recording /transcript permanently (9VAC 25-230)	OU		

APPENDIX A.2
SUBMITTAL CHECKLIST FOR PUBLIC HEARINGS

SUBMITTAL ITEM & COMPONENTS	CHECK IF SUBMITTED
Hearing Authorization or Denial Package (From OU) * hearing authorization or denial memorandum (see subdivision F.2.a for details) * copy of public notice with the name of the newspapers which ran the public notice and date of publication * list of individuals and organizations who responded to the public notice * sample letters from OU Manager to responders to the public notice and addressed envelopes for the owner and responders * permit/certificate package for Director's* signature	
Public Hearing Notice to RAO Director (From OU)	
Technical Presentation (From OU)	
Hearing Officer Package (OU) * briefing memorandum for hearing officer * opening remarks * travel arrangements, maps, etc.	
Material for Hearing File/Exhibit List (From OU) * draft permit - fact sheet * responses to public notice * hearing authorization memorandum * hearing notice certification from newspaper * technical documentation to support staff recommendation	
Package for Board Book (Board Meeting Materials) (OU) (see subdivision F.5.B for details) * memorandum to the board containing a purpose statement, background information on permit up through authorization to convene public hearing, staff contact person and contact information, summary of public comments, agency response to comments * copy of the draft permit (fact sheet optional) * statement of legal basis and justification for recommendations	

* The Director or by other DEQ staff in accordance with the Delegation of Authority Memorandum signed by the Director, available on the DEQnet at Documents>Admin>Admin Policy>Public Affairs and Policy

APPENDIX B - STATUTORY AND REGULATORY CONSIDERATIONS

I. Types of Hearings: Virginia Pollutant Discharge Elimination System (VPDES) Permit - Issuance, Modification, Revocation and Reissuance

II. Factors to be Considered in Determining Need for Hearing Based on Responses to Public Notice of VPDES

A. 9VAC25-230-50 A and §62.1-44.15:02:
The executive secretary shall review all timely requests for public hearing filed in accordance with the provisions of 9VAC25-230-40, and within 30 calendar days following the expiration of the time period for the submission of requests shall grant a public hearing if he finds the following:

1. That there is significant public interest in the issuance, denial, modification or revocation of the permit in question, and
2. That there are substantial disputed issues relevant to 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, and
3. That the action requested is not on its face inconsistent with, or in violation of, the Water Control Law, federal law, or any regulation promulgated thereunder, or
4. That a public hearing is required by statute.

B. 9 VAC 25-31-310 A:
The board shall hold a public hearing whenever it finds, on the basis of requests, a significant degree of public interest in a draft permit or permits.
The board may also hold a public hearing at its discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision.

III. Factors for Dispensing with Hearing - 9VAC25-230-70
Where no person other than the applicant or permittee has requested a hearing, and
Where no hearing is required by statute.

IV. Notice Requirements for Hearings
A. 9 VAC 25-31-290
Timing: Public notice of a public hearing shall be given at least 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

Methods: Public notice shall be given by the following methods:
1. By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this subdivision may waive his or her rights to receive notice for any classes and categories of permits):

a. The applicant (except for VPDES general permits when there is no applicant);
b. Any other agency which the board knows has issued or is required to issue a VPDES, sludge management permit;
c. Federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected states (Indian Tribes);
d. Any state agency responsible for plan development under §208(b)(2), 208(b)(4) or §303(e) of the CWA and the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service;
e. Any user identified in the permit application of a privately owned treatment works;
f. Persons on a mailing list developed by:

(1) Including those who request in writing to be on the list;
(2) Soliciting persons for area lists from participants in past permit proceedings in that area; and
(3) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as EPA regional and state funded newsletters, environmental bulletins, or state law journals. (The board may update the mailing list from time to time by requesting written indication of continued interest from those listed. The board may delete from the list the name of any person who fails to respond to such a request.);

g. (1) Any unit of local government having jurisdiction over the area where the facility is proposed to be located; and
(2) Each state agency having any authority under state law with respect to the construction or operation of such facility;

2. **By publication once a week for two successive weeks in a newspaper of general circulation in the area affected by the discharge. The cost of public notice shall be paid by the owner**; and

3. Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

Contents.

1. All public notices issued under this part shall contain the following minimum information:
   a. Name and address of the office processing the permit action for which notice is being given;
   b. Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit, except in the case of VPDES draft general permits;
   c. A brief description of the business conducted at the facility or activity described in the permit application or the draft permit, for VPDES general permits when there is no application;
   d. Name, address, telephone number and email address of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application;
   e. A brief description of the procedures for submitting comments and the time and place of any public hearing that will be held and other procedures by which the public may participate in the final permit decision;
   f. A general description of the location of each existing or proposed discharge point and the name of the receiving water and the sludge use and disposal practice or practices and the location of each sludge treatment works treating domestic sewage and use or disposal sites known at the time of permit application. For draft general permits, this requirement will be satisfied by a map or description of the permit area; and
   g. Any additional information considered necessary or proper.

2. In addition to the above notice of a public hearing under 9VAC25-31-310 shall contain the following information:
   a. Reference to the date of previous public notices relating to the permit;
   b. Date, time, and place of the public hearing;
   c. A brief description of the nature and purpose of the public hearing, including the applicable rules and procedures; and
   d. A concise statement of the issues raised by the persons requesting the public hearing.

3. Public notice of a VPDES draft permit for a discharge where a request for alternate thermal effluent limitations has been filed shall include:

a. A statement that the thermal component of the discharge is subject to effluent limitations incorporated in 9VAC25-31-30 and a brief description, including a quantitative statement, of the thermal effluent limitations proposed under §301 or §306 of the CWA;

b. A statement that an alternate thermal effluent limitation request has been filed and that alternative less stringent effluent limitations may be imposed on the thermal component of the discharge under the law and §316(a) of the CWA and a brief description, including a quantitative statement, of the alternative effluent limitations, if any, included in the request; and

c. If the applicant has filed an early screening request for a CWA §316(a) variance, a statement that the applicant has submitted such a plan.

B. Locality Particularly Affected Requirements

Before issuing any permit, if the board finds that there are localities particularly affected by the permit, the board shall:

1. Publish, or require the applicant to publish, a notice in a local paper of general circulation in the localities affected at least 30 days prior to the close of any public comment period. Such notice shall contain a statement of the estimated local impact of the proposed permit, which at a minimum shall include information on the specific pollutants involved and the total quantity of each which may be discharged; and

2. Mail the notice to the chief elected official and chief administrative officer and planning district commission for those localities.

Written comments shall be accepted by the board for at least 15 days after any public hearing on the permit, unless the board votes to shorten the period. For the purposes of this section, the term "locality particularly affected" means any locality which bears any identified disproportionate material water quality impact which would not be experienced by other localities.

C. 9VAC25-230-50.C (Procedural Rule No. 1 – Public and Formal Hearing Procedures)

Not less than 30 or more than 60 days notice of the time, date and place of the hearing.

Notice to be given to each requester and the applicant or permittee.

Content determined by VPDES Permit Regulation

V. Requirements for Holding File Open after the Public Hearing (see Locality Particularly Affected above)

APPENDIX C - NOTICE CONTENT FORMAT

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment and announce a public hearing on a draft permit from the Department of Environmental Quality that will allow the release of {treated} {wastewater}{storm water} into a water body in CITY/COUNTY, Virginia.
PUBLIC COMMENT PERIOD: MONTH DAY, YEAR to TIME p.m. on MONTH DAY, YEAR
PUBLIC HEARING: MEETING ROOM, BUILDING in CITY on MONTH DAY, YEAR from TIME {a.m.}{p.m.} to TIME {a.m.}{p.m.}.
PURPOSE OF HEARING: To obtain input from the public related to this project for the DEQ to consider.
{INFORMATION BRIEFING: {MEETING ROOM, BUILDING in CITY on MONTH DAY, YEAR} {Same date and location} from TIME {a.m.}{p.m.} to TIME {a.m.}{p.m.}.}
PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – {Wastewater}{Storm water} issued by DEQ, under the authority of the State Water Control Board
APPLICANT NAME, ADDRESS AND PERMIT NUMBER: NAME OF APPLICANT; ADDRESS; PERMIT NUMBER
{FACILITY NAME AND LOCATION: NAME; ADDRESS *NOTE TO WRITER: USE THIS IF INFO IS DIFFERENT FROM THE APPLICANT EXCEPT IN CASE OF VPDES DRAFT GENERAL PERMITS*}
{This facility is an {Environmental Enterprise}{Exemplary Environmental Enterprise}{Extraordinary Environmental Enterprise} participant in Virginia's Environmental Excellence Program.}
PROJECT DESCRIPTION: NAME OF APPLICANT has applied for {a new}{a modified}{reissuance of a} permit for the {public}{private} NAME OF FACILITY/NAME OF PROJECT. The applicant proposes to release {cooling water, a type of wastewater}{treated sewage wastewaters} {from residential areas} {treated industrial wastewaters}{storm water}{at a rate of NUMBER AND UNIT (NOTE: SPELL OUT UNIT; OPTION IS FOR WASTEWATER)} into a water body. {The modification of the process would allow DESCRIPTION.} Sludge from the treatment process will be used DESCRIPTION. {The sludge will be disposed by DESCRIPTION.} The facility proposes to release the {cooling water}{treated sewage}{treated industrial wastewaters}{storm water} in the NAME OF RECEIVING STREAM in CITY/COUNTY in the NAME watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: {nutrients}{metals}{organic matter}{solids}.
ISSUES RAISED BY PUBLIC: The previous public comment period was from MONTH DATE, YEAR to MONTH DATE, YEAR. The comments received at that time were CONCISE DESCRIPTION.
HOW TO COMMENT: DEQ accepts comments by e-mail, fax or postal mail. All comments must include the name, address and telephone number of the person commenting and must be received by DEQ during the comment period. DEQ also accepts written and oral comments at public hearings. To make a statement at a public hearing, write your name on a sign-up sheet available before the hearing. You may sign up only for yourself. The time allowed for each statement is set by the hearing officer. The public may review the draft permit and application at the DEQ office named below.
CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: NAME; NAME OF REGIONAL OFFICE, STREET, CITY, VA ZIP CODE; Phone: PHONE NUMBER; E-mail: E-MAIL ADDRESS; Fax: FAX NUMBER

[**NOTE:** When counting the 30 days before the hearing, do not count the first day the notice appears in the newspaper. When counting the 15 days after the hearing, do not count the day of the hearing. For example, if the first notice in the newspaper appears on March 1, the hearing can not be before March 31 and if the hearing is on March 31, then the comment period can not close before March 15.]

APPENDIX D
Official File
Exhibit List

The OU is responsible for establishing the official hearing file/exhibit list. The official file should contain as applicable:

- Copy of the mailing list
- List of attendees at public hearing
- Exhibit List (which will be marked Exhibit #1)
- Notices Posted on Virginia Regulatory Town Hall
- Draft Permit - Fact Sheet
- Responses to Public Notice
- Authorization Memorandum
- Newspaper Notice Certification
- Technical Documentation to support staff recommendations

All documents should be marked "Exhibit No._____; Date-------; Hearing (Name of Action and Location(s)." This information should, when possible, be placed in the bottom right hand corner and can be typed or hand-written. An example Exhibit List is attached.

Once the hearing file has closed and action by the Board has been finalized, the hearing file shall be permanent stored/maintained at the OU.

APPENDIX E
EXAMPLE OF OPENING REMARKS FOR PUBLIC HEARINGS

OPENING REMARKS
[NAME OF PERMITTEE]
[DATE]

Good evening ladies and gentlemen. My name is [Board Member] and I'm a member of State Water Control Board. I will serve as Hearing Officer for tonight's hearing. Before I introduce the staff, I'd like to clarify that the State Water Control Board is a policy-making body of citizens appointed by the Governor and empowered by the law to adopt regulations and issue permits. The Department of Environmental Quality is an agency of the State's Executive Branch with the responsibility for administering its relevant laws and the regulations adopted by the Board. I am not a staff member of the Department. In addition, I would like to point out that the relevant State and Federal laws and regulations are the basis for the actions taken by the Board and the Department. Neither has the authority to make changes to the law.

At this time I would like to introduce staff present: [list all DEQ staff members in attendance].

We will be taping all public testimony for the official record. The hearing file will close at 4 p.m. on [Give Day/Month/Year].

The State Water Control Board is holding this hearing to receive comments on the [give description of action]. This hearing was authorized by the **[Choose one:** Director of the Department /State Water Control Board. Notice of this hearing was published in [list name(s) of newspapers and dates of publication]. This fact finding proceeding is being held pursuant to Section 2.2-4019 of the Code of Virginia, 9VAC25-31 (VPDES Permit Regulation) and 9VAC 25-230 (Procedural Rule No. 1 – Public and Formal Hearing Procedures).

The State Water Control Board will ultimately decide whether to [**Choose all that apply:** issue/reissue/deny/modify/terminate] the permit. There will be no decision made here tonight; it will be made at the next meeting of the Board [if known, give date of next Board Meeting]. Please be assured that written comments received to date for this permit action are part of the hearing file. The comments received during this hearing and any written comments received prior to the close of the hearing file will be added to the hearing file and all relevant information will be considered by the Board. In that regard, I ask that the speakers restrict their comments to address only those issues which have not been discussed already. Also, as hearing officer for this hearing, I reserve the right to restrict comments based on length of time or repetitive content.

The general procedure for this hearing will be as follows: [list name of person making staff presentation] will make the staff presentation. Next, I will call on the applicant and then I will call on those people who have indicated on the sign-in cards that they wish to comment. Finally, we will hear from anyone else who would like to make a statement.

In the interest of saving time I will enter the exhibits which we have received to date into the record by incorporating the Exhibit List as Exhibit No. 1. This list is here for your inspection.

At this time, I will call on [staff person giving presentation].

SECTION IV
MODIFICATION PROCEDURES

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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. If the modification request falls within **15 months** of permit expiration, it may be more expedient to revoke and reissue the permit rather than modify it. In this case, the RO may send a Reissuance in Lieu of Modification letter (see Section L). Determination of the need for a revocation and reissuance versus a modification is generally done on a case-by-case basis. 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:

- 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
- 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
- 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 Board 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.

Track the modification process using the applicable parts of the Tracking Sheet in Section I and CEDS.

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 Section L for a sample modification request. A modification request contains the following information:

- A statement of present permit conditions in question.
- A statement of the proposed changes being sought.

- Reasons and justification for the changes or a revised application if the request involves modification or substantial increase in flow, loading, or outfall location.
- 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 Information 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 board 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. Place a copy of the check and permit fee form in the permit file.

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

(9 VAC 25-31-400)

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 Board 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;

e. **(1)** 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.

(2) 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

f. 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 - f** above require an amendment to the Fact Sheet and a modification date on the permit coverpage. 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 Information From in order for the request to be deemed complete.

b. For 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 and VMRC where appropriate (see Section II).

c. The **120 day** time period to modify the permit starts upon determination that the modification request/application is complete. This deadline does not apply to staff initiated modifications.

2. OWP&CA Model Review

Regional modeling packages do not require OWP&CA review. Send other models to OWP&CA 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 OWP&CA review. Send any other changes in an approved model to OWP&CA 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, 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 below when developing the public notice for the newspaper.

Modification Public Notice Format

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of {treated}{wastewater}{storm water} into a water body in CITY/COUNTY, Virginia.
PUBLIC COMMENT PERIOD: MONTH DAY, YEAR to TIME {p.m.} on MONTH DAY, YEAR
PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – {Wastewater}{Storm water} issued by DEQ, under the authority of the State Water Control Board
APPLICANT NAME, ADDRESS AND PERMIT NUMBER: NAME OF APPLICANT; ADDRESS; NUMBER
{FACILITY NAME AND LOCATION: NAME; ADDRESS *NOTE TO WRITER: USE THIS IF INFO IS DIFFERENT FROM THE APPLICANT EXCEPT IN CASE OF VPDES DRAFT GENERAL PERMITS*}
{This facility is an {Environmental Enterprise}{Exemplary Environmental Enterprise}{Extraordinary Environmental Enterprise} participant in Virginia's Environmental Excellence Program.}
PROJECT DESCRIPTION: NAME OF APPLICANT has applied for {a new}{a modified}{reissuance of a} permit for the {public}{private} NAME OF FACILITY/NAME OF PROJECT. The applicant proposes to release {cooling water, a type of wastewater}{treated sewage wastewaters} {from residential areas} {treated industrial wastewaters}{storm water}{at a rate of NUMBER AND UNIT (NOTE: SPELL OUT UNIT; OPTION IS FOR WASTEWATER)} into a water body. {The modification of the process would allow DESCRIPTION.} Sludge from the treatment process will be used DESCRIPTION. {The sludge will be disposed by DESCRIPTION.} The facility proposes to release the {cooling water}{treated sewage}{treated industrial wastewaters}{storm water} in the NAME OF RECEIVING STREAM in CITY/COUNTY in the NAME watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: {nutrients}{metals}{organic matter}{solids}.
HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.
CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: NAME; NAME OF REGIONAL OFFICE, STREET, {POSTAL ADDRESS IF DIFFERENT FROM STREET ADDRESS}, CITY, VA ZIP CODE; Phone: PHONE NUMBER; E-mail: E-MAIL ADDRESS; Fax: FAX NUMBER. The public may review the draft permit and application at the DEQ office named above {by appointment}.

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 or for outside review on the public ftp site ftp://ftp.deq.virginia.gov/wps (see OWP&CA for instructions) 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 ftp site link (e.g. ftp://ftp.deq.virginia.gov/wps/EPA/SWRO/VA0026298/) reference the ftp site link in an email. 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 should have a procedure for reviewing draft permits to assure that quality permits are produced by DEQ. The entire draft permit package should be reviewed, including the draft permit, the fact sheet and the public notice. The following recommendations can be modified to meet individual regional needs.

a. Peer Review. Another permit writer in the regional office should evaluate the permit package to assure 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 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. 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. OWP&CA Review

The staff of OWP&CA is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to OWP&CA for review and indicate which program areas (technical, TMP, pretreatment, storm water, 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; 9 VAC 25-31-50 C)

Send any changes in a major facility permit, except minor modifications, to the EPA for review. 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 unrelated to the TMDL for these minor permits do not need to be reviewed by EPA). For these minor TMDL facilities, forward the permit and other

documentation to EPA (Mark Smith, EPA Region 3) after the final permit has been signed. An EPA Transmittal Checklist must be prepared for all VPDES permits that are to be reviewed by EPA.

a. Forward a copy of the application/mod. request, draft permit, Fact Sheet and EPA Transmittal Checklist to EPA. This may be concurrent with the submittal of this information to VDH. A format for the Transmittal Letter to EPA and EPA Transmittal Checklist is included in Section L.

Prior to 2009, EPA had agreed to reduced review periods for modifications. While we can still negotiate this with EPA on a permit by permit basis, assume all permits to EPA will have a 30-day review EPA is generally willing to work with us on shorter review periods when needed. Contact OWP&CA for assistance on shorter review periods for a permit modification.

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, contact OWP&CA for follow-up with EPA. Any comments and/or objections by the EPA will be specified in writing and directed to OWP&CA. OWP&CA will coordinate the response to EPA.

d. The RO compiles the required additional information for the draft modified permit or modifications to the Fact Sheet, and immediately forwards the information to OWP&CA for concurrence and routing to EPA. EPA will advise OWP&CA in writing if the deficiencies have or have not been corrected to EPA's satisfaction.

e. If EPA has further objections to the application or draft modified permit, OWP&CA 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 draft modified permit pages, including boilerplate language, and the modified Fact Sheet to the owner. (Owner review occurs upon EPA concurrence for majors permits. Courtesy copies of the draft permit may be sent to the owner prior to EPA review as long as they understand that EPA's comments may result in changes.) Advise the owner of the right to a hearing if the DEQ staff or an interested person initiated the modification.

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 Information Form Required in Section L.

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) in Section L.

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 Information 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.

D. Public Participation

1. Newspaper Public Notice

(§§ 62.1-44.16 and 62.1-44.19; 9 VAC 25-31-290)

a. Upon owner concurrence, give 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. Contact DPL personnel for information concerning acceptable newspapers.

b. The VPDES Permit Regulation at 9 VAC 25-31-290 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. Attempt to resolve the comments during the comment period. Retain and consider all written comments submitted during the 30 day comment period. In a permit modification, only those conditions to be modified are subject to comment during public notice. Send a written response to those individuals who commented during the public notice period. See Response to Comments below.

If any changes are made in a draft modified 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.

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, no additional public notice is required.

d. All modification files at the RO are to contain evidence of both 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. 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.

2. Optional Public Notice Procedures (Owner Contacts the Newspaper)

Send the transmittal letter, draft permit, actual public notice and the PN 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. (See Section L, Draft Permit/Optional PN Transmittal Letter to Owner (PN Authorization form is not required (owner contacts the newspaper).

3. Mailing List

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 9 VAC 25-31-290 for the specific requirements concerning mailing lists for VPDES permits.

a. Send a copy of the public notice to OWP&CA for inclusion on the mailing list at the same time the public notice is submitted to the newspaper. This list is maintained at headquarters by OWP&CA staff. The mailing list is distributed once every two weeks by OWP&CA.

b. When using the optional PN procedure, send a copy of the public notice to the mailing list 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.

c. The mailing list is the mechanism by which the EPA (for minor permits), DGIF, VIMS, USF&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 (applications, draft permits, FSs) concerning permit actions to these entities if requested by them. They have the 30 day public comment period for their review and comment.

d. Place a copy of the mailing list page(s) with the notification of permit action in the permit file.

4. Local Government Notification

As required by the State Water Control Law Section 62.1-44.15:01, the permit modification public notice must be mailed 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 that extends into the surrounding county, then both the town and the county should be notified. See Section L for an example letter.

Because of the distinct legal citation applicable here, a separate letter should be sent to each of the local officials rather than a copy of the one sent to the newspapers or other agencies. This mailing should occur when the permit public notice is sent to the newspaper and the OWP&CA 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 to the localities do not have to be sent by certified mail. These notices may be sent via email only if the locality officials have indicated that email notification is acceptable to them. The regions should, however, document the fact that they sent the letters by keeping copies in their permit files. NOTE: These notices may be sent via email but only if the locality officials have indicated that email notification is acceptable to them (this acceptance must be kept on file) and this acceptability of email notification must be verified with each reissuance.

If the applicant is one of the local officials listed above, receipt of the PN authorization from that person constitutes the notice required by law. Other government officials and/or the planning district will still need to be notified.

5. Adjacent States Review

If the RO does not incorporate the recommendations of an 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 before modification.

6. Other Agency Review

(9 VAC 25-31-330)

a. Address comments from the Department of Game and Inland Fisheries 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 Law or the Act. If the requested conditions are not included in the draft permit, notify the requesting agency of the reasons for not including the requested conditions.

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 modification to an existing permit, ask the owner to either change the modification request or withdraw the request for modification. Failure to do either one should result in denial of the modification.

If the COE advises the RO that imposing specified conditions upon the permittee is necessary to avoid any substantial impairment of anchorage and navigation, include the conditions specified by the District Engineer in the permit. Any objection or redress by the permittee is 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 proposed modification.

7. Public Hearing

a. In accordance with 9VAC25-31-310 (Public Hearings), 9VAC25-230 (Procedural Rule No. 1 – Public and Formal Hearing Procedures) and §62.1-44.15:02, action relative to a discharge proposal is generally delayed and a public hearing held when a public hearing is required by statute or the Regional Office (Originating Unit - OU) makes a determination as to whether the responses and requests received during the permit public comment period meet the following criteria:

(1) That there is significant public interest in the issuance, reissuance, denial, modification or termination of the permit in question as evidenced by receipt of a minimum of **25 individual requests** for a public hearing,

(2) That the requestors raise substantial, disputed issues relevant to the issuance, reissuance, denial, modification or termination of the permit in question, and

(3) That the action requested by the interested parties is not on its face inconsistent with, or in violation of the SWCL, federal law or any regulation promulgated thereunder.

b. The Regional Director may make the recommendation to hold a public hearing based on hearing requests from the public or the owner or at his discretion based on substantial issues raised during the comment period. The Regional Director is responsible for tracking the public hearing request and making the recommendation as to whether a public hearing is appropriate. The Regional Office may want to involve headquarters support groups if the hearing request involves disputed issues pertinent to them. See section III F 1 for determining the need for hearing.

c. If there are less than 25 individual requests for a public hearing, the permit is the Department's to decide and the OU may proceed to review and consider public comments and develop recommended final action on the permit. However, the OU is encouraged to contact requesters to discuss and attempt to resolve the requester's issues. This should occur within the 30 day public notice comment period. Also, the OU is encouraged, if there are several requests for a public hearing but less than 25, to schedule a public meeting in the locality to educate and explain the permit to the public. If a public meeting is to be held, the permit should not be issued until after the public meeting in order to be able to make appropriate changes to the permit based on the information received at the public meeting.

d. If at least 25 individual requests for a public hearing are received, the OU will proceed under subdivision F. 2 for authorization to convene or deny a hearing. The OU may contact the requestors to attempt to resolve issue and, if issues are resolved, can ask that requests be withdrawn. Within **30 days** after the public notice expires, advise the persons requesting the hearing in writing of the decision to either grant or deny a hearing. This option can also include a public meeting in the locality. If a public meeting is to be held, the permit should not be issued until after the public meeting in order to be able to make appropriate changes to the permit based on the information received at the public meeting.

The permit public comment period is automatically extended to the end of any public hearing comment period.

e. The applicant or permittee may request a public hearing under the following circumstances:

(1) Prior to the comment period for the draft permit in order to public notice the comment period for both the draft permit and the public hearing concurrently and within the same notice. This may occur when, for example, the facility or activity to be authorized by the draft permit is controversial, or for other cause and the applicant or permittee wishes to expedite the permit action. See F.3 for more information regarding arrangements for public hearings.

(2) Up to 30 days after the permit is issued (§62.1-44.25). If the permit was mailed to the owner, add 3 days to this.

f. When a public hearing is approved, the RO will make public notice of the hearing and make arrangements to hold the hearing. There must be at least 30 days public notice prior to the hearing date and the hearing record must be held open for at least 15 days after the hearing.

A public hearing requires the same notice as a draft permit (9VAC25-31-310 A 3), including publication for two successive weeks in a local newspaper.

g. Once a hearing is scheduled, the RO is responsible for preparing and making the staff presentation. Follow the Hearing Procedures in subsection F below.

h. If a decision is made to deny the modification based upon the hearing, follow the procedures for denials that received a public hearing described in Section II H 6 of this manual.

i. Give EPA the opportunity to comment on a major permit that has been revised as a result of a public hearing.

8. Response to Comments

(9 VAC 25-31-320)

After the close of public comment, public notice, or public hearing, 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 notice, including the hearing. 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, as stated by letter dated (insert date)." 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.

E. 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 on the public ftp site ftp://ftp.deq.virginia.gov/wps (see OWP&CA for instructions) 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).** Forward the information to owners, EPA, VDH etc… using the public ftp site link (e.g. ftp://ftp.deq.virginia.gov/wps/EPA/SWRO/VA0026298/) via email and reference the link in the 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 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)) (at this time there is no email substitution for CERTIFIED MAIL):

- Transmittal Letter
- Permit
- DMR
- 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* Use link to public ftp site in an email

- Transmittal Letter
- Permit
- DMR
- Response to Comments
- Application/Modification Request (minor permits)
- Fact Sheet (minor permits)

c. RO & OWP&CA (follow Enterprise Content Management procedures)

- Transmittal Letter
- Permit
- DMR
- Response to Comments
- Fact Sheet
- Application/Modification Request

d. Regional Compliance Auditor
- Transmittal Letter
- Permit
- DMR

* As of October 2009, all final permit packages <u>for majors only</u> go to Nancy Ford at EPA Region 3. In addition, all final major permits and minor permits that were approved by EPA (minors with applicable EPA approved TMDLs where the facility had an effluent limitation based on the TMDL) also go to Mark Smith at EPA Region 3. However, if the minor with a TMDL has not changed from draft to final, just send Mark Smith the signed cover page for that minor. Send him the entire final major permit regardless of changes from draft to final.

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.

F. 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 Board'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 in Section L. The multi-media change of ownership form in addition to the Change of Ownership Agreement Form in Section L is appropriate when an ownership change has the potential to affect more than one media. See http://www.deq.virginia.gov/forms/multimedia.html

b. Once the Change of Ownership Agreement Form has been received, change the owner information on the permit cover page, add a modification date, update or amend the permit fact sheet and follow the final permit processing steps in this section.

c. For change of ownership, the **120 day** 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 120 days start with receipt of the Change of Ownership Agreement Form, signed by the new owner.

SECTION V
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A. 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 close-out 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 at the regional office. Copies of permit termination agreement forms should be sent to OWPP for the Central Office file and 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. The DEQ staff should make it clear to the permittee that the meeting is being held under the informal fact finding provisions of the Administrative Process Act, §2.2-4019.
b) 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.

c) If there is a pending enforcement action, but the permittee agrees to the termination, follow the procedures below for public notice and board action. No formal hearing is required.
d) 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 State Water Control Board (APA §2.2-4020 and 9VAC25-230 (Procedural Rule No. 1 – Public and Formal Hearing Procedures). Contact the Division of Policy and Office of Water Permit Programs for further guidance if a formal hearing is necessary.
e) 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 Board intends to terminate the permit.
f) Board approval must be obtained after public notice when the permittee agrees to the termination but there is a pending enforcement action. The Board will terminate the permit, if it decides it is appropriate, at a board meeting. The regional office must submit a Permit Termination Summary Form to the Division of Policy so that the permit termination is placed before the Board at its next meeting.
g) If a formal hearing is held before the Board, the permit termination decision will be made by the Board at the hearing.
h) If the termination is approved by the Board, the regional office prepares the minute of the Board decision. The regional staff notifies the permittee by sending a copy of the minute from the Board meeting, 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) Copies of termination notifications should be provided to OWPP and EPA Region III should be notified. An email notification of termination to EPA is sufficient.
j) If the Board 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 can be found in Section L of this manual.

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.

B. Denial of Requests for Termination

(9 VAC 25-31-370 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.

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The following pages provide examples of letters and forms that are used in the permit process. The permit writer may modify the text of these examples to fit a specific situation. However, some parts of the letters are mandated by legal or regulatory requirements. Modification of these examples should be done with this in mind.

Where [**bold**] appears in an example, this indicates the need to insert permit specific language.

A. Agency Addresses and Telephone Numbers

Virginia Department of Health Addresses, Phone Numbers and Field Director Email

Office of Drinking Water Field Offices

Regional Office	Counties and Cities Served
ABINGDON 454 East Main Street Abingdon, VA 242l0 Telephone: (276) 676-5650 Fax: (276) 676-5659 Richard.Puckett@vdh.virginia.gov	Bland, Buchanan, Carroll, Dickinson, Floyd, Giles, Grayson, Lee, Montgomery, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe **Cities**: Bristol, Galax, Norton, Radford
CULPEPER 400 South Main St, 2nd Floor Culpeper, VA 2270l Telephone: (540) 829-7340 Fax: (540) 829-7337 Hugh.Eggborn@vdh.virginia.gov	Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford **Cities**: Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, Manassas Park
DANVILLE 211 Nor San Drive, Suite 1040 Danville, VA 24540 Telephone: (434) 836-8416 Fax: (434) 836-8424 Mitch.Childrey@vdh.virginia.gov	Amelia, Amherst, Appomattox, Bedford, Buckingham, Brunswick, Campbell, Charlotte, Cumberland, Franklin, Halifax, Henry, Lunenburg, Mecklenburg, Nottoway, Patrick, Pittsylvania, Prince Edward **Cities**: Bedford, Danville, Lynchburg, Martinsville. South Boston
LEXINGTON l31 Walker Street Lexington, VA 24450-2431 Telephone: (540) 463-7136 Fax: (540) 463-3892 Doug.Caldwell@vdh.virginia.gov	Albemarle, Alleghany, Augusta, Bath, Botetourt, Clarke, Craig, Fluvanna, Frederick Greene, Highland, Louisa, Nelson, Page, Roanoke, Rockbridge, Rockingham, Shenandoah, Warren **Cities**: Buena Vista, Charlottesville, Covington, Harrisonburg, Lexington, Roanoke, Salem, Staunton, Waynesboro, Winchester
EAST CENTRAL 300 Turner Road Richmond, VA 23225 Telephone: (804) 674-2880 Fax: (804) 674-2815 Bennett.Ragnauth@vdh.virginia.gov	Charles City, Chesterfield, Essex, Gloucester, Goochland, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Powhatan, Richmond, Westmoreland **Cities**: Richmond
SOUTHEAST 830 Southampton Ave. Rm. 2058 Norfolk, VA 23510 Telephone: (757) 683-2000 Fax: (757) 683-2007 Daniel.Horne@vdh.virginia.gov	Accomack, Dinwiddie, Greensville, Isle of Wight, James City, Northampton, Prince George, Southampton, Surry, Sussex, York **Cities**: Chesapeake, Colonial Heights, Emporia, Franklin, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Suffolk, Va. Beach, Williamsburg

Office of Environmental Health Services

Division of Shellfish Sanitation
109 Governor Street, Rm. 614B
Richmond, VA 23219
Telephone: (804) 864-7483
Fax: (804) 864-7475
keith.skiles@vdh.virginia.gov

DEQ Office of Wastewater Engineering

For WQIF Funded Projects
http://www.deq.virginia.gov/wastewater/WQIFProjectProcedures092009
gary.phillips@deq.virginia.gov

Mailing addresses for the state agencies in the states bordering Virginia:

Kentucky	Department for Environmental Protection Division of Water, KPDES Branch 200 Fair Oaks Lane, Fourth Floor Frankfort, Kentucky 40601 Telephone: 502-564-3410 ext 4850 (Jory Becker) 4924 (Larry Sowder) Fax: 502-564-0111 E-mail: jory.becker@ky.gov and larry.sowder@ky.gov
Maryland	Wastewater Discharge Permit Program Maryland Department of the Environment 1800 Washington Blvd. Baltimore, Maryland 21230 Telephone: 410-537-3000 E-Mail: egertler@mde.state.md.us (Ed Gertler - industrial permits) sluckman@mde.state.md.us (Stephen Luckman - municipal permits)
North Carolina	Tom Belnick Supervisor, NPDES West Program NC DENR/Division of Water Quality 1617 Mail Service Center Raleigh, North Carolina 27699-1617 Telephone: 919-807-6390 Fax: 919-807-6495 E-mail: tom.belnick@ncdenr.gov
Tennessee	Vojin Janjic, Program Manager Department of Environment and Conservation Division of Water Pollution Control 401 Church St., L and C Annex, 6th Floor Nashville, Tennessee 37243-1534 Telephone: 615-532-0670 E-mail: vojin.janjic@tn.gov or Vojin.Janjic@state.tn.us
West Virginia	Matthew Sweeney, Engineer Senior Division of Water and Waste Management 601 57th Street, SE Charleston WV 25304 Telephone: 304-926-0495 Fax: 304-926-0463 E-mail: Matthew.L.Sweeney@wv.gov

State And Federal Agency Addresses (See Section II.F for threatened and endangered species procedures and contacts.)

Department of Game and Inland Fisheries
Planning, Policy and Environmental Services Division
P.O. Box 11104
Richmond, Virginia 23230
Telephone: 804-367-8999

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

Robert O'Reilly, Deputy Chief
Fisheries Management Division
Virginia Marine Resources Commission
2600 Washington Ave. 3rd Floor
Newport News, VA 23607
Telephone: 757-247-2200

U.S. Army Engineering District
Norfolk
803 Front Street
Norfolk, VA 23510-1096

For VDOT Residency Offices:
http://www.virginiadot.org/info/contactus.asp **(Click on Local Contacts)**

B. Application Correspondence

New Application Transmittal Letter

Regional Office Letterhead

(DATE)

(OWNER'S ADDRESS)

RE: VPDES Permit Application for a Wastewater Discharge

Dear :

In response to your request, enclosed are copies of the appropriate Virginia Pollutant Discharge Elimination System (VPDES) permit application forms and instructions. The application forms must be signed by the owner, a partner, an executive officer, or a ranking elected official, according to the application instructions. If you would like to request a waiver from any of the sampling or testing requirements in the application forms, please contact me prior to submitting your application or provide a thorough justification for the request when you submit your application. A complete application for this facility will consist of the following:

[**List forms required; include the Public Notice Billing Information Form and Water Quality Criteria Monitoring form (Attachment A see MN-3 and IN-3) if appropriate**]

Upon completing the application, return the original and an electronic file(s) (use PDF if signatures or handwriting is present) or four paper copies of the application and required forms to the [ ] Regional Office at the above address

In addition, we must receive the appropriate permit fee before we can process your application. The fee is [**$____** or **shown on the back of the enclosed Permit Application Fee form**]. Please follow the instructions on the form concerning payment of the fees.

If a permit is issued to your facility, effluent data reports will be required. DEQ has launched an e-DMR program that allows you to submit the effluent data electronically. We expect every permittee to use e-DMR as permits are issued. There are many benefits to both DEQ and the permittee when e-DMR is utilized for submissions:

1) Fewer revisions for data since the e-DMR program automatically flags omissions before the data is submitted;
2) Cost savings on postage, copying, and paper;
3) No concerns about using the most current DMR – e-DMR refreshes the required parameters automatically when changes are needed;
4) Submittals can be made on a timelier basis; and
5) Electronic signatures from multiple people are allowed and e-DMR can be accessed from multiple computer locations.

We ask that you apply for e-DMR participation now so that we will be able to complete the application process when your permit is effective. The following website provides details and our regional e-DMR administrator [INSERT NAME , PHONE NUMBER, EMAIL] can also assist you:

http://www.deq.virginia.gov/water/edmrfaq.html

Please call me at ( ) XXX-XXXX if you have any questions.

Sincerely,

[**Permit Writer**]

Enclosures

(***Note to Permit Writers-Include with this letter a copy of all applicable application forms, the VPDES Permit Application Addendum, the Paperwork Reduction Act notice, the list of common application errors, and the Pollution Prevention Flyer.***)

Reissuance Reminder Letter

Regional DEQ Letterhead
Date

Facility Name
Address

Attn:
Re: VPDES Permit No. VA00**00000**

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 State Water Control Board's VPDES Permit Regulation requires that we receive a complete application at least 180 days before the existing permit expires. The deadline for submitting the application is [**date**]. Early submissions are encouraged and will better enable us to complete processing before permit expiration. The instructions and application forms are enclosed [*include Water Quality Criteria Monitoring form* ***(Attachment A see MN-3 and IN-3)*** *if appropriate*]. [*or provide web links for appropriate application forms*] [***For industrial discharges:*** If you would like to request a waiver from any of the sampling or testing requirements in the application forms, please contact me prior to submitting your application or provide a thorough justification for the request when you submit your application. Failure to submit the waiver request by the 180 day application deadline may result in the waiver or administrative continuance of the permit being denied if the permit is not subsequently re-issued on time.][***For municipal discharges:*** If you would like to request a waiver from any of the sampling or testing requirements in the application forms, you must submit your application and a thorough justification for the request at least 240 days prior to the exiting permit's expiration date. These waiver requests must be approved by DEQ and the U.S. EPA at least 180 days before the existing permit expires. DEQ will review your waiver request and, if it is justified, forward it to EPA. Failure to submit the waiver request by the 240 day deadline may result in the waiver or administrative continuance of the permit being denied if the permit is not subsequently re-issued on time.]

Upon completing the application, return the original and an electronic copy (use PDF if signatures or handwriting is present) or four paper copies to the [ ] 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.

DEQ has launched an e-DMR program that allows you to submit effluent data electronically. We expect every permittee to use e-DMR as permits are reissued and exceptions will only be allowed if requested by the applicant. There are many benefits to both DEQ and the permittee when e-DMR is utilized for submissions:

1) Fewer revisions for data since the e-DMR program automatically flags omissions before the data is submitted;
2) Cost savings on postage, copying, and paper;
3) No concerns about using the most current DMR – e-DMR refreshes the required parameters automatically when changes are needed;
4) Submittals can be made on a timelier basis; and
5) Electronic signatures from multiple people are allowed and e-DMR can be accessed from multiple computer locations.

We ask that you apply for e-DMR participation now although you may apply at any time. The following website provides details and our regional e-DMR administrator [INSERT NAME, PHONE NUMBER and EMAIL] can also assist you:

http://www.deq.virginia.gov/water/edmrfaq.html

Please call me at ( ) XXX-XXXX if you have any questions.

Sincerely,

[**Permit Writer**]

Enclosures
(***Note to Permit Writers-Include with this letter a copy of all applicable application forms, the Public Notice Billing Information Form, the VPDES Permit Application Addendum, the Paperwork Reduction Act notice, the list of common application errors, and the Pollution Prevention Flyer.***)

Common Application Errors

The following list contains some common errors found in permit applications. This list may be helpful in completing the application and in reviewing applications for completeness.

- Standard Industrial Classification (SIC) code is missing or incorrect on Form 1, Item VII.

- Not all items are addressed. (N/A should be used for any items which do not apply.)

- Map omissions, Form 1, Item XI
  - Scale
  - North Arrow
  - USGS Quadrangle Name
  - Legal facility boundaries identification
  - Discharge points identification
  - Latitude & Longitude

- Signature errors
  - Title of signer is missing.
  - There is no original signature on at least one copy of each application form.
  - Signer does not meet the regulatory criteria to sign. (See Item XIII of the Form 1 instructions)

- Incorrect identification of receiving stream.
  (If a discharge is to an unnamed tributary of a named stream, then it should be noted.)

- There is no request for a testing waiver for a required parameter that was not tested.

(Note to permit writers: This list was developed to aid applicants in "getting it right the first time". Send this list or a customized list to the applicant at your discretion.)

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued**: _____
Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Y / N

3. **Provide the tax map parcel number for the land where the discharge is located.**_____

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** _____

5. **What is the design average effluent flow of this facility?** _____ MGD
For industrial facilities, provide the max. 30-day average production level, include units:
_____

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y / N
If "Yes", please identify the other flow tiers (in MGD) or production levels:

_____

Please consider the following as you answer the questions in #5 above for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater**:
_____

____% of flow from domestic connections/sources

Number of private residences to be served by the treatment works: _____

____% of flow from non-domestic connections/sources

7. **Mode of discharge:** ____Continuous ____Intermittent ____Seasonal
Describe frequency and duration of intermittent or seasonal discharges:
_____

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
__ Permanent stream, never dry
__ Intermittent stream, usually flowing, sometimes dry
__ Ephemeral stream, wet-weather flow, often dry
__ Effluent-dependent stream, usually or always dry without effluent flow
__ Lake or pond <u>at or below the discharge point</u>
__ Other:_____

9. **Approval Date(s)**:
O & M Manual _____ **Sludge/Solids Management Plan** _____

Have there been any changes in your operations or procedures since the above approval dates? Y / N

Pollution Prevention & Environmental Management Systems: Assisting Your Facility Reduce Its Water Discharges

Today, many facilities are taking the opportunity to look at achieving broader environmental management objectives rather than concentrating solely on meeting pollution control & regulatory standards. Organizations of all types are realizing that preventing pollution before it is created can lead to both cost savings *and* environmental improvements.

What is Pollution Prevention?

Liquid, solid and/or gaseous waste materials are generated during the manufacture, processing and use of products. In addition to environmental problems, these waste streams represent a loss of valuable materials and energy and may require significant investment in pollution control equipment to meet regulatory requirements. In addition, there are costs associated with waste handling, monitoring, compliance reporting and the long-term liability issues associated with these wastes.

Traditional *pollution control* focuses on end-of-pipe and out-the-back-door viewpoints. *Pollution prevention* emphasizes the elimination or reduction of waste discharges at the source of generation. If wastes are not generated, the wastes do not have to be managed. Facilities have many reasons to implement pollution prevention techniques. Achieving compliance with regulatory standards, saving money and improving public relations are a few of the reasons why proactive Virginia facilities are investing in pollution prevention alternatives.

What are Environmental Management Systems?

An environmental management system (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. EMSs operate on a "Plan, Do, Check, Act" model and can result in benefits for both the facility and the environment such as:

- Improved environmental performance
- Enhanced compliance
- Pollution prevention and resource conservation
- Risk reduction and mitigation
- New customers & markets
- Increased efficiency
- Reduced costs
- Enhanced employee morale and possibly enhanced recruitment of new employees
- Enhanced image with public, regulators, lenders & investors
- Improved employee awareness of environmental issues and responsibilities

DEQ P2 and EMS Initiatives: Through its voluntary Virginia Environmental Excellence Program (VEEP), DEQ encourages and recognizes facilities that are either in the process of or have developed EMSs. VEEP and the agency's other pollution prevention initiatives are run by the Office of Pollution Prevention, a voluntary, non-regulatory technical assistance program. Staff of the p2 program is available to assist your facility with its pollution prevention and EMS efforts.

For more information, please visit the Office's website at www.deq.virginia.gov/p2.

Additional Web Resources for Pollution Prevention/EMS Information:

- Virginia Environmental Excellence Program: www.deq.virginia.gov/veep
- PEER Center: www.peercenter.net
- Virginia Energy Source for Energy: www.deq.virginia.gov/vise

- P2Rx (Pollution Prevention Resource Exchange): www.p2rx.org
- EPA Pollution Prevention Division: www.epa.gov/p2
- EPA Office of Water P2 Information: www.epa.gov/water/citizen/pollution.html

Office of Pollution Prevention
Virginia Department of Environmental Quality
PO Box 1105
Richmond, VA 23218
www.deq.virginia.gov/p2

Paperwork Reduction Act Notice

Collection of this information is governed by the paperwork Reduction Act, and has been approved by the Office of Management and Budget (OMB) in accordance with 5 CFR 1320. The OMB approval number is 2040-086, expiring May 31,1992. The public reporting burden for each Application for Permit to Discharge Wastewater is estimated as follows:

Form 2A
Public reporting burden for this collection of information is estimated to be an average of 15 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Form 1
Public reporting burden for this collection of information is estimated to be an average of 3 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Form 2b
Public reporting burden for this collection of information is estimated to be an average of 6 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Form 2c
Public reporting burden for this collection of information is estimated to be a weighted average for all major and minor facilities of 33 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Form 2d
Public reporting burden for this collection of information is estimated to vary from a range of 32 hours as an average per response for some minor facilities, to 46 hours as an average per response for some major facilities, with a weighted average for major and minor facilities of 33.2 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Form 2e
Public reporting burden for this collection of information is estimated to be an average of 14 hours, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding these burden estimates or any other aspect of this collection, including suggestions for reducing this burden, to the Chief, Information Policy Branch, PM-223, U. S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Paperwork Reduction Act Project (2040-0086), Office of Management and Budget, Washington, DC 20503.

Local Government Ordinance Form

SUBJECT: Local and Areawide Planning Requirements

TO: Applicants for a Virginia Pollutant Discharge Elimination System Permit

§62.1-44.15:3 A of the State Water Control Law states:

"*No application for a new individual VPDES permit authorizing a new discharge of sewage, industrial wastes, or other wastes shall be considered complete unless it contains notification from the county, city, or town in which the discharge is to take place that the location and operation of the discharging facility are consistent with applicable ordinances adopted pursuant to Chapter 22 (§ 15.2-2200 et seq.) of Title 15.2, Code of Virginia. The county, city or town shall inform in writing the applicant and the Board of the discharging facility's compliance or noncompliance not more than thirty days from receipt by the chief administrative officer, or his agent, of a request from the applicant. Should the county, city or town fail to provide such written notification within thirty days, the requirement for such notification is waived. The provisions of this subsection shall not apply to any discharge for which a valid VPDES permit had been issued prior to March 10, 2000*"

In accordance with this section, applications for a new VPDES permit will not be considered complete until the certification statement is submitted to the Department of Environmental Quality Regional Office. Applicants may use the bottom of this page to transmit the request to the locality. If the locality does not respond to your request within 30 days, submit a copy of this form, showing the date you made the request, with your permit application.

****

To: _____ Date:_____
(County, City, or Town Administrator/Manager)

I am in the process of completing an application for a new VPDES permit. In accordance with Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code, I request that you sign one of the three statements certifying that the operation described on the attached permit application is or is not consistent with your local ordinances. Please return this form to me at:

(Applicant's address) : _____

_____

_____

PLEASE SEE THE REVERSE SIDE OF FORM FOR CERTIFICATION REQUIREMENTS

LOCAL GOVERNMENT ORDINANCE FORM

For new VPDES permit applications

In reference to the request from:_____
Applicant's Name

For certification of a discharge at:

_____
Name and Location of Facility

I hereby certify,

___ (1) That the proposed location, and operation of the facility is consistent with all ordinances adopted pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia

OR

___ (2) That no local ordinances are in effect pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia

OR

___ (3) That the proposed location and operation of the facility is **not** consistent with all ordinances adopted pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia

_____	_____
Signature	Title
_____	_____
Printed Name	Date

Application Transmittal Letter to VDH

Regional Letterhead

Date

VDH Regional Director
Virginia Department of Health
Office of Drinking Water
Regional Field Address (Or use email see page 1)

RE: VPDES Permit No. VA00**00000, Facility Name, County;**
[*choose one:* Issuance/Reissuance/Modification]

Dear :

Enclosed is a copy of the referenced VPDES permit application for your review and concurrence. [OR if done by email] Documentation supporting issuance/reissuance/modification of the referenced VPDES permit application is [choose one] posted at ftp://ftp.deq.virginia.gov/wps/..... [OR] is attached 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**]
[*Include email and fax information*]

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 (Or use email see page 1)

RE: VPDES Permit No. VA00**00000, Facility Name, County;**
[*choose one:* Issuance/Reissuance/Modification]

Dear :

Enclosed is a copy of the referenced VPDES permit application for your review. [OR if done by email] Documentation supporting issuance/reissuance/modification of the referenced VPDES permit application is [choose one] posted at ftp://ftp.deq.virginia.gov/wps/..... [OR] is attached for your review and concurrence. 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**]
[*Include email and fax information*]

Enclosure: Permit Application

Commissioner of the Revenue Letter

Regional DEQ Letterhead

DATE

Commissioner of the Revenue
Address (Or use email)

Dear Commissioner:

We are in receipt of the following permit application:

VPDES Permit No. VA00 Applicant:
Facility: Tax Map Parcel:

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.

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 give me a call at ( )-XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure
cc: File

(***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 :

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**]. 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. Your name was provided to DEQ by the Commissioner of Revenue.

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.

Please feel free to call me at ( ) XXX-XXXX if you have any questions about this notification.

Sincerely,

[**Permit Writer**]

cc: file

(***Note: Permit writers may wish to provide more details about the proposed facility.)***

Application Comment Letter to Owner

Regional DEQ Letterhead

DATE

(OWNER'S ADDRESS)

RE: 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. .....

c. .....

(For Reissuances) A complete application for reissuance is due at least 180 days before a permit expires. In the event that 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 information on what information DEQ believes is needed in order 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. For information on the Process for Early Dispute Resolution, please visit the "Laws & Regulations", then the "DEQ Regulations" portion of our website for: http://www.deq.virginia.gov/regulations/pdf/Process_for_Early_Dispute_Resolution_8260532.pdf

If you have any questions about this letter, please call me at ( ) XXX-XXXX.

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'S ADDRESS)

RE: Facility Name VPDES No. (if applicable)

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 2 to 3 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 feel free to call me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer]**

Notice of Intent to Deny Application

Regional Letterhead

Date

Owner's Address

RE: Application for VPDES permit dated _____, facility name, location

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 call me at ( ) XXX-XXXX if you have any comments or questions.

Sincerely,

Application Withdrawal Form

SUBJECT: WITHDRAWAL OF VPDES PERMIT APPLICATION

TO: (DEQ Regional Office Address)

OWNER: (Full name as on application)
(address)

Application Withdrawal

I hereby agree to withdraw my VPDES Permit application dated _____ .

SIGNED:

NAME PRINTED:

TITLE:

DATE:

Reissuance in Lieu of Modification

Regional Letterhead

Date

Contact Name
Facility Name
Address

RE: Request for Modification of VPDES Permit No. VA00**00000**

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 is [ ]. Please follow the instructions on the permit fee form concerning fee payment. Permit application processing cannot begin without payment of this fee.

If you have any questions, please call me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure

(***Note: Send all enclosures that would be part of a permit reissuance package.***)

Permit Revocation Agreement Form for Revocation and Reissuance

SUBJECT: Revocation and Reissuance of VPDES Permit No 00**00000**

TO: **(Regional Office Address)**

FACILITY: **(Facility Name)**

FROM: **(Owner Name)**
(Address)

I hereby agree to the revocation of VPDES Permit No VA00**00000** and waive my right to a hearing in accordance with the State Water Control Law. This agreement is made with the understanding that concurrent with this revocation, a new VPDES permit will be reissued for the appropriate discharge(s) previously permitted under VPDES Permit No. VA00**00000**.

SIGNED:_____

PRINT NAME:_____

TITLE:_____

DATE:_____

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY	**VPDES PERMITS** **Threatened and Endangered Species Coordination**
To: ☐ DGIF, Environmental Review Coordinator ☐ DCR ☐ USFWS, T/E Review Coordinator **From:**	**Date Sent:** **Permit Number:**
Facility Name: **Contact:** **Phone:** **Address:**	**Location:** **USGS Quadrangle:** **Latitude/Longitude:** **Receiving Stream:** **Receiving Stream Flow Statistics used for Permit:**
Effluent Characteristics and Max Daily Flow:	**Species Search Results (or attach database report and map):**

Attach draft permit effluent limits page if available or attach existing effluent limits page (make sure it is clear in your email which one it is – draft current or existing).

DGIF email: projectreview@dgif.virginia.gov
USFWS email: cindy_kane@fws.gov
DCR: If Natural Heritage Data Explorer (NHDE) has the needed information DCR does not need this form. If you have additional information you wish to add, you may do so in the comments field on the NHDE form. DCR will contact you directly if they need more information.

C. Draft Permit Correspondence
Draft Permit Transmittal to EPA
(All correspondence to EPA should be done via email)

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 [INSERT FACILITY NAME], VPDES Permit [INSERT VPDES NO.] [is posted at [INSERT FTP LINK OR is attached]. The following documents [are posted OR attached] for your review: draft permit, fact sheet and EPA Checklist.

This proposed permit issuance 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 bacteria was approved for a downstream segment in the NAMED River Watershed by the U.S. EPA on [DATE]. The facility is identified in the bacteria TMDL for the [NAMED RIVER] Watershed and the permit includes a WLA and permit limit for [PARAMETER]."
[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.

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 Manager

(*Note: 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.)*

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: _____

NPDES Permit Number: _____

Permit Writer Name: _____

Date: _____

Major [ ] **Minor** [ ] **Industrial** [ ] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?			
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?			
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?			
5. A Priority Pollutant Screening to determine parameters of concern?			
6. A Reasonable Potential analysis showing calculated WQBELs?			
7. Dissolved Oxygen calculations?			
8. Whole Effluent Toxicity Test summary and analysis?			
9. Permit Rating Sheet for new or modified industrial facilities?			

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?			
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?			
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?			
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?			

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
5. Has there been any change in streamflow characteristics since the last permit was developed?			
6. Does the permit allow the discharge of new or increased loadings of any pollutants?			
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?			
8. Does the facility discharge to a 303(d) listed water?			
a. Has a TMDL been developed and approved by EPA for the impaired water?			
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?			
10. Does the permit authorize discharges of storm water?			
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?			
12. Are there any production-based, technology-based effluent limits in the permit?			
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?			
14. Are any WQBELs based on an interpretation of narrative criteria?			
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?			
16. Does the permit contain a compliance schedule for any limit or condition?			
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?			
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?			
20. Have previous permit, application, and fact sheet been examined?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs
(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3. Does the fact sheet provide effluent characteristics for each outfall?			
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			
List of Standard Conditions – 40 CFR 122.41 Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit actions Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset Reporting Requirements Planned change Anticipated noncompliance Transfers Monitoring reports Compliance schedules 24-Hour reporting Other non-compliance			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals
(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?			
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?			
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?			
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?			
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?			

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?			
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
3. Does the fact sheet provide effluent characteristics for each outfall?			
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?			
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			
List of Standard Conditions – 40 CFR 122.41 Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit actions Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset Reporting Requirements Planned change Anticipated noncompliance Transfers Monitoring reports Compliance schedules 24-Hour reporting Other non-compliance			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?			

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name _____

Title _____

Signature _____

Date _____

Water Quality Standards Variance Form

Documentation that water quality standards variance or water effect ratio (WER) procedure was duly processed according to state law. When the steps outlined below are followed and the form is signed, then a 'blanket' certification from the Attorney General's Office applies and states that the variance or WER was duly adopted according to state law. This is a necessary component for EPA approval of water quality standards variances or WERs.

- the variance or WER has been approved by the Department of Environmental Quality,

- the variance or WER applies to only the applicant or permittee in this proceeding,

- the variance or WER shall not prevent the maintenance and protection of existing uses or exempt the discharger or regulated activity from compliance with other appropriate technology or water quality-based limits or best management practices,

- the variance or WER was described in the 30-day public notice published for the permit and public comment was requested,

- the variance or WER public notice for the permit was published in a newspaper of general circulation in the area of interest,

- if a public hearing was held on the variance or WER, the public notice of hearing was published in a newspaper of general circulation,

- if a hearing was held, the State Water Control Board voted to grant the variance or WER request,

- the variance expires at the time of permit expiration, unless the permittee makes a showing that the variance still applies,

- the variance and WER have been duly processed with the permit according to all applicable laws and regulations and is so certified by the position authorized to approve the VPDES permit (signature below):

VPDES Permit No. _____

Facility Name _____

Facility Location _____

Effective Date of Permit _____

CERTIFIED: _____

Signature Date

_____

Title

VA DEQ AGO Variance/WER Certification Form 3/29/99 Updated 05/20/09

This form must be signed by Regional Director for AGO Certification to apply.

Draft Permit/PN Transmittal Letter to Owner when the PN Billing Information Form is Submitted with the Application

Regional Letterhead
Date

Facility Contact
Facility Name and Address

RE: VPDES Permit No. VA00**00000**

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.

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 Information 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. 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. You may submit comments prior to publishing the public notice and through the 30-day public comment period. [**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 Virginia Department of Conservation and Recreation, Storm Water Management Program Director.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure:
Draft Permit
Draft Fact Sheet
Public Notice
Public Notice Authorization Form

Draft Permit/PN Transmittal Letter to Owner when the PN Billing Information Form is not Submitted with the Application

Regional Letterhead
Date

Facility Contact
Facility Name and Address

RE: VPDES Permit No. VA00**00000**

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.

While we have drafted a permit for this 14 day review, your application was incomplete in that it did not include the Public Notice Billing Information 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 Information 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 Information 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 Information 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 Virginia Department of Conservation and Recreation, Storm Water Management Program Director.

If you have any questions or comments on the draft permit or public notice requirements, please contact me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure:
Draft Permit
Draft Fact Sheet
Public Notice
Public Notice Authorization Form

Public Notice Billing Information Form

PUBLIC NOTICE BILLING INFORMATION FORM

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in accordance with 9VAC25-31-290. C. 2.

Agent/Department to be billed: _____

Owner: _____

Applicant's Address: _____

_____

_____

Agent's Telephone No: _____

Authorizing Agent: _____
Signature

Facility Name:
Permit No. VA00**00000**

Please return to:

Permit Writer
DEQ Regional Address
Fax Number:

Public Notice Transmittal Letter to Newspaper

Regional Letterhead

Date

Newspaper Name
Address

RE: VPDES Permit No. VA00**00000**, VPDES Permit **Issuance/Reissuance/Modification**
Facility Name

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 Name and Address**]

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 call me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure:
Public Notice Verification Sheet
Public Notice

cc: Mailing List
Facility

PUBLIC NOTICE VERIFICATION SHEET

PASTE COPY OF NOTICE IN THIS SPACE

I hereby certify that the notice attached to this page appeared in the [**Newspaper Name**] once weekly for two consecutive weeks on these dates:

_____ and

_____

_____
(Signature) (Date)

_____
(Title)

Facility Name:
Permit No. VA00**00000**
Attn: [**Permit Writer**]

RETURN THE COMPLETED FORM TO: [**REGIONAL OFFICE ADDRESS**]

Draft Permit/Optional PN Transmittal Letter to Owner when the PN Authorization Form is not Required (Owner Contacts the Newspaper)

Regional Letterhead
Date

Facility Contact
Facility Name
Address

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 call me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure:
Draft Permit, Draft Fact Sheet
Public Notice
Public Notice Verification Form

cc: Mailing List

Draft Permit Transmittal Letter to DGIF, F&WS, NMFS, VIMS, VMRC & Adjacent States

Regional Letterhead

Date

Agency Name
Address of Agency (or use email)

RE: VPDES Permit No. VA00**00000** **Facility Name**

Dear Sir:

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 ftp://ftp.deq.virginia.gov/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:

[**Permit Writer]**
Virginia DEQ
[Regional Office]
[Address]

Sincerely,

[**Permit Writer**]

Enclosures:
Draft Permit
Draft Fact Sheet

Public Notice Transmittal Letter to Local Governments

Regional Letterhead

Date

Name
Address

RE: VPDES Permit No. VA00**00000** [**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 ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosures: Permit Public Notice

D. Final Permit Correspondence

Final Permit Transmittal Letter Format

Regional DEQ Letterhead
Date

Facility Contact
Facility Name
Address

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: VPDES Permit No. VA00**00000**, [**Issuance/Reissuance/Modification**]

Dear :

Your VPDES permit is enclosed. [**For Revocation and Reissuances add the following language: This permit supersedes the previous VPDES Permit VA00XXXXX issued to this facility.**] [*INSERT only if permittee unable to use eDMR* A Discharge Monitoring Report (DMR) form is included with the permit. Please make additional copies of the DMR for future use.] The first DMR required by this permit for [**monthly/bimonthly/quarterly/semiannually/annually monitored parameters] [***if parameters are monitored at more than one frequency, specify the first monitoring period and due date for each*] is due on [**date**] for the period [**months in monitoring period**]. If you still have DMR data to report as required by the previous permit please submit it as an attachment to the first DMR required by this permit. Monitoring results on the DMRs should be reported to the same number of significant digits as are included in the permit limit for the parameter. [*INSERT only if permittee unable to use eDMR* Please send DMRs to:

Regional Office Address}

[INSERT only if permittee does not have e-DMR yet has not demonstrated that they are unable to use e-DMR] DEQ has launched an e-DMR program that allows you to submit the effluent data electronically. We expect every permittee to use e-DMR as permits are reissued and exceptions will only be done on a case by case basis. There are many benefits to both DEQ and the permittee when e-DMR is utilized for submissions:
1) Fewer revisions for data since the e-DMR program automatically flags omissions before the data is submitted;
2) Cost savings on postage, copying, and paper;
3) No concerns about using the most current DMR – e-DMR refreshes the required parameters automatically when changes are needed;
4) Submittals can be made on a timelier basis; and
5) Electronic signatures from multiple people are allowed and e-DMR can be accessed from multiple computer locations.

We ask that you apply for e-DMR participation now although you may apply at any time. The following website provides details and our regional e-DMR administrator [INSERT NAME, PHONE NUMBER and EMAIL] can also assist you:
http://www.deq.virginia.gov/water/edmrfaq.html

[**For any TWTDS > 1,000 gpd that land apply, incinerate or surface dispose of sludge:** Please note that compliance with the permit's requirements for use and disposal of sewage sludge does not relieve you of your responsibility to comply with federal requirements set forth in 40 CFR Part 503. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, treatment works treating domestic sewage should continue to work directly with EPA to comply with them. For more information, you can call the EPA Region III office in Philadelphia at 215-814-5735]

[**For facilities with discharges greater than 1.0 MGD or that have pretreatment programs:**

Please note that if this permit is to be reissued in five years, there are specific testing requirements associated with the Form 2A reissuance application that are different from the testing requirements in your permit. In order to provide the necessary data for Form 2A you may need to begin additional sampling during the term of this permit prior to receiving a reissuance reminder letter from this agency. Please look at Form 2A Part D (Expanded Effluent Testing Data) and Part E (Toxicity Testing Data) for the sampling requirements.]

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia 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.

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 State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said petition must meet the requirements set forth in 9VAC25-230-130 (Procedural Rule No. 1 – Petition for formal hearing). In cases involving actions of the Board, 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 about the permit, please call [**permit writer**] at ( ) XXX-XXXX.

Sincerely,

Enclosure: Permit No. VA00**00000**
cc: EPA, Region III-3WP12

Final Permit Package Review

Permit Writer please check appropriate line:

____Issuance ____Reissuance _____Modification ____Revocation and Reissuance

____Major ____Minor 120 days or Expiration Date:

Package checklist:
___Transmittal Letter ____Original Permit ___DMR, if applicable
___Response to Comments ____Application Copies ____Fact Sheet Copies ____Tracking Sheet

Was the permit and/or fact sheet changed following regional draft permit review? Y/N
If yes, identify or summarize all changes that were made

Permit Date should be: ____Signature Date ____Previous Expiration Date

Check Off When You Review Package

Reviewer	Initials/Date
Technical	
Planning	
Water Permit Manager	
Regional Director	
Other:	
Clerical	

Final Permit Distribution Checklist

✔	To	Transmittal Letter	Permit/DMR	Response to Comments	Fact Sheet	Application
	Owner	Original	Original	Copy		
	Regional File RO Enforce. OWP&CA	FileNet	FileNet	FileNet	FileNet	FileNet
	EPA	ftp site	ftp site	ftp site	ftp site	ftp site

E. Modification Correspondence

Sample Format for a Modification Request

Virginia Department of Environmental Quality
Regional Office
Address

RE: Proposed Modification of VPDES Permit No. VA00

This is to request that VPDES Permit No. VA00_____ issued to _____ on _____ be modified as described below.

1. Present Permit Condition in Question

2. Proposed Modification Being Sought

3. Reasons for the Modification

The permit fee required for this modification and the fee form are enclosed.

_____
Signature of Responsible Official

_____
Printed Name

_____
Title

_____
Date

Change of Ownership Form Transmittal Letter

Regional Letterhead

Date

Facility Contact
Facility Name
Address

RE: Transfer of Ownership Modification of VPDES Permit No. VA00**00000**

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 call me at ( ) XXX-XXXX.

Sincerely,

[**Permit Writer**]

Enclosure

Change of Ownership Agreement Form

RE: Change of Ownership - VPDES Permit No. VA00_____

Name of permitted facility:_____

_____ County

TO: Virginia Department of Environmental Quality
Regional Office Address

We, the undersigned, hereby request a transfer of ownership for the referenced permit.
Anticipated date of transfer: _____

CURRENT OWNER SHOWN ON PERMIT: I (We) hereby agree to the transfer of ownership modification to the referenced VPDES Permit.

Attach verification that all current owner outstanding Annual Fee payments are up to date (YES/NO). If NO see statement under NEW OWNER below.

Current Owner name as listed on the VPDES Permit Cover Page:_____

Signed: _____ Date: _____

Printed Name: _____ Title: _____

Address: _____

_____

NEW OWNER TO ASSUME PERMIT: I (We) hereby agree to the change of ownership modification to the referenced VPDES Permit, and agree to accept all conditions and responsibilities of the permit.

NEW OWNER agrees to pay all outstanding Annual Fee payments currently due by old owner YES/NO

Transferred permit to be issued to: _____

Signed: _____ Date: _____

Printed Name: _____ Title: _____

Address: _____

_____

Telephone: (_____)_____

This form must be signed by properly authorized individuals as specified in the VPDES Permit Regulation and will not be processed until all fees are up to date.

F. Termination Correspondence

Intent to Terminate Letter

Regional Letterhead

Date

Facility Contact
Facility Name
Address

RE: Termination of Permit No. ____

Dear :

The Department of Environmental Quality intends to terminate the referenced permit or, if required, recommend that the State Water Control Board 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 call me at [( ) **XXX-XXXX**].

Sincerely,

[**Permit Writer**]

Enclosures:
Termination Agreement Form

Termination Agreement Form

SUBJECT: TERMINATION OF VPDES PERMIT NO. _____

TO: [**DEQ Regional Office Address**]

OWNER: [**Full name as on permit**
Address
City, State, Zip]

I hereby agree to the termination of VPDES Permit No. VA00_____ and waive my right to a hearing in accordance with Section §62.l-44.15(5) of the State Water Control Law for the following reasons:

[**Provide reason for Termination]**

I certify that the permit is ____ is not ____ subject to a pending state or federal enforcement action, including citizen suits, brought under state or federal law.

SIGNED: _____

PRINTED NAME:

TITLE: _____

DATE: _____

Permit Termination Summary Form

STATE WATER CONTROL BOARD MEETING
ON (insert date)

(Use Times New Roman -12 pt or Courier 12 point)

ITEM: Name of owner
Address

OFFICE: (insert region)

STATE WATER AFFECTED: (insert water body and river basin)

PROPOSED BOARD ACTION: Terminate (insert type of permit)

BACKGROUND: Provide the history behind the action presented; e.g., what type of facility.

DISCUSSION: Explain the basis for the termination, e g.:

owner closed
connected to regional facility and approval of discharge no longer needed
owner has installed a recycling or reuse system
proposed facility will not be built
permitted facility has no discharge and no discharge is anticipated
covered under a general permit
no longer any pollutant management activities at the site
terminating a VPA Permit for a VPDES permit to allow a discharge.

Include a statement that the owner has agreed to the termination of the permit.

PENDING ENFORCEMENT ACTION: Describe the state or federal enforcement action on this permit that necessitates board approval for termination and the impact of termination on this enforcement action.

PUBLIC COMMENT: Provide the status of any required public notice of the proposed termination and, if applicable, a summary of the public comment received to date.

Uncontested Termination Notification Letter

Regional DEQ Letterhead

Date

Contact Name
Facility Name
Address

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Permit No.

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 Supreme Court of Virginia, you have thirty days from the date you received this decision within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Virginia Department of Environmental Quality.

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 State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said agreement must meet the requirements set forth in 9VAC25-230-130 (Procedural Rule No. 1 – Petition for formal hearing).

If you have any questions, please call [**permit writer**] at ( ) XXX-XXXX.

Sincerely,

Enclosure

cc: Department of Health **(municipal only)**

Contested Termination Notification Letter

Regional DEQ Letterhead

Date

Contact Name
Facility Name
Address

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: VPDES Permit VA00**00000**

Dear :

At their [date] meeting, the State Water Control Board approved the termination of the VPDES Permit referenced above. A copy of the Board meeting minute is enclosed for your information.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date of service (the date you actually received this decision or the date it was mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Virginia Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period.

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 State Water Control Board taken without a formal hearing, or by inaction of the Board, may demand in writing a formal hearing of such owner's grievance, provided a petition requesting such hearing is filed with the Board. Said agreement must meet the requirements set forth in 9VAC25-230-130 (Procedural Rule No. 1 – Petition for formal hearing). In cases involving actions of the Board, 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 call [**permit writer**] at ( ) XXX-XXXX.

Sincerely,

Enclosure

cc: Department of Health **(municipal only)**

SECTION IN-1
INDUSTRIAL VPDES FORMATS

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A. Fact Sheet

*NOTE TO PERMIT WRITER: Remove text in italics before you print this document. Where language appears in **bold**, choose the correct response or supply the necessary information.*

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the **issuance/reissuance/modification** of the VPDES permit listed below. This permit is being processed as a **Major/Minor,** Industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards in 9VAC25-260. The discharge results from the operation of a [**describe the facility].** This permit action consists of [**Summarize what is happening in this permit action: updating boilerplate, adding ammonia/toxics limits, etc**].

1. Facility Name and Address: SIC Code:

   Location:

2. Permit No. VA00**00000** Existing Permit Expiration Date:
   (if reissuance)

3. Owner Contact: Name: Title:
   Telephone No:

4. Application Complete Date:_____
   Permit Drafted By:_____ Date:_____ [**name your**] Regional Office
   Reviewed By:_____ Date:_____
   Public Comment Period Dates: from_____to_____

5. Receiving Stream Name: River Mile:

   Basin: Subbasin: Section: Class: Special Standards:

   7-Day, 10-Year Low Flow: MGD 1-Day, 10-Year Low Flow: MGD

   30-Day, 5-Year Low Flow: MGD Harmonic Mean Flow: MGD

   30-Day, 10-Year Low Flow MGD

   Tidal? YES/NO On 303(d) list? YES/NO

   [Attach Flow Frequency Analysis documentation or indicate why no flow analysis was made]

6. Operator License Requirements:

7. Reliability Class:

8. Permit Characterization:
( ) Private ( ) Federal ( ) State ( ) POTW

( ) Possible Interstate Effect ( ) Interim Limits in Other Document (attach to Fact Sheet)

9. Provide a brief description of the wastewater treatment system and provide a general description of the production cycle(s) and activities of the facility. Include production rates if production-based technology guidelines apply. Include history of production level changes, upgrades and expansions, if applicable, to provide a basis for antidegradation. Note whether or not a Concept Engineering Report has been submitted and approved.

Discharge Description

OUTFALL NUMBER	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)

(1) List operations contributing to flow (2) List treatment units (3) Maximum 30-day average flow for industrial plant

Note: The outfall description page from the permit application may be substituted if it contains the above information. The discharge descriptions should include storm water discharges.

10. Sewage Sludge Use or Disposal: (*If the facility has a separate treatment works treating domestic sewage, briefly describe sewage sludge management process.)*

11. Discharge(s) Location Description: (Attach USGS Topo map which indicates the discharge location, significant **(large)** dischargers to the receiving stream, water intakes, and other items of interest. Write Name of Topo and Quadrangle Number on the map.)

12. Material Storage: (List the type and quantity of wastes, fluids, industrial sludges, or pollutants being stored or managed at this facility. Briefly describe the storage facilities and list any measures taken to prevent the stored material from reaching state waters. Refer to Operations and Maintenance Manual).

13. Ambient Water Quality Information (Include surface and ground water data. Attach any memoranda or other information which helped to develop permit conditions, i.e., PReP complaints, special water quality studies, STORET data, ground water data, other biological and/or chemical data, special standards, Board policies, and 305(b) report.)

14. Antidegradation Review & Comments:

Tier: 1 _____ 2_____ 3_____

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9VAC25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. [**Receiving stream**] is determined to be a Tier [**1, 2, or 3**] waterbody. This determination is based on [**give rationale for Tier determination**].

15. Site Inspection: Date_____Performed by_____

16. Effluent Screening & Limitation Development:
Include information supporting all interim and final limits or monitoring requirements here. Include all calculations and rationale for effluent limitations and at least the following information:
- *Evaluation of existing effluent data to determine the need for water quality-based limits or toxics monitoring*
- *Flow basis for wasteload allocations*
- *Calculations of wasteload allocations*
- *Provide rationale for limiting internal waste streams and indicator pollutants.*
- *Printout of the STATS.EXE, and MIX.EXE computer programs.*

These printouts contain the analysis of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic, and human health); effluent limits determination; data source

Basis for Effluent Limitations

PARAMETER	BASIS

1. Technology –based limits (cite applicable federal effluent guidelines or regulation)
2. Water Quality-based limits (show calculations or cite WQM plan reference)
3. Best Professional Judgement (BPJ)-based limits (provide narrative rationale)

17. Antibacksliding Statement: (*For reissuance, either state that all limits are at least as stringent as in the previous permit or give rationale for any relaxed limits.)*

18. Compliance Schedules: (*Document any compliance schedules, include rationale used in developing the schedule 9VAC25-31-250*)

19. Special Conditions: (*Provide a rationale for **all** special conditions contained in the permit. See listing of some common special conditions' rationales below.)*

a. Additional Chlorine Limitations and Monitoring Requirements

Rationale: Required by Sewage Collection and Treatment Regulations 9VAC25-790 and Water Quality Standards 9VAC25-260-170, Bacteria; Recreational Waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

b. Chlorine Demonstration Requirements for Bacteria Limits

Rationale: This special condition specifies the requirements for chlorine demonstrations if the permittee intends to demonstrate that chlorine limitations are an appropriate surrogate parameter for indicating compliance with bacteria standards during the permit term, in accordance with 9VAC25-260.

c. Notification Levels

Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 A for all manufacturing, commercial, mining, and silvicultural dischargers.

d. O&M Manual Requirement

Rationale: Required by Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9VAC25-31-190 E, and 40 CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this.

e. Licensed Operator Requirement

Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 C and The Code of Virginia §54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18VAC160-20-10 et seq.), requires licensure of operators. (*The licensed operator requirements apply to wastewater treatment works based on the maximum 30-day average flow and treatment type, there is no distinction between municipal and industrial.)*

f. Materials Handling/Storage

Rationale: 9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

g. Best Management Practices

Rationale: VPDES Permit Regulation, 9VAC25-31-220 K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limit or to carry out the purpose and intent of the Clean Water Act and State Water Control Law.

h. Nutrient Enriched Waters Reopener

Rationale: Policy for Nutrient Enriched Waters, 9VAC25-40 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future nutrient limits may be needed to control aquatic plants.

[NOTE: See also GM 07-2008 and it's associated amendments for additional Nutrient Waters fact sheet language for reopeners for facilities in the Chesapeake Bay Watershed.]

i. Water Quality Criteria Reopener

Rationale: VPDES Permit Regulation, 9VAC25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of the water quality standards.

j. Water Quality Criteria Monitoring

Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. To ensure that water quality standards are maintained, the permittee is required to analyze the facility's effluent for the substances noted.

k. Compliance Reporting

Rationale: Authorized by VPDES Permit Regulation, 9VAC25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

l. Instream Monitoring

Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters.

m. New Discharges which are permitted from Form 2D or 2E

Rationale: The permit limitations are based on assumed effluent quality characteristics when application Forms 2D or 2E are used. These assumptions (and the permit basis) can only be validated with actual effluent data. The submission of actual data is required in the application form instructions.

n. Sampling to Fulfill Form 2F Requirements

Rationale: In some cases, applicants may not have been able to comply with the Form 2F storm water sampling requirements due to the lack of a representative storm event. This special condition requires the permittee to sample and submit data from a storm event to fulfill the requirements of Form 2F.

o. Sludge Use and Disposal

Rationale: VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. (Applicable if the domestic sewage is treated as a separate outfall at this industrial facility.)

p. Effluent Monitoring Frequency

Rationale: Permittees are granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations related to the effluent limits for which reduced frequencies were granted. If permittees fail to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated for those parameters that were previously granted a monitoring frequency reduction.

q. Oil Storage Ground Water Monitoring Reopener

Rationale: Facilities with greater than 1,000, 000 gallons of regulated aboveground petroleum storage are required to monitor ground water under the Facility and Aboveground Storage Tank

Regulation 9VAC25-91. Where potential exists for ground water pollution and that regulation does not require monitoring, the VPDES permit may under Code of Virginia §62.1-44.21.

r. Whole Effluent Toxicity Testing

Rationale: VPDES Permit Regulation, 9VAC25-31-210 and 220 I, requires monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act.

s. Ground Water Monitoring

Rationale: State Water Control Law § 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. Ground water monitoring for parameters of concern will indicate whether possible lagoon seepage is resulting in violations to the State Water Control Board's Ground Water Standards.

t. Storm Water Management

Rationale: VPDES Permit Regulation, 9VAC25-31-10 defines discharges of storm water from industrial activity in 9 industrial categories. 9VAC25-31-120 requires a permit for these discharges. The Storm Water Pollution Prevention Plan requirements of the permit are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9VAC25-151-10 et seq. VPDES Permit Regulation, 9VAC25-31-220 K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limit or to carry out the purpose and intent of the Clean Water Act and State Water Control Law.

u. Total Maximum Daily Load (TMDL) Reopener

Rationale: Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

v. Limitation Monitoring Waiver

Rationale: Monitoring for one or more technology-based effluent limitations may be waived if the permittee provides the demonstration required by 9VAC25-31-220 A 2.

w. *(NOTE: Insert when a special condition has been added to address when DMR submittal is not required until commencement of discharge or annually until commencement of discharge. See section III.A.10 b.*

Notification of Commencement of Discharge for New Facilities

Rationale: This condition is designed to clarify monitoring and reporting requirements before the commencement of discharge.

x. Part II, Conditions Applicable to All Permits

Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

20. NPDES Permit Rating Work Sheet: Total Score_____ (*Attach completed sheet. Alternately, the permit writer may note that the previously completed work sheet remains valid, and attach that work sheet*).

21. Changes to Permit: (*Identify any changes in the permit from the previously issued permit. Refer to communications with applicant, VDH, EPA and any other agency where comments resulted in changes to the permit. Include any changes associated with the special conditions or reporting requirements and the reasons for the changes.*)

Outfall No.	Parameter Changed	Monitoring Requirement Changed		Effluent Limits Changed		Reason	Date
		From	To	From	To		
Special Condition Changes							

22. Variances/Alternate Limits or Conditions: (*Provide justification or refutation rationale for modifications or alternatives to required permit conditions/limitation (9VAC25-31-280 B 4). This includes, but is not limited to:*

- *waivers from application testing requirements*
- *variances from technology guidelines(9VAC25-31-220 A 2) or water quality standards*
- *variances from VPDES permit manual guidance*)

23. Public Notice Information required by 9VAC25-31-280 B:
All pertinent information is on file and may be inspected or copied by contacting **Permit Writer** at:
Virginia DEQ Regional Office Address and Telephone No. (000) 000-0000; Email address:

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ **[Insert Regional Office]** Regional Office by appointment.

24. Additional Comments:

Previous Board Action: (*Summarize all previous Board actions affecting this permit action. If none, state* ***none****. Include Consent Decrees, Consent Orders, and Interim Limits, if applicable*).

Staff Comments: (*If applicable, explain compliance status and reasons for short term permit.*)

Public Notice Comments: (*State* **"No comments were received during the public notice" or "Comments received during the pubic notice are provided in the attached Response to Comments" or include comments on the fact sheet if they are brief.**

Other Agency Comments: Include information from other agencies received outside of the public comment period (e.g. VDH, EPA, DGIF and DCR threatened and endangered species coordination (their comments and our responses. Include dates of coordination comments.)

25. 303(d) Listed Segments (TMDL): (*Indicate if the facility discharges to a segment that has been or is listed on the current 303(d) list and the allocations are specified by an approved TMDL and, if so, provide all appropriate information/calculations. If the facility discharges to a stream segment that is on an impaired water, then the fact sheet must include some description of how the TMDL requirements are being met. Note that the discharge may be directly into an impaired segment or a downstream TMDL has been established for the discharge. Permit writers should consult with planning staff for recommendations and may choose from one of the following categories to fulfill this requirement.)*

Permits for discharges into Category 5 Impaired or Threatened Waters (TMDL Needed):

TMDL approved, permit has limits for the TMDL parameter :

Fact Sheet Information:
- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Identify by name the TMDL associated with this permit
- Identify the date of EPA approval
- Identify the wasteload allocation given to the discharge being permitted
- Identify the permit limits that are associated with the TMDL. Some permit limits may be WQS and TMDL based.

Example fact sheet language:

This facility discharges directly to **(name of receiving stream)**. The stream receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) on the current 303(d) list. EPA approved the (**name of the TMDL**) TMDL on (**date of approval**) for this segment. It contains a WLA for this discharge of (**provide WLA numbers**). This permit has limits of (**list numerical limits**) for (**list parameter**) that are in compliance with the TMDL.

Special Permit considerations:
None

TMDL approved, permit does not have limits for the TMDL parameter:

Fact Sheet Information:
- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Identify by name the TMDL associated with this permit

- Identify the date of EPA approval
- Point out that the effluent being permitted does not contain the parameter that the TMDL addresses.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) on the current 303(d) list. EPA approved the (**name of the TMDL**) TMDL on (**date of approval**) for this segment. It does not contain a WLA for this discharge. No limit for (**list parameter**) is included because the effluent does not contain (**list parameter**).

Special Permit considerations:

None

TMDL not approved, permit has limits for the parameter that caused the segment to be listed:

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- *Note that the permit limit is established to meet the standard at the end of the pipe, pending completion of the TMDL.*
- *Note that the permit limit may be relaxed, in accordance with CWA Section 303(d)(4), after the TMDL is approved.*

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* **for (list parameter**) on the current 303(d) list. A TMDL has not been prepared or approved for the segment. This permit has limits of (**list numerical limits**) for (**list parameter**) that require compliance with the standard prior to discharge. Given these limits this facility can neither cause nor contribute to the observed violation of the standards. The permit contains a re-opener condition that may allow these limits to be modified, in compliance with section 303(d)(4) of the Act once a TMDL is approved.

Special Permit considerations:

Include the TMDL re-opener special condition.

TMDL not approved, permit does not have limits for the parameter that caused the segment to be listed:

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Note, with appropriate documentation, that the effluent being permitted does not contain the parameter that caused the segment to be listed.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) on the current 303(d) list. The TMDL

that will be prepared for this segment will not have a WLA for this discharge for (**list parameter**). No limit for (**list parameter**) is included in this permit because the effluent does not contain (**list parameter**).

Special Permit considerations:
None

Permits for discharges into segments listed in Categories 4B or 5C:

Categories 4B and 5C of the list is based on the fact that a permit contains a water quality limit that has not been complied with due to a compliance schedule. Once the schedule runs its course and the facility attains the limit, the segment will be removed from the list. No TMDL will normally be prepared.

Reissuance, Compliance attained, segment delisted:

Since compliance schedules cannot run beyond the end of a permit, the facility should have attained compliance and the segment should have been removed from the list prior to the need to reissue the permit. Providing this occurs there will be no need to send the permit to EPA for review and neither the fact sheet nor the permit requires any special language.

Fact Sheet Information:
None

Special Permit considerations:
None

Modification - Compliance not attained:
There is, of course, a chance that the permit will have to be modified prior to the completion of the compliance schedule and delisting. In this case, the TMDL discussion in the fact sheet should contain the following:

Fact Sheet Information:
- Identify the segment
- The reason the segment was listed (as noted above)
- The parameter and/or designated use the segment was listed for
- The current limit that will result in attainment
- The time line of the compliance schedule.
- The current status of facility relative to the schedule

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired for (**list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit that has not been achieved. The limits for **(list parameter)** in this permit will result in attainment of the standards upon completion of the compliance schedule. The scheduled date is (**give compliance schedule completion date**). No TMDL will be prepared for this segment since it will be delisted when the facility achieves compliance with the limits.

Special Permit considerations:
None

<u>Compliance attained but segment not delisted</u>:

Fact Sheet Information:
- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- Information to demonstrate that the facility is in compliance and the standard is being attained.
- A statement that the segment will be removed from the list as soon as possible and that a TMDL is not necessary.

Example fact sheet language:

This facility discharges directly to **(name of receiving stream**). The stream segment receiving the effluent is listed as impaired for (**list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit. The limits for (**list parameter**) in this permit have resulted in attainment of the standards. No TMDL will be prepared for this segment since it will not appear in the next 303(d) list.

Special Permit considerations:
None

<u>Compliance schedule complete but facility still is not in compliance.</u>

Fact Sheet Information:
- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- A description of enforcement action being taken to bring the facility into compliance.
- A statement that the segment will be removed from the list as soon as compliance is reached and that a TMDL is not necessary.

Example fact sheet language:

This facility discharges directly to **(name of receiving stream**). The stream segment receiving the effluent is listed as impaired for **(list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit. The limits for (**list parameter**) in this permit will result in attainment of the standards once compliance is achieved. The facility is currently in non-compliance with the requirements of the permit. No additional permit limits are necessary and enforcement action is underway to obtain compliance. No TMDL will be prepared for this segment since it is not a water quality issue but rather an enforcement issue. The segment will be removed from the 303(d) list when compliance with permit limits is obtained.

Special Permit considerations:
None

Permits for discharges into Category 2B or 3C waters of concern or waters with observed effects:

Categories 2B and 3C is a listing of waters of concern or waters with observed effects. Generally, a TMDL will not be prepared for these waters. However, the fact sheet for permits issued for a discharge to these segments should contain a demonstration that the limits will not increase the threat.

Facility discharges parameter that resulted in the listing:

Fact Sheet Information:

- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- A description of how this permit will not increase the threat.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as of concern or with observed effects for (**list parameter**) in the current 303(d) list. The limits for (**list parameter**) in this permit will result in attainment of the applicable standards.

Special Permit considerations:
Include the TMDL re-opener special condition.

Permits for discharges into Categories 4C or 5C naturally impaired waters:

Category 4C is a listing of segments that do not meet the standard due to natural conditions but does not need a TMDL. Section 5C is a listing of segments that do not meet the standard due to 'suspected' natural conditions and may require a TMDL.

<u>Permit has limits for the parameter that caused the segment to be listed:</u>

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge* for (**list parameter**) in the current 303(d) list. The impairment is the result of natural conditions. The standards for this segment are being reevaluated to determine if they are correct or if they require modification. The limits of (**list numerical limits**) in this permit for (**list parameter**) have been designed to provide that this facility will neither cause nor contribute to the impairment.

Special Permit considerations:
Include the TMDL re-opener special condition.

B. Permit Format

1. Cover Page

DEQ Letterhead (No Board Members, No Regional Letterhead)

Permit No. VA00**00000**
Effective Date:
Expiration Date:

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, and Parts I and II of this permit [*list other permit parts if applicable*], as set forth herein.

Owner: **(Permit Applicant)**
Facility Name: **(Facility)**
City [County]: (**Either City or County as appropriate)**
Facility Location: (**Location**)

The owner is authorized to discharge to the following receiving stream:

Stream: **(Receiving Waters name)**
River Basin:
River Subbasin:
Section:
Class:
Special Standards:
(**fill in above information)**

_____
[*Indicate position of person delegated to sign permit here*]
Department of Environmental Quality

_____
Date

2. Part I A. Effluent Limitations and Monitoring Requirements

A. 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)

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow	NL	NA	NA	NL		

INCLUDE ADDITIONAL PARAMETERS AND LIMITATIONS AS REQUIRED

NL = No Limitation, monitoring required
NA = Not Applicable

a. There shall be no discharge of floating solids or visible foam in other than trace amounts.

Any other footnotes should be listed alphabetically

3. Part II, Permit Boilerplate

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring.

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records.

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results.

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

Regional office address

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S.

Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information.

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports.

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

F. Unauthorized Discharges.

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other 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 to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges.

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges.

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (XXX) XXX-XXXX (voice) or (XXX) XXX-XXXX (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24 hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes.

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or

(2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

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

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

K. Signatory Requirements.

1. Applications. All permit applications shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and 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 partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters

for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

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

L. Duty to Comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit.

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law.

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the

Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges.

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate.

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

T. Need to Halt or Reduce Activity not a Defense.

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

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:

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

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

(3) The permittee submitted notices as required under Part II U 2.

b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in Part II I; and

d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry.

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

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

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

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

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions.

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

Y. Transfer of permits.

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability.

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

SECTION IN-2
INDUSTRIAL VPDES DRAFTING

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A. NPDES Permit Rating Work Sheet

EPA's NPDES Permit Rating Work Sheet is completed for every industrial facility whenever a permit is issued, reissued or modified or coverage under a general permit for an industrial facility is proposed. Do not issue a general permit to any facility which qualifies as a major. The completion of this work sheet will establish whether or not the industrial facility is considered a major discharger. The only exception to this requirement is if the permit meets all of the three following conditions:

- the permit is being reissued or modified and
- the rating on the new work sheet 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 work sheet is part of the official file on the facility. If the rating should change for a facility, the RO should notify OWP&CA 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 work sheet should be forwarded to OWP&CA. If a major facility is changed and no longer qualifies as a major, the RO should forward a copy of that work sheet to OWP&CA so that a current list of major dischargers can be maintained.

2. Work Sheet Supplemental Instructions

The work sheet should be totally completed. Skipping one or more Factors will negate the validity of the final score. A blank work sheet form is reproduced here for your information. Each Regional Office has copies of the instructions for completing the form, including the Appendices. The following hints may be useful for the permit writer.

The reach number is available from STORET, however it is not necessary to fill in this part. EPA uses it in their PCS data entry. The questions on steam electric plants and storm sewers are self explanatory.

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 Work Sheet 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 storm water 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.

$$\frac{\text{max. 30 day avg. flow}}{\text{7Q10 + max. 30 day avg. flow}} \times 100 = \text{IWC}$$

Use the chart in Figure 1 of the Work Sheet 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.

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 storm water 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 whether or not the facility has a TMP, and if they do, whether or not they have failed enough acute and chronic toxicity tests according to the Toxics Management Regulation. If there are any questions on the response to this part, call OWP&CA 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 WORK SHEET

☐ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status change
☐ Deletion

NPDES NO. _____

Facility Name:_____

City:_____

Receiving Water:_____

Reach Number: _____

Is this facility a steam electric power plant (SIC=4911) with one or more 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)*

Section A ☐ Wastewater Flow Only Considered

Wastewater Type (See Instructions)		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 (See Instructions)	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

NPDES NO:

(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

NPDES NO.

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	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

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

HPRI code checked: __

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 NPDES NO.

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

INSTRUCTIONS FOR COMPLETING THE NPDES PERMIT RATING WORK SHEET

(This is a US EPA document. Not all parts of these instructions are applicable for Virginia permits.)

General Information

From the permit, enter the NPDES number, facility name, and city. Enter the receiving water name and EPA reach number.

The eleven digit reach number for a facility can be obtained through the use of the STORET water quality database that resides on the EPA IBM mainframe computer. The user will need to have a USERID to access the computer and will need to have STORET database privileges. See your EPA ADP coordinator for the former and call STORET User Support at 1-800-424-9067 for the latter. Once these items have been obtained, the user may access a procedure known as the "PCS/STORET Interface" (or IPS5). This procedure links the PCS and STORET databases together and allows the user to obtain information from both. In order to obtain information from the PCS system, the user will have to be approved by PCS for access. Call PCS User Support for information on getting access to this database. However, access to PCS is not necessary for obtaining a reach number.

Once logged on to the EPA IBM computer, simply issue the following command at the "Ready" prompt: *WQAB IPS5*. The procedure will ask you to provide an NPDES number; the rest is menu driven. One of the reports that is available for the procedure is the "Basic" report. This will provide the reach number. Questions about the use of this procedure may be directed to Phillip Taylor at FTS 382-7046 or (202) 382-7046.

Answer the next two questions regarding steam electric facilities and storm water 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 storm water 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 on page II-3 of Form C. 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.

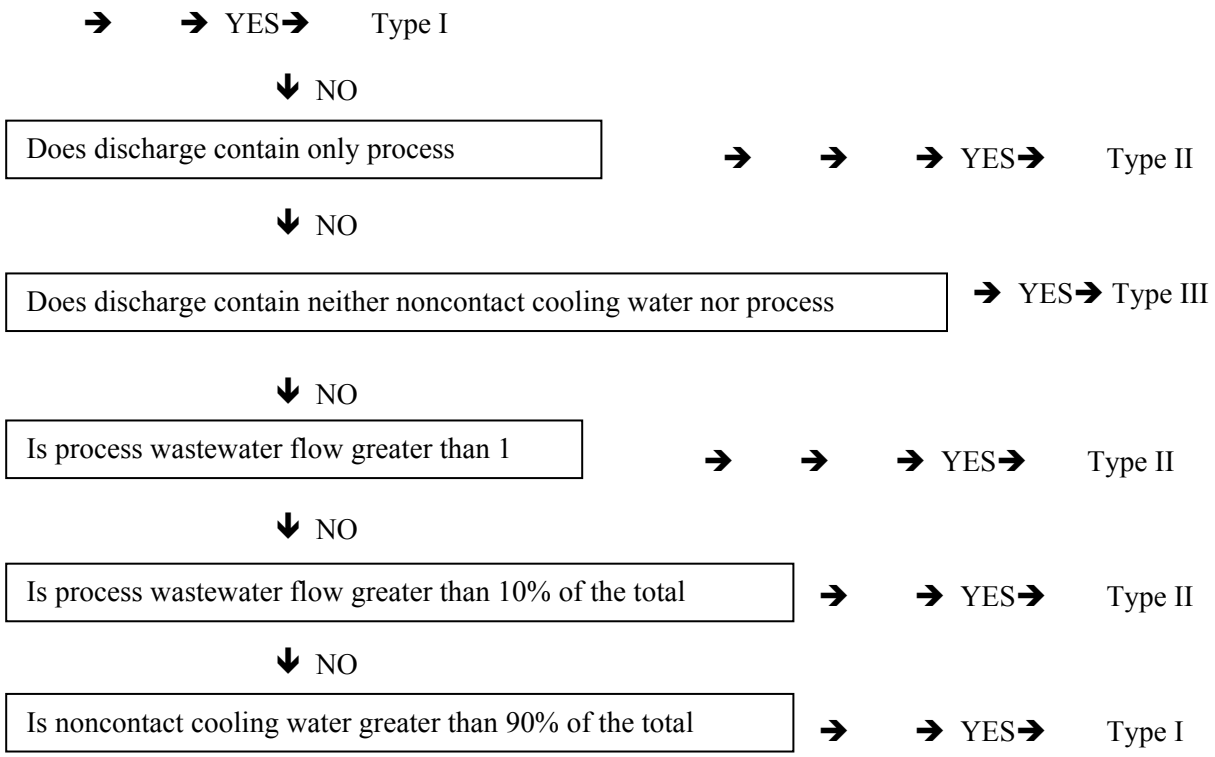
Once the wastewater type has been determined, compute the total volume of wastewater discharged for all outfalls. This is the sum of the daily average discharges for each outfall shown in the permit application.

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.

Figure 1. Wastewater Type Selection Flow Diagram

Does discharge contain only noncontact cooling



FACTOR 3: Conventional Pollutants

Data on conventional pollutants are obtained from the NPDES permit. This may be present in the permit and/or compliance files. 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 NPDES 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 (the rationale on which permit limits were based), water quality inventory reports prepared by the State and submitted to EPA biennially as required by Section 305, and area-wide Waste Treatment Management planning reports prepared for some urban areas by local planning agencies under Section 208. Some states may have reports summarizing these data.

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." Each facility nationally has been assigned a Headquarters Priority Permit Indicator (HPRI). These codes range from 1 through 5, or a facility may have no code. The following are the definitions of each code:

Code	Description
1.	∋403(c) direct ocean discharger: dischargers seaward of the inner baseline of territorial seas. These facilities were identified in the ∋403(c) Report to Congress.
2.	Discharger in Coastal county not in a major estuary drainage area and not a ∋403(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 work sheet known as Factor 2. From PCS, ascertain the appropriate HPRI code for this facility or determine the appropriate HPRI code from the above definition. 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 <u>or</u> 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
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
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
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
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
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
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

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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
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	408	R	WEST COAST BUTCHERED SALMON PROCESSING	1	1	17

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	SEAFOOD						
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
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
2299	TEXTILE GOODS NEC	410	A	WOOL SCOURING	10	10	1
2299	TEXTILE GOODS NEC	410	C	LOW WATER USE PROCESSING	2	9	2

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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
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

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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
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

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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
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
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

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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
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

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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
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

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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
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
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	428	B	EMULSION CRUMB RUBBER	8	8	1

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	ELASTOMER)						
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
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

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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
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	5	5	4

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				PLANT			
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
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	463	A	CONTACT COOLING & HEATING WATER	4	6	20

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	PLASTIC RESINS						
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
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

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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
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

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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
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	421	F	SECONDARY COPPER	1	8	7

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	METALS						
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
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

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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
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

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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
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

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3553	WOODWORKING MACHINERY	433	A	METAL FINISHING	1	9	0
3553	WOODWORKING MACHINERY		NR	NO ELECTROPLATING	1	1	99
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
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

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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
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

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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
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

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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
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
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
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
1.	San Francisco Bay/Delta	California
2.	Santa Monica Bay	California
3.	Albemarle	North Carolina
4.	Pamlico	North Carolina
5.	Puget Sound	Washington
6.	Buzzards Bay	Massachusetts
7.	Narragansett Bay	Rhode Island
8.	Long Island Sound	Connecticut & New York
9.	New York/New Jersey Harbor	New Jersey & New York
10.	Delaware Bay	Pennsylvania, New Jersey & Delaware
11.	Delaware Inland Bays	Delaware
12.	Sarasota Bay	Florida
13.	Galveston Bay	Texas
14.	CASCO	Maine
15.	Massachusetts Bay	Massachusetts
16.	Indian River Lagoon	Florida
17.	Tampa Bay	Florida
18.	Barataria-Terrebonne Estuarine Complex	Louisiana

NPDES RATING WORKSHEET APPENDIX C
GREAT LAKES AREAS OF CONCERN

Lake Basin	Jurisdiction	Cause of Problem: Conventional Pollutants	Cause of Problem: Heavy Metals/ Toxic Organics
Lake Superior			
St. Louis River	Minnesota	X	X
Torch Lake	Michigan	X	X
Deer Lake-Carp Creek – Carp River	Michigan		X
Lake Michigan			
Manistique	Michigan		X
Menominee River	Michigan/Wisconsin		X
Fox River/Southern Green Bay	Wisconsin	X	X
Sheboygan	Wisconsin		X
Milwaukee Estuary	Wisconsin	X	X
Waukegan Harbor	Illinois		X
Grand Calumet River/ Indiana Harbor Canal	Indiana	X	X
Kalamazoo Lake	Michigan		X
Muskegon Lake	Michigan		
White Lake	Michigan		X
Lake Huron			
Saginaw River/Saginaw Bay	Michigan		X
Lake Erie			
Clinton River	Michigan	X	X
Rouge River	Michigan	X	X
Raisin River	Ohio	X	X
Maumee River	Ohio	X	X
Black River	Ohio	X	X
Cuyahoga River	Ohio	X	X
Ashtabula River	Ohio	X	X
Lake Ontario			
Buffalo River	New York	X	X
Eighteen Mile Creek	New York	X	X
Rochester Embayment	New York	X	X
Oswego River	New York	X	X
Connecting Channels			
St. Marys River	Michigan	X	X
St. Clair River	Michigan	X	X
Detroit River	Michigan	X	X
Niagra River	New York	X	X
St. Lawrence River	New York	X	X

NPDES RATING WORKSHEET APPENDIX D
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

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
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 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 40 CFR Part 423
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 4

C. EPA Transmittal Checklist

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name: _____

NPDES Permit Number: _____

Permit Writer Name: _____

Date: _____

Major [ ] **Minor** [ ] **Industrial** [ ] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?			
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?			
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?			
5. A Priority Pollutant Screening to determine parameters of concern?			
6. A Reasonable Potential analysis showing calculated WQBELs?			
7. Dissolved Oxygen calculations?			
8. Whole Effluent Toxicity Test summary and analysis?			
9. Permit Rating Sheet for new or modified industrial facilities?			

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?			
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?			
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?			

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?			
5. Has there been any change in streamflow characteristics since the last permit was developed?			
6. Does the permit allow the discharge of new or increased loadings of any pollutants?			
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?			
8. Does the facility discharge to a 303(d) listed water?			
a. Has a TMDL been developed and approved by EPA for the impaired water?			
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?			
10. Does the permit authorize discharges of storm water?			
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?			
12. Are there any production-based, technology-based effluent limits in the permit?			
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?			
14. Are any WQBELs based on an interpretation of narrative criteria?			
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?			
16. Does the permit contain a compliance schedule for any limit or condition?			
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?			
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?			
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?			
20. Have previous permit, application, and fact sheet been examined?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs
(To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (POTWs)	Yes	No	N/A
1. Does the permit contain numeric limits for ALL of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?			
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?			
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?			
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?			
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?			
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
3. Does the fact sheet provide effluent characteristics for each outfall?			
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the record indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			
4. Does the permit require testing for Whole Effluent Toxicity?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?			
2. Does the permit include appropriate storm water program requirements?			

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?			
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?			
a. Does the permit require implementation of the "Nine Minimum Controls"?			
b. Does the permit require development and implementation of a "Long Term Control Plan"?			
c. Does the permit require monitoring and reporting for CSO events?			
7. Does the permit include appropriate Pretreatment Program requirements?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			
List of Standard Conditions – 40 CFR 122.41 Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit actions Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset Reporting Requirements Planned change Anticipated noncompliance Transfers Monitoring reports Compliance schedules 24-Hour reporting Other non-compliance			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?			

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals
(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?			
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?			

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?			
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?			
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?			
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?			
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?			
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?			

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ) – cont.	Yes	No	N/A
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?			
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?			

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?			
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			
3. Does the fact sheet provide effluent characteristics for each outfall?			
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?			
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?			
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?			
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?			
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?			
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?			

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?			
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?			
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?			

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?			
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			
List of Standard Conditions – 40 CFR 122.41 Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit actions Property rights Duty to provide information Inspections and entry Monitoring and records Signatory requirement Bypass Upset Reporting Requirements Planned change Anticipated noncompliance Transfers Monitoring reports Compliance schedules 24-Hour reporting Other non-compliance			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?			

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name _____

Title _____

Signature _____

Date _____

D. 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/month for continuous process wastewaters is recommended for use in drafting VPDES 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 sample 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 Guidance 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 his potential impact on the receiving stream.

b. Frequency of sampling will be largely determined by:

- Compatibility of the wastewater discharge and stream uses;
- Receiving water quality;
- Potential presence of toxic or hazardous materials;
- Variability of the wastewater;
- Mode of discharge - batch, continuous, controlled, etc.
- Residence time - wastewater treatment facilities with short residence time should be sampled more frequently than those with long residence time; and
- Whether the discharge is capable of meeting permit limits.

c. The use of sampling frequencies below the minimums identified in the sample standard permit recommendations requires justification in the FS. Reissuance of a permit with reduced sampling frequency does not require another justification if the limits are being met.

3. Sample Type

Base the sample type on treatment technology and discharge duration. A batch type discharge or flows averaging less than .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.

c. Grab samples or continuous recording should be used for pH, DO, and residual chlorine.

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 on the DMR. DMRs are generally sent to the RO 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, but they should accompany the DMR. 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 monthly operational report with the DMR that details the results of the additional monitoring. In addition to the DMR, a monthly report covering the plant's general operational data may be requested by the RO.

5. Monitoring Reductions for Reissuances

a. Qualification Criteria

Monitoring reductions should be based on past performance. Only permittees having exemplary operations that consistently meet permit requirements should be considered for reduced monitoring. This restriction applies to parameters that have limits. Monitoring only requirements can be reduced at the discretion of the permit writer. No facilities are specifically excluded from the evaluation. However, to ensure protection of aquatic life and human health, disinfection and dechlorination parameters should not be considered eligible for reduced monitoring. Procedures already established, such as the Designated Use Attainability Analysis that requires Virginia Department of Health review and concurrence, should be used for this purpose.

To qualify for consideration of reduced monitoring requirements, the facility should not have been issued any Warning Letters, Notices of Violation, or Notices of Unsatisfactory Laboratory Evaluation, or be under any Consent Orders, Consent Decrees, Executive Compliance Agreements, or related enforcement documents during the past three years. If the facility has had problems, but has not yet been issued an enforcement action, it can still qualify for monitoring reduction. If an upgraded facility replaces one that was under an enforcement action, the new facility can be considered for monitoring reduction after it produces 3 years of effluent data.

b. Monitoring Reductions

(1) For each eligible parameter, calculate the three-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.

Allowable 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	1/2mos
2/month	2/mo	2/mo	2/mo	1/quarter
1/month	1/mo	1/mo	1/quarter	1/6mos

(2) The baseline monitoring frequencies in Table 1 will normally be considered the level of monitoring in the existing effective VPDES permit. 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. Data collected on a quarterly basis is not included in the baseline frequencies because it is not frequent enough to develop valid reduced monitoring statistics.

(3) New permittees and upgraded treatment facilities should generate three years of data before being eligible for consideration for reduced monitoring.

(4) 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.

(5) 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.

(6) 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.

(7) Temperature: Reduction of monitoring frequency can be considered on a case-by-case basis.

(8) Bacteria: Reduction of monitoring frequency when using TRC disinfection can be considered on a case-by-case basis 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 for minors. Monitoring reductions for bacteria are not appropriate when using alternate disinfection. The sampling should be conducted between the hours of 10:00 a.m. and 4:00 p.m.

c. Reinstating Higher Monitoring:

Permittees are expected to maintain the performance levels that were used as the basis for granting monitoring reductions. To remain eligible for these reductions, the permittee should not have any violations related to any of the effluent limitations for which reduced monitoring was granted. For facilities that do not maintain performance levels, reinstate the baseline frequencies for all parameters that previously had reduced monitoring.

d. Permit recommendations:

(1) List only the reduced monitoring requirements in the Part I.A. page of the permit, adding a footnote reference number following the Frequency column heading.

(2) Add the following footnote to the Part I.A. page: "See Part I._._* for additional instructions regarding effluent monitoring frequencies."

(3) Add the Effluent Monitoring Frequencies special condition at Part I._._*:

* = Use the appropriate permit special condition reference

e. 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 this guidance.

(2) 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 guidance 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.

(3) 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 well decide not to reduce monitoring of critical point sources in these instances. The permit writer should always apply Best Professional Judgement in setting monitoring frequencies.

(4) 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 guidance recommending reductions from established monitoring frequencies for these types of limits.

(5) Use of Daily Maximum Values: This guidance does 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/mo (weekly 10am-4pm) provided TRC sampling frequencies are applied that match those TRC sampling requirements in the sampling schedule table in MN-2 A. For alternative disinfection, follow the sampling schedule following the paragraph below.

When disinfection is by means other than chlorination, use the following guidance for bacteria monitoring frequency to ensure adequate continuous disinfection. This follows the same sampling frequencies in the Sample Frequency Table in MN-2. 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 (10 am to 4 pm, grab)
0.0401-.1	2 days/wk (10 am to 4 pm, grab)
< 0.040	1/week (10 am to 4 pm, grab)

SECTION IN-3
INDUSTRIAL VPDES SPECIAL CONDITIONS

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A. Industrial Special Conditions

The specific text for special conditions common to many industrial permits is presented in the following pages. Some are to be included in all industrial permits while others may be used on a case-by-case basis. Rationales for these special conditions are found in the Fact Sheet. Permit writers should delete *italics notes and instructions* and resolve **bold items** before printing the special conditions.

Refer to Section III for recommendations on arrangement of the sections of Part I.

Reminder*:* Each permit page after the cover page has the following header in the upper right corner. Permit writers should ensure that the header is present and that the appropriate permit number and Part and Page numbers are printed.

Permit No.

VA00**XXXXX**

Part **X**

Page **X of X**

1. Additional TRC Limitations and Monitoring Requirements

(*Use for all permits where chlorine is used for disinfection, Include the following sentence when chlorine is used as a backup to alternative disinfection; otherwise start with paragraphs a - d*): If chlorine is chosen as a disinfection method **[instead of ultraviolet, etc..],** TRC shall be limited and monitored by the permittee as specified below:

a. The permittee shall monitor the TRC at the outlet of each operating chlorine contact tank [**frequency from Sampling Schedule Table in MN-2**] by grab sample.

b. No more than [**10% of total no. of monthly samples**] of all samples taken at the outlet of each chlorine contact tank shall be less than **X.X** mg/l for any one calendar month.

(*Note: for **X.X** in the above, use 1.5 mg/l for waters designated as public water supplies or shellfish waters and 1.0 mg/l for other waters (DMR #157).)*

c. No TRC sample collected at the outlet of each chlorine contact tank shall be less than 0.60 mg/l *(DMR #213)*.

d. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

(Insert the following item e (toxicity based effluent limits) in this special condition if chlorine is used as a backup to alternative disinfection or include as a limit on Part I A with a footnote that it applies when chlorine is used for disinfection. If chlorine is used as a backup the preceding paragraphs a. – d. must also be included in the special condition with the opening statement following 1. above to ensure adequate disinfection. More information on chlorine effluent limits may be found in Bacteria and Chlorine Limitations/Procedures IN-3 B).

e. If chlorination is chosen as a disinfection method, effluent TRC shall be limited and monitored, following dechlorination, by the permittee as specified below:

	Monthly Average	Weekly Average	Frequency	Sample Type
TRC (mg/l) *(DMR #005)*	**[Use values derived from waste load allocations]**	**[Use values derived from waste load allocations]**	**[Insert Frequency from Sampling Schedule Table in MN-2 A]**	Grab

(*Insert the following item e in this special condition if alternate disinfection may substitute for chlorine disinfection at the facility and the permit has no bacteria limits or less frequent bacteria monitoring in Part I A than the recommended bacteria monitoring frequency in IN-2D (or MN-2 A) for alternate disinfection.)*

f. If chlorine disinfection is not used, *E. coli*/enterococci (*choose one*) shall be limited and monitored by the permittee as specified below and this requirement, if applicable, shall substitute for the TRC and *E. coli*/enterococci *(choose one)* requirements delineated elsewhere in Part I of this permit:

	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E. coli (N/100 ml) *(For Freshwater)*	126*	**[Insert Bacteria Monitoring Frequencies in IN-2 D]**	Grab
Enterococci *(For Saltwater and Transition Zones)*	35*	**[Insert Bacteria Monitoring Frequencies in IN-2 D]**	Grab
Fecal coliform *(For shellfish waters)*	200*	**[Insert Bacteria Monitoring Frequencies in IN-2 D]**	Grab

* Monthly Geometric Mean

2. *(Use this optional special condition only when chlorine demonstrations are used to verify that chlorine limits may be used in lieu of bacteria limits. The agency has already analyzed sufficient data to determine that chlorine limitations maintain E. coli criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation. See Bacteria and Chlorine Limitations/Procedures that follows for more information. The agency may not use this item 2 special condition and use chlorine as a surrogate for bacteria limits for majors or minors with an EPA approved TMDL that has a waste load allocation for bacteria for that facility – these TMDL facilities must have bacteria limits at all times. It is inappropriate to use this special condition to remove fecal coliform bacteria limits required for shellfish waters (see IN-3, Section B.2.c) or if a current or prior demonstration study failed to conclude that chlorine is an appropriate surrogate for bacteria.)*

Chlorine Demonstration Requirements for Bacteria Limits

a. Beginning no later than **[insert date no later than six months of the permit effective date]**, *E. coli,* enterococci *(choose one)* monitoring shall be performed at a minimum as prescribed below:
Monitoring Frequency: [**select appropriate from below based on flow**]

Q≥1.0 MGD
3 per week by grab sample at 48 hour intervals between 10 a.m. and 4 p.m. until a minimum of 12 data points are collected.

Q<1.0 MGD
Once per week by grab sample between 10 a.m. and 4 p.m. until a minimum of 12 data points are collected.

Effluent flow shall be measured and chlorine residual after contact but before dechlorination shall be sampled within 15 minutes of the time each *E. coli,* enterococci *(choose one)* sample is taken. The date and time the samples were collected shall also be recorded. All data for each calendar month shall be compared to the geometric mean of *(choose one)* 126 colonies/ 100 ml *E. coli* / 35 colonies/100 ml enterococci.

b. No later than **[insert date no later than one year after the permit effective date]**, a demonstration of adequate disinfection as described in item c below shall be completed, or the limitations and monitoring requirements in item d shall become effective. No later than **[insert date no later than 14 days prior to one year after the permit effective date]** the permittee shall submit to the DEQ [**insert region**] regional office a written notice, including all data collected during the demonstration period. The written notice shall include the following:

(1) The original data set including the following information and data:
- date and time sample collected
- *E. coli,* enterococci *(choose one)* (colonies/100 ml)
- chlorine residual after contact but before dechlorination (mg/l)
- chlorine contact time (minutes)
- flow (mgd)

(2) The geometric mean calculations and results; and
(3) A summary of results in tabular format and a statement of successful or unsuccessful demonstration of the requirements of item c.

In the case of unsuccessful demonstration, the permittee shall comply with item d.

c. If there are no exceedences of the applicable *E. coli,* enterococci *(choose one)* criterion in a minimum of 12 consecutive samples collected under item a. while chlorine limitations *are* being complied with, then upon written notification from DEQ, *E. coli,* enterococci *(choose one)* monitoring shall no longer be required.

d. If there are any exceedences of the applicable *E. coli,* enterococci *(choose one)* criterion in the data set collected under item a. while chlorine limitations are being complied with, then:

The following limitations and monitoring requirements shall become effective for *E. coli,* enterococci *(choose one)* in accordance with the schedule of compliance in item (2) below:

EFFLUENT CHARACTERISTICS	MONITORING REQUIREMENTS		
	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E.coli (N/100 ml) *(For Freshwater)*	126*	[4/Month** **or See Bacteria Sampling Schedule Table in IN-2]**	Grab
Enterococci (N/100 ml) *(For Saltwater and Transition Zones)*	35*	[4/Month** **or See Bacteria Sampling Schedule Table in IN-2]**	Grab

* Monthly Geometric Mean

** Four samples taken during the calendar month weekly between 10a.m. and 4 p.m..(*NOTE: The sample frequency will be increased if the facility has alternate disinfection).* See IN-2 'Bacteria Sampling Schedule Table'

3. **Notification Levels** (*For existing industrial process wastewater dischargers, which use Form 2C*) The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) One hundred micrograms per liter;

(2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;

(3) Five times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(1) Five hundred micrograms per liter;

(2) One milligram per liter for antimony;

(3) Ten times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Board.

4. **Operation and Maintenance Manual Requirement** (*For all applicable permits without an approved operations and maintenance manual on file*) The permittee shall develop an Operations and Maintenance (O & M) Manual for the treatment works. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. The manual shall be submitted to the DEQ Regional Office

for approval within 90 days of [**the effective date of this permit OR issuance of Certificate to Operate OR commencement of discharge** *(if DMRs not required until commencement of discharge see Part III.10.b)***]**. The permittee shall operate the treatment works in accordance with the approved O & M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I.B.# [*corresponding to the Materials Handling Storage special condition*] that will prevent these materials from reaching state waters.
e. Treatment system design, treatment system operation, routine preventive maintenance of units within the treatment system, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

OR (*if approved O & M Manual already on file*) The permittee shall review the existing Operations and Maintenance (O & M) Manual and notify the DEQ Regional Office in writing within 90 days of [**the effective date of this permit]** whether it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office within 90 days of [**the effective date of this permit]**. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I. B.# [*corresponding to the Materials Handling Storage special condition*] that will prevent these materials from reaching state waters
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues..

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

5. **Licensed Operator Requirement** (*Use when a licensed operator is required*) The permittee shall employ or contract at least one Class [**from law**] licensed wastewater works operator for the facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

6. **Materials Handling/Storage** (*Use if quantities of materials are being stored on the site, and there is a potential for some to be included in runoff to State waters.*) Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, and/or stored in such a manner and consistent with Best Management Practices, so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

7. **BMP** (*Use for permits where effluent limits are infeasible to control all discharges of pollutants and O&M, Materials Handling/Storage and Storm Water Management special conditions are not sufficient*) A Best Management Practices (BMP) plan for control of leaks, spills and storm water runoff from the facility shall be developed and submitted for staff approval within 90 days of the effective date of this permit. Upon approval, the BMP plan becomes an enforceable part of the permit. The permittee shall amend the BMP plan whenever there is a change in the facility or operation of the facility which materially increases the potential to discharge significant amounts of pollutants or if the BMP plan proves to be ineffective in preventing the release of significant amounts of pollutants. Changes to the BMP plan shall be submitted for staff approval within 90 days of the effective date of the changes. Upon approval, the amended BMP plan becomes an enforceable part of the permit. (*Add requirements for monitoring and reporting/record keeping as needed. See Pulp and Paper and Shipyards for example BMP language.*)

BMP *(Use for permits where a BMP plan has already been developed)* A Best Management Practices (BMP) plan for control of leaks, spills and storm water runoff from the facility shall be maintained as an enforceable part of the permit. The permittee shall amend the BMP plan whenever there is a change in the facility or operation of the facility which materially increases the potential to discharge significant amounts of pollutants or if the BMP plan proves to be ineffective in preventing the release of significant amounts of pollutants. Changes to the BMP plan shall be submitted for staff approval within 90 days of the effective date of the changes. Upon approval, the amended BMP plan becomes an enforceable part of the permit. (*Add requirements for monitoring and reporting/record keeping as needed. See Pulp and Paper and Shipyards for example BMP language.*)

8. **Nutrient Enriched Waters Reopener** (*Required for discharges to waters designated as nutrient enriched in Water Quality Standards*) This permit may be modified or alternatively revoked and reissued to include new or alternative nutrient limitations and/or monitoring requirements should the Board adopt nutrient standards for the waterbody receiving the discharge or if a future water quality regulation or statute requires new or alternative nutrient control.

9. **Water Quality Criteria Reopener** (*Place in the permit when a water criteria parameter with no limit is monitored on the Part I A page)* Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

10. **Water Quality Criteria Monitoring** (*See Section III.A.8. Use when water quality criteria monitoring is required and has not been obtained with the application.*) The permittee shall monitor the effluent at outfall _____ for the substances noted in Attachment A, "Water Quality Criteria Monitoring" according to the indicated analysis number, quantification level, sample type and frequency. Monitoring shall be initiated after the start of the third year from the permit's effective date. Using Attachment A as the reporting form, the data shall be submitted with the next application for reissuance which is due at least 180 days prior to the expiration date of this permit [*OR for facilities not built:* **Using Attachment A as the reporting form, the data shall be submitted no later than two years following the commencement of discharge or with the permit reissuance application if that application due date is less than two years after the commencement of discharge]**. Monitoring and analysis shall be conducted in accordance with 40 CFR Part 136 or alternative EPA approved methods. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The DEQ will use these data for making specific permit decisions in the future. This permit may be modified or, alternatively, revoked and reissued to incorporate limits for any of the substances listed in Attachment A.

(The following pages are Attachment A. These pages will also serve as the reporting form for the monitoring results. They are placed in the permit at the end of Part I. Delete the parameters on the list that do not apply. Dioxin monitoring is only required for pulp and paper mills and oil refineries. Hardness monitoring is not necessary where salt water standards apply.

QLs for metals will equal the lesser of 0.4 WLAa or 0.6 WLAc, but not less than the lowest DEQ-certified metal specific method QL [which are Ag = 0.20; Al = 2.0; As = 1.0; Cd = 0.30; Cr = 0.50; Cu = 0.50; Fe = 1.0; Hg = 1.0; Mn = 0.20; Ni = 0.50; Pb = 0.50; Sb = 0.20; Se = 2.0; Zn = 2.0 (all in ug/l); all other QLs are to be taken directly from GM00-2011, as amended/updated.

The regional office may elect to allow the permittee to analyze for total recoverable metals. However, the regional office and the permittee must be aware that dissolved and/or clean metals analyses may be necessary at a later time.)

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

NOTE TO PERMIT WRITERS: Unnecessary parameters and this note should be deleted from the Attachment A table. The (PWS) note is there to advise us which chemicals apply only to PWS segments - include those chemicals only for PWS segments, but do not include the PWS symbol in the permit.

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
	METALS					
7440-36-0	Antimony, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-39-3	Barium, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7440-43-9	Cadmium, dissolved	(3)	(Insert target value)		G or C	1/5 YR
16065-83-1	Chromium III, dissolved [8]	(3)	(Insert target value)		G or C	1/5 YR
18540-29-9	Chromium VI, dissolved [8]	(3)	(Insert target value)		G or C	1/5 YR
7440-50-8	Copper, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7439-89-6	Iron, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7439-92-1	Lead, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7439-96-5	Manganese, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7439-97-6	Mercury, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-02-0	Nickel, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7782-49-2	Selenium, dissolved	(3)	(Insert target value)		G or C	1/5 YR (SW)
7782-49-2	Selenium, Total Recoverable	(3)	(Insert target value)		G or C	1/5 YR (FW)
7440-22-4	Silver, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	1/5 YR
7440-66-6	Zinc, dissolved	(3)	(Insert target value)		G or C	1/5 YR
	PESTICIDES/PCB'S					
309-00-2	Aldrin	608	0.05		G or C	1/5 YR
57-74-9	Chlordane	608	0.2		G or C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
72-54-8	DDD	608	0.1		G or C	1/5 YR
72-55-9	DDE	608	0.1		G or C	1/5 YR
50-29-3	DDT	608	0.1		G or C	1/5 YR
8065-48-3	Demeton	(4)	(5)		G or C	1/5 YR
333-41-5	Diazinon	(4)	(5)		G or C	1/5 YR
60-57-1	Dieldrin	608	0.1		G or C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or C	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or C	1/5 YR
72-20-8	Endrin	608	0.1		G or C	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	(5)		G or C	1/5 YR
86-50-0	Guthion	(4)	(5)		G or C	1/5 YR
76-44-8	Heptachlor	608	0.05		G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)		G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)		G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)		G or C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)		G or C	1/5 YR
143-50-0	Kepone	(9)	(5)		G or C	1/5 YR
121-75-5	Malathion	(4)	(5)		G or C	1/5 YR
72-43-5	Methoxychlor	(4)	(5)		G or C	1/5 YR
2385-85-5	Mirex	(4)	(5)		G or C	1/5 YR
56-38-2	Parathion	(4)	(5)		G or C	1/5 YR
11096-82-5	PCB 1260	608	1.0		G or C	1/5 YR
11097-69-1	PCB 1254	608	1.0		G or C	1/5 YR
12672-29-6	PCB 1248	608	1.0		G or C	1/5 YR
53469-21-9	PCB 1242	608	1.0		G or C	1/5 YR
11141-16-5	PCB 1232	608	1.0		G or C	1/5 YR
11104-28-2	PCB 1221	608	1.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
12674-11-2	PCB 1016	608	1.0		G or C	1/5 YR
1336-36-3	PCB Total	608	7.0		G or C	1/5 YR
8001-35-2	Toxaphene	608	5.0		G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0		G or C	1/5 YR
120-12-7	Anthracene	625	10.0		G or C	1/5 YR
92-87-5	Benzidine	(4)	(5)		G or C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0		G or C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0		G or C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0		G or C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or C	1/5 YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or C	1/5 YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0		G or C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or C	1/5 YR
218-01-9	Chrysene	625	10.0		G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or C	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or C	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
86-73-7	Fluorene	625	10.0		G or C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or C	1/5 YR
67-72-1	Hexachloroethane	(4)	(5)		G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or C	1/5 YR
78-59-1	Isophorone	625	10.0		G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0		G or C	1/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or C	1/5 YR
129-00-0	Pyrene	625	10.0		G or C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(4)	(5)		G	1/5 YR
107-13-1	Acrylonitrile	(4)	(5)		G	1/5 YR
71-43-2	Benzene	624	10.0		G	1/5 YR
75-25-2	Bromoform	624	10.0		G	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0		G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0		G	1/5 YR
67-66-3	Chloroform	624	10.0		G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0		G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0		G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)		G	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)		G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
542-75-6	1,3-Dichloropropene	(4)	(5)		G	1/5 YR
100-41-4	Ethylbenzene	624	10.0		G	1/5 YR
74-83-9	Methyl Bromide	(4)	(5)		G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)		G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0		G	1/5 YR
10-88-3	Toluene	624	10.0		G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)		G	1/5 YR
79-01-6	Trichloroethylene	624	10.0		G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0		G	1/5 YR
RADIONUCLIDES						
	Beta Particle & Photon Activity (mrem/yr)	(4)	(5)		G or C	1/5 YR (PWS)
	Gross Alpha Particle Activity (pCi/L)	(4)	(5)		G or C	1/5 YR (PWS)
	Combined Radium 226 and 228	(4)	(5)		G or C	1/5 YR (PWS)
	Uranium	(4)	(5)		G or C	1/5 YR (PWS)
ACID EXTRACTABLES [6]						
95-57-8	2-Chlorophenol	625	10.0		G or C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0		G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or C	1/5 YR
25154-52-3	Nonylphenol	(4)	(5)		G or C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or C	1/5 YR
108-95-2	Phenol	625	10.0		G or C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or C	1/5 YR
MISCELLANEOUS						
776-41-7	Ammonia as NH3-N	350.1	200		C	1/5 YR
16887-00-6	Chlorides	(4)	(5)		C	1/5 YR (FW and PWS)
7782-50-5	Chlorine Produced Oxidant	(4)	(5)		G	1/5 YR (SW)

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
7782-50-5	Chlorine, Total Residual	(4)	100		G	1/5 YR
57-12-5	Cyanide, Free	(4)	10.0		G	1/5 YR
94-75-7	2,4 Dichlorophenoxy acetic acid (synonym = 2,4-D)	(4)	(5)		G or C	1/5 YR (PWS)
1746-01-6	Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1613	0.00001		G or C	1/5 YR [Paper Mills & Oil Refineries]
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)		G	1/5 YR
N/A	Foaming Agents (as MBAS)	(4)	(5)		G	1/5 YR (PWS)
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or C	1/5 YR
14797-55-8	Nitrate as N (mg/L)	(4)	(5)		C	1/5 YR (PWS)
N/A	Sulfate (mg/L)	(4)	(5)		C	1/5 YR (PWS)
N/A	Total Dissolved Solids (mg/L)	(4)	(5)		C	1/5 YR (PWS)
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)		G or C	1/5 YR
93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	(4)	(5)		G or C	1/5 YR (PWS)
471-34-1	Hardness (mg/L as $CaCO_3$)	(4)	(5)		G or C	1/5 YR

_____

Name of Principal Exec. Officer or Authorized Agent/Title

_____

Signature of Principal Officer or Authorized Agent/Date

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. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as 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.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour **(PW - Revise as required to require same composite duration as BOD_5)** composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	**Analytical Method**
Antimony	1638; 1639
Arsenic	1632
Chromium(8)	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenols requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

11. **Compliance Reporting** *[Use for permit with water quality-based limits in Part I A and B]*

a. The quantification levels (QL) shall be less than or equal to the following concentrations: *[add or delete parameters as applicable]*

Effluent Parameter	Quantification Level
BOD5	5.0 mg/l
TSS	1.0 mg/l
Chlorine	0.10 mg/l
Ammonia-N	0.20 mg/l
Oil Grease	5.0 mg/l
COD	10 mg/l
TKN	0.50 mg/l
Color	1.0 pcu (platinum cobalt units)
Total Recoverable *[Metal]*	x.x ug/l *[See Note]*

[NOTE: QLs for metals equal the lesser of 0.4 WLAa OR 0.6 WLAc, but not less than the lowest DEQ-certified metal specific method QL which are: Ag = 0.20; A2.0; As1.0; Cd = 0.30; Cr = 0.50; Cu = 0.50; Fe = 1.0; Hg = 1.0; Mn = 0.02; Ni = 0.50 Pb = 0.50; Sb = 0.20; Se = 2.0; Zn = 2.0 (all in ug/l); all other QLs are taken directly from GM00-2011, as amended/updated].

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained. The permittee shall use any method in accordance with Part II A of this permit.

b. **Monthly Average** -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities.

Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The

maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

Single Datum - Any single datum required shall be reported as "<QL" if it is less than the QL used in the analysis (QL must be less than or equal to the QL listed in a. above). Otherwise the numerical value shall be reported.

c. **Significant Digits --** The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

12. **Instream Monitoring** *(use where applicable).* The permittee shall submit a plan for monitoring of the receiving stream which shall include the following components, at a minimum:

a. Sampling/monitoring station locations, including a map with the locations noted. *[The permit writer may designate specific locations upstream and/or downstream of the discharge point. If a plan has been previously approved, cite the plan and date of approval.]*

b. [Specify monitoring parameters, frequency and sample types. Specify analytical methods and quantification levels.]

c. [Specify implementation criteria (when sampling should begin) and reporting mechanism (attached to DMR, submitted by the 10th day of the following month).]

d. If the results of this monitoring indicate actual or potential water quality standard violations, the permit may be modified, or alternately, revoked and reissued, in order to incorporate more stringent permit requirements.

13. **New discharges which are permitted from Form 2E [Form 2D]** In accordance with the requirements of VPDES application Form 2E [**Form 2D**], the permittee shall complete and submit Item IV of Form 2E [**Items V and VI of Form 2C**] **[***(use the following for facilities not built)* **no later than two years following the commencement of discharge or with the permit reissuance application if that application due date is less than two years after the commencement of discharge]** for each outfall, no later than two years following the permit's effective date, or the commencement of discharge if later than the permit's effective date. Following an evaluation of the required information, this permit may be modified or, alternatively, revoked and reissued in order to incorporate additional or different permit conditions. (*Regional Offices are to send blank Form 2E [2C] to permittee with final permit.*)

14. **Form 2F Sampling** (*as needed*) -- The completed Part VII of Form 2F shall be submitted within 1 year of the effective date of the permit **[(***Use the following for facilities not built)* **Form 2F shall be submitted for outfalls** *(insert outfall numbers)* **no later than one year following the commencement of operations at the** *(insert industrial activity type e.g. power station)* **or with the permit reissuance application if that application due date is less than one year after the**

start of *(insert industrial activity type e.g. power station)* **operations and a qualifying rain event has occurred.**.

15. **Sewage Sludge** (*See Municipal Section*)

16. Effluent Monitoring Frequencies (*For permits that are being reissued with reduced monitoring frequency.*)

If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then all of the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration.

(List all of the parameters that previously had reduced monitoring frequencies here and add the monitoring frequencies that would routinely be assigned for those parameters.)

No other effluent limitations or monitoring requirements are affected by this special condition.

17. **Oil Storage Ground Water Monitoring Reopener** (F*or facilities covered under UST or AST program*) As this facility currently manages ground water in accordance with 9 VAC 25-91-10 et seq., Facility and Aboveground Storage Tank (AST) Regulation, this permit does not presently impose ground water monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include ground water monitoring not required by the AST regulation.

18. **Whole Effluent Toxicity Testing** -- *Refer to the latest TMP implementation guidance for special condition text and rationale regarding TMP implementation.*

19. **Groundwater Monitoring Plan** (*Use this condition when requesting a new ground water monitoring plan*) Within 90 days of the effective date of this permit, the permittee shall submit to the Board's Regional Office an approvable ground water monitoring plan. The purpose of this plan will be to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. This plan must be approved by the _____ Regional Office. As a minimum, the plan shall contain the following sections:

A. Introduction
B. Geologic Information
C. Monitoring Well Design and Installation
   (Borehole and monitoring well records shall be submitted after well installation)
D. Parameters To Be Monitored and Sampling Frequency
   (As a minimum, all parameters will be monitored quarterly for a period of two years)
E. Sampling Protocol

All monitoring wells shall be installed and monitoring initiated within 180 days of plan approval. Once approved, the plan shall be incorporated into the permit by reference with the next modification or reissuance and become an enforceable part of this permit.

If monitoring results indicate that any unit has contaminated the ground water, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. In addition, based on the extent of contamination, a risk analysis may be required. Once approved, this plan and/or analysis shall become an enforceable part of this permit.

NOTE TO PERMIT WRITER: Any additional schedules needed for the submittal of borehole logs and monitoring well construction logs, as well as potentiometric surface maps can also be included in the condition. In addition, the permit writer may add certain minimum requirements (eg. minimum number of wells, parameters to be monitored, monitoring frequency, etc.). Finally, for large facilities, the condition could require the permittee to perform the statistics on the ground water data (at a 5% level of significance).

OR

(*Use this condition when a monitoring plan has been approved and monitoring is to continue under that approved plan. The RO may want to consider including the plan as a Fact Sheet Attachment so as not to 'lose' it due to file retention issues.*) The permittee shall continue sampling and reporting in accordance with the ground water monitoring plan approved on [**DATE**]. The purpose of this plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. The approved plan is an enforceable part of the permit. Any changes to the plan must be submitted for approval to the _____ Regional Office.

If monitoring results indicate that any unit has contaminated the ground water, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. In addition, based on the extent of contamination, a risk analysis may be required. Once approved, this plan and/or analysis shall be incorporated into the permit by reference and become an enforceable part of this permit.

OR

(Use the following special condition to demonstrate the integrity of a lagoon liner; suspect leaking lagoon)

1. Within 60 days after the **[effective/modification]** date of this permit, the permittee shall submit to the DEQ [**Regional Office**] for approval:
   a. a protocol for establishing a valid water balance for the earthen lagoon, or
   b. a protocol for monitoring ground water quality impacts due to lagoon leakage, or
   c. documentation that the lagoon's permeability is not greater than 10^{-6} cm/sec.
2. If the water balance option is selected, then the following requirements shall apply:
   a. Within 60 days after the approval of the protocol, the permittee, utilizing the approved protocol, shall submit a valid monthly water balance for this facility. Thereafter, the permittee shall submit a valid water balance monthly for 12 consecutive months, due by the tenth of each month for the previous month's performance.
   b. Should any monthly water balance indicate lagoon liner permeability in excess of 10^{-6} cm/sec, the permittee, upon written notification by the Regional Director, shall within 60

days of such notification submit for approval a plan and schedule for corrective action. If the corrective action plan specifies installation of a liner, the liner must exhibit a coefficient of permeability of no more than 10^{-6} cm/sec.

3. If the ground water monitoring program option is selected, then the following requirements shall apply:

a. Within 60 days of approval of the protocol, the permittee, utilizing the approved protocol, shall submit valid ground water monitoring data. Thereafter, the permittee shall submit ground water monitoring data in accordance with the protocol schedule.

b. Should this ground water monitoring data indicate contamination to ground water, the permittee, upon written notification by the Regional Director, shall within 60 days of such notification submit for approval a plan and schedule for corrective action. If the corrective action plan specifies installation of a liner, the liner must exhibit a coefficient of permeability of no more than 10^{-6} cm/sec.

20. **Total Maximum Daily Load (TMDL) Reopener** (*for all permits.*)

This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

21. **Limitation Monitoring Waiver** (*for permits where a waiver from monitoring a technology-based effluent limitation has been granted under 9 VAC 25-31-220 A 2. Limit still appears on Part I A.*) This permit contains a waiver from monitoring for a technology-based effluent limitation granted under 9 VAC 25-31-220 A 2. The limitation appears in Part I A. The requirement for monitoring and reporting the level of [name parameter] in outfall [00X] is waived for the term of this permit. This waiver does not eliminate the effluent limitation. The permittee is liable for any violation of the permit limitation for [name parameter]. If the permittee changes the facility operation in a way that may result in a pollutant discharge beyond that which serves as the basis for this waiver, they shall report the change to the Department. If the permittee discovers in the discharge, pollutant levels which exceed the effluent limitation, they shall report that information to the Department.

22. Closure Plan

If the permittee plans an expansion or upgrade to replace the existing treatment works, or if the facility is permanently closed, the permittee shall submit to the DEQ Regional Office a closure plan for the existing treatment works. The plan shall address the following information as a minimum: Verification of elimination of sources and/or alternate treatment scheme; treatment, removal and final disposition of residual wastewater and solids; removal/demolition/disposal of structures, equipment, piping and appurtenances; site grading, and erosion and sediment control; restoration of site vegetation; access control; fill materials; and proposed land use (post-closure) of the site. The plan should contain proposed dates for beginning and completion of the work. The plan must be approved by the DEQ prior to implementation.

23. [*Use this special condition when DMRs are not required until commencement of discharge. See Section III.A.10.b. Also may be used in conjunction with a statement on effluent limits page (e.g."Monitoring and reporting are not required until the commencement of this discharge see*

special condition [insert letter or number of special condition]. An alternative is to have all instructions regarding notification of commencement of discharge on effluent limits page.
Notification of Commencement of Discharge
No later than 10 days prior to the commencement of discharge from the facility, the permittee shall submit written notification to DEQ which provides the first day of discharge. This first day of discharge will be used as the trigger date for all other permit conditions which drive off the commencement of discharge.

Use this special condition as when DMRs are required annually until commencement of discharge. See Section III.A.10.b. Also may be used in conjunction with a statement on effluent limits page (e.g."Monitoring and reporting required annually until the commencement of this discharge see special condition [insert letter or number of special condition]. An alternative is to have all instructions regarding notification of commencement of discharge on effluent limits page.
Notification of Commencement of Discharge
The permittee shall submit DMRs annually until commencement of discharge at which time DMR submittal shall be monthly in accordance with Part IIC. The annual DMR shall be no later than January 10 of the following year.***/***

B. Bacteria and Chlorine Limitations/Procedures

1. Chlorine Limit Development (Final Effluent)

a. All chlorinated effluents should have a chlorine limitation. The final effluent chlorine limitation for an industrial discharge is determined based on the nature of the discharge. If the effluent is from a domestic sewage wastewater discharge at an industrial facility, the limit will be water quality-based. These outfalls will also have the Part I B limits to assure disinfection. Where chlorine is used in the industrial process, and not for disinfection, the limit will be the more stringent of water quality-based limit or an applicable effluent guideline technology-based limit. For final effluents at industrial operations where disinfected domestic wastewater is combined with process wastewater that contains chlorine used in the industrial process, the chlorine limit should be the more stringent of either an applicable effluent guidelines limit or a water quality-based limit. In this case, the Part I B disinfection limits should be applied to the internal outfall from the domestic treatment plant.

b. In either case, the limit is placed onto the Part I.A. page [DMR parameter code # 005 for water quality-based and # 158 for effluent guidelines limits] and is expressed as a monthly average and daily maximum for industrial dischargers. The water quality-based chlorine limit is determined using existing guidance on the development of limits for toxic pollutants (Guidance Memo 00-2011 or its successor). Water quality-based limits for final effluent are expressed as total residual chlorine (TRC).

c. The recommended monitoring frequency for TRC in the final effluent should be consistent with the bacteria sampling schedule table in IN-2.

d. The current recommended quantification level for chlorine is 0.10 mg/l. Refer to the Special Conditions section for the appropriate quantification language. Note that the limits derived from the WLA model are included in the permit as actual numbers, even if they are less than the QL

e. .A technology limit of 4.0 mg/l [DMR parameter code # 005] is recommended for domestic wastewater discharges where the chlorine limit, based on STATS.EXE, would come out high (e.g. above 4.0 mg/l). Note that this limit is not water quality-based. The fact sheet should list the basis as BPJ. The following protocol is recommended in these cases.

- Calculate the WLAa and WLAc
- If the WLAa is greater than 4.0 mg/l, run STATS.EXE with the following inputs:
  WLAa = 4.0 WLAc = 4.0
  One datum of 20.0 is input to force the program to calculate a limit.
- If the WLAa is less than 4.0 mg/l, run STATS.EXE with the following inputs:
  WLAa = calculated values WLAc = calculated values
- One datum of 20.0 is input to force the program to calculate a limit.

f. Examples of chlorine calculations/limits

- MIX.EXE and the mixing equation yield a WLAa of 11 mg/l and a WLAc of 8.0 mg/l.
- STATS.Exe is run with inputs of: WLAa = 4.0, WLAc = 4.0, one datum of 20.0,one sample/day

- The resulting limits are a Daily maximum = 4.0 mg/l, monthly average of 2.0 mg/l and a weekly average of 2.4 mg/l. The frequency of final effluent sampling would be 1/day.
- MIX.EXE and the mixing equation yield a WLAa of 2.0 mg/l and a WLAc of 1.0 mg/l.
- STATS.EXE is run with inputs of: WLAa = 2.0, WLAc = 1.0, one datum of 20.0
- The resulting limits are a daily maximum = 2.0, monthly average of 1.0 mg/l and a weekly average of 1.2 mg/l. The frequency of final effluent sampling would be 1/day. The fact sheet should list the basis for the limits as water quality.

Since this is an industrial facility, the monthly average and daily maximum limits would be used.

2. Bacteria Limits

If the industrial discharge has a domestic sewage component requiring disinfection the following paragraphs apply.

a. Bacteria limits are required for major permits, minor permits with an EPA approved TMDL and the TMDL contains a bacteria waste load allocation for that facility and for facilities that use alternate disinfection. They are not required for all other facilities where a successful chlorine demonstration has been conducted and TRC is the surrogate bacteria limit (see item b below). E. coli applies in freshwater and enterococci in saltwater and transition zones (see 9VAC25-260-140 C for delineations). Fecal coliform limits will no longer be used, **except** for discharges into shellfish waters, where both fecal coliforms and the below bacterial parameters (enterococci) are to be limited. (See below regarding shellfish waters.). There is no compliance schedule associated with new bacteria limits. Sample frequencies may be reduced (see MN-2). Monitoring frequency reductions are allowed in certain situations when chlorine is the method of disinfection see IN-2 **Monitoring Reductions for Reissuances.**

EFFLUENT CHARACTERISTICS	MONITORING REQUIREMENTS		
	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E .coli (N/100 ml) *(freshwater)*	126*	**[4/Month** or see Bacteria Sampling Schedule Table in IN-2 per NOTE below]**	Grab
Enterococci *(saltwater and transition zones)*	35*	**[4/Month** or see Bacteria Sampling Schedule Table in IN-2 per NOTE below]**	Grab
Fecal coliform *(shellfish waters)*	200*	**[4/Month** or see Bacteria Sampling Schedule Table in IN-2 per NOTE below]**	Grab

* Monthly Geometric Mean

** Four samples taken during the calendar month weekly between 10a.m. and 4 p.m..*(NOTE: The sample frequency will increase if the facility has alternate disinfection per IN-2)*

b. Chlorine Demonstration Requirements for Bacteria Limits

If chlorine limits are to be used instead of bacteria (*E. coli* and enterococci) limits, the permittee must demonstrate the ability of the chlorine limits to allow the bacteria criteria to be met. The agency has already analyzed sufficient data to demonstrate that chlorine limits maintain E. coli criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation (even though industrial facilities are not subject to the SCAT regulation) so chlorine demonstration studies for those discharges are no longer needed. However, for other *E. coli* discharges and discharges to transition zones and saltwater, chlorine demonstration studies are still needed. For new issuances, this demonstration must go into the permit and remain in force until it is demonstrated that chlorine limits are adequate. For reissuances, if the demonstration was made during the application process and the demonstration shows that bacteria standards are met while the discharge is in compliance with the proposed chlorine limits, bacteria limits and monitoring are not required and the permit should contain chlorine limits in accordance with the preceding section of this manual. If the demonstration was not satisfied the permit should contain chlorine **and** bacteria limits. If a demonstration of ability to meet the bacteria standards with chlorine limits was **not** made during the reissuance application process the permit should contain chlorine limits and require bacteria monitoring sufficient to generate a data set adequate to perform an evaluation as specified in the special condition "**Chlorine Demonstration Requirements for Bacteria Limits**" which can be found as one of the special conditions in IN-3 above.

The results of all demonstrations should be submitted by the regions to the Office of Water Permit Programs to enable DEQ to review whether the need for a demonstration remains appropriate.

c. Shellfish Waters Bacteria Limits

For effluents that contain fecal coliforms discharging to shellfish waters, the above paragraphs regarding *E. coli* or enterrococci limits and chlorine demonstrations will apply in order to protect recreational uses. In addition, the permits are to continue to limit fecal coliforms with an effluent limit of 200 per 100 milliliters, applied as a monthly geometric mean. Although the Water Quality Standards have been amended to remove the reference to this effluent limit in shellfish waters, the Virginia Department of Health, Bureau of Shellfish Sanitation still uses fecal coliform as an indicator for determining the quality of shellfish waters and it is necessary to ensure discharges meet this level. Since it has historically maintained the in-stream water quality criteria for fecal coliforms of 14/43 per 100 milliliters, the 200 per 100 milliliters effluent limit will be used in shellfish waters in order to continue meeting the in-stream criteria and for protection of shellfish under the general standard.

C. Nutrient Enriched Waters Procedures

All discharges (municipal and industrial) into nutrient enriched waters (designated in the Water Quality Standard for Nutrient Enriched Waters, 9 VAC 25-260-330 et seq.) which meet or exceed the design flow requirements designated in Regulation 9 VAC 25-40-10 et seq., Policy for Nutrient Enriched Waters, must meet a monthly average Total Phosphorus limitation of 2.0 mg/l. For industrial permits, use the maximum 30-day average flow value for the "design flow" referenced below.

1. New Sources, Design Flow > 0.050 MGD proposing to discharge into nutrient enriched waters must meet a monthly average Total Phosphorus effluent limitation of **2.0 mg/l** and monitor

for monthly average Total Nitrogen concentration and quantity. Base the quantity limit for phosphorus on the design flow.

2. Existing Permits Requiring Modification to Include Total Phosphorus Effluent Limits, Design Flow > 1.0 MGD, will include a monthly average Total Phosphorus effluent limitation of **2.0 mg/l** and a monthly average Total Phosphorus quantity effluent limitation using the design flow on the Part I page. All modifications to install phosphorus sampling should also include nitrogen monitoring as monthly average Total Nitrogen concentration and monthly average Total Nitrogen quantity. Include the schedule of compliance found below.

3. Existing Permits Requiring Modification to Include Total Phosphorus and Total Nitrogen Effluent Limits, Design Flow > 1.0 MGD, will include a monthly average Total Phosphorus effluent limitation of **2.0 mg/l**, a monthly average Total Phosphorus quantity effluent limitation using the design flow, a monthly average Total Nitrogen effluent limitation of **10 mg/l** for the months of April through October and a monthly average Total Nitrogen quantity effluent limit using the design flow on the Part I page. Include the compliance schedule found below.

Note that the conditions in 1.(New Sources, Design Flow $\geq$ 0.050 mgd) also apply to facilities which undergo modifications to add 0.05 mgd or more capacity to their design flow. The 0.050 mgd design flow increase is considered new flow for purposes of the regulation. Multiple outfalls from the same facility to the same receiving stream should be screened against the flow criteria separately, rather than in aggregate.

4. Schedule of Compliance for Nutrient Limits

C. Schedule of Compliance

The permittee shall achieve compliance with the [**Total Phosphorus, Total Nitrogen**] limitation in Part I.A. in accordance with the following schedule:

1. Submit Progress Reports	Annually from the [**effective/modification**] date of the permit
2. Achieve Compliance with Final Effluent Limitation	Within **3 years** [**4 years if TN**]after the [**effective/modification**] date of the permit

No later than 14 calendar days following the final compliance date identified in the above schedule of compliance, the permittee shall submit to the DEQ Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial action taken, and the probability of meeting the next scheduled requirement.

5. Nutrient monitoring for Chesapeake Bay Significant Dischargers

The Office of Water Quality - Chesapeake Bay Programs tracks a list of significant contributors of nutrients into the Chesapeake Bay watershed. This list should be on the agency website. Permits for facilities on this list may need to include additional requirements related to nutrients. Check the latest guidance or with the Regional Water Permit Manager or central office to determine what requirements are necessary.

D. Bypass Point Sources

Bypasses of treatment units at the treatment facility are allowable provided they are in compliance with the bypass language that is included in the boilerplate of each permit (Part II.U). There is no need to list in the permit the potential points where bypasses may occur or to include any further special language addressing bypasses at the facility. Bypasses must be reported in accordance with Part II.U. If the permit limits are met there is no requirement to report a bypass.

If a treatment facility has an auxiliary outfall that is actually a separate pipe to a receiving stream it may either be treated as a bypass as discussed above, or if it meets effluent limits, it may be identified in the permit as a separate outfall and treated in the permit as any other outfall would be. (There may be restrictions on the conditions under which the outfall may discharge.).

E. Hydrogen Sulfide

The following provides a recommendation on how to manage hydrogen sulfide in permits.

PERMIT – Part I.A. page – Basis for limit – best (*choose: professional / engineering)* judgment.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/l*	kg/day*	mg/l*	kg/d*	mg/l*	mg/l*		
Dissolved Sulfide (mg/l)	NL	NA	NL	NA	NA	NA	1/6 Months [1]	Grab

1/6 Months = Once per six months, in accordance with the following schedule: 1st half (January 1 - June 30, to be reported on the DMR **due July 10** of each year); 2nd half (July 1 - December 31, to be reported on the DMR **due January 10** of each year).

[1] See Parts I.—a and b *(enter reference to applicable part of permit for compliance reporting)*, Compliance Reporting for quantification levels and reporting requirements, respectively.

(Insert the following effluent characteristic and quantification level within compliance reporting special condition)

Compliance Reporting

a. Quantification Levels

(1) Maximum quantification levels (QL) shall be as follows:

Effluent Characteristic	Quantification Level
Dissolved Sulfides	0.10 mg/l

FACT SHEET LANGUAGE

Dissolved Sulfide - Monitoring only is required for this parameter. During the *(choose: previous permit cycle / permit application process)* total sulfides were reported in the effluent. Through a conversion

method, these data were initially used in an attempt to assess potential hydrogen sulfide (H_2S) levels. However, the accuracy and precision of using total sulfide results for developing limits for H_2S have recently come under question. According to Standard Methods, the unionized H_2S "can be calculated from the concentration of dissolved sulfide, the sample pH, and the conditional ionization constant of H_2S." Based on the above, it now appears to be more appropriate to specify that results be reported as dissolved sulfide. To provide data to evaluate the potential presence of H_2S and need for a limit, dissolved sulfide monitoring is required once per six months by grab sample for this permit re-issuance.

SECTION IN-4

INDUSTRIAL STORM WATER DISCHARGES

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Article I. Storm Water Discharges.

All permits that authorize storm water discharges associated with industrial activity must include storm water management provisions. (**Note**: municipally owned industrial facilities classified as Category (9) of the industrial activity definition should use the conditions described in **Section MN–Municipal**; all other municipally owned industrial facilities should use the conditions described below. See **Section III** for guidance.) The five components of the storm water management provisions are: **effluent limitations and compliance monitoring**; **analytical monitoring**; **storm water management evaluation**; general **storm water special conditions**; and, general and **sector-specific storm water pollution prevention plan** (SWPPP) conditions. The Regional Office has the discretion to include additional requirements based on site specific information, but the minimum requirements should be incorporated.

Depending on the industrial sector into which the facility falls, the permit may need to contain sector –specific storm water management requirements in addition to the general requirements. The permit may also need effluent limitations and/or analytical (benchmark) monitoring, and may require that the storm water management evaluation be included. 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 of the industrial sectors that contribute storm water to each outfall. Facilities with co-located industrial activities must comply, on a discharge-by-discharge basis, with all applicable effluent limitations, analytical monitoring requirements, and storm water pollution prevention plan requirements.

The sector-specific requirements for effluent limitations and analytical monitoring are summarized below. They are also included in the sector-specific industrial sections which follow the generic SWPPP section. Permit writers should consult both to be sure they have considered all of the possible permit requirements/recommendations.

Section 1.01 Effluent Limits, Compliance Monitoring and Analytical (Benchmark) Monitoring.

a. Effluent Limits. Effluent limitations for storm water discharges in the following industrial sectors are based on EPA Effluent Guidelines and they must be included in the permit. Consult the CFR citation for specific applicability. These limits should be placed on the Part I- A page for the outfall.

Mandatory Numeric Limitations for Storm Water Discharges

Industrial Sector	Effluent Guideline	Parameter	Effluent Limitation
Coal Pile Runoff* (*Applies to all sectors – see below)	Coal pile runoff at steam electric generating facilities [40 CFR Part 423]	Total Suspended Solids	50 mg/L, daily max
		pH	6.0 – 9.0 S.U.
Timber Products (Sector A)	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas [40 CFR Part 429 Subpart I]	pH	6.0 – 9.0 S.U.
		Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)	No discharge of debris that will not pass through a 2.54 cm (1") diameter round opening
Phosphate Fertilizer Manufacturing (Sector C)	Contaminated runoff from phosphate fertilizer manufacturing facilities [40 CFR Part 418 Subpart A]	Total Phosphorus (as P)	105 mg/L, daily max 35 mg/L, 30-day avg.
		Fluoride	75 mg/L, daily max 25 mg/L, 30-day avg.
Asphalt Paving and Roofing Emulsions (Sector D)	Runoff from asphalt emulsion facilities [40 CFR Part 443 Subpart A]	Total Suspended Solids	23 mg/L, daily max 15 mg/L, 30-day avg.
		Oil and Grease	15 mg/L, daily max 10 mg/L, 30-day avg.
		pH	6.0 – 9.0 S.U.
Cement Manufacturing	Runoff from material storage piles at cement manufacturing facilities	Total Suspended Solids	50 mg/L, daily max

(Sector E)	[40 CFR Part 411 Subpart C]	pH	6.0 - 9.0 S.U.
Mineral Mining and Dressing (Sector J)	Mine dewatering discharges at crushed stone mines [40 CFR Part 436 Subpart B]	pH	6.0 - 9.0 S.U.
	Mine dewatering discharges at construction sand and gravel mines [40 CFR Part 436 Subpart C]	pH	6.0 - 9.0 S.U.
	Mine dewatering discharges at industrial sand mines [40 CFR Part 436 Subpart D]	Total Suspended Solids	25 mg/L, mon avg 45 mg/L, daily max
		pH	6.0 - 9.0 S.U.
Hazardous Waste Landfills (Sector K)	Runoff from landfills subject to the provisions of 40 CFR Part 264, *Standards for Owners and Operators of Hazardous Waste TSD Facilities, Subpart N–(Landfills);* and 40 CFR Part 265, *Interim Status Standards for Owners and Operators of Hazardous Waste TSD Facilities, Subpart N–(Landfills)* [40 CFR Part 445 Subpart A]	BOD_5	220 mg/L, daily max 56 mg/L, mon avg
		Total Suspended Solids	88 mg/L, daily max 27 mg/L, mon avg
		Ammonia	10 mg/L, daily max 4.9 mg/L, mon avg
		Alpha Terpineol	0.042 mg/L, daily max 0.019 mg/L, mon avg
		Aniline	0.024 mg/L, daily max 0.015 mg/L, mon avg
		Benzoic Acid	0.119 mg/L, daily max 0.073 mg/L, mon avg
		Naphthalene	0.059 mg/L, daily max 0.022 mg/L, mon avg
		p-Cresol	0.024 mg/L, daily max 0.015 mg/L, mon avg
		Phenol	0.048 mg/L, daily max 0.029 mg/L, mon avg
		Pyridine	0.072 mg/L, daily max 0.025 mg/L, mon avg
		Arsenic (Total)	1.1 mg/L, daily max 0.54 mg/L, mon avg
		Chromium (Total)	1.1 mg/L, daily max 0.46 mg/L, mon avg
		Zinc (Total)	0.535 mg/L, daily max 0.296 mg/L, mon avg
		pH	6.0 – 9.0 S.U.
Non-Hazardous Waste Landfills (Sector L)	Runoff from landfills subject to the provisions of 40 CFR Part 258, *Criteria for Municipal Solid Waste Landfills;* and 40 CFR Part 257, *Criteria for Classification of Solid Waste Disposal Facilities and Practices.* [40 CFR Part 445 Subpart B]	BOD_5	140 mg/L, daily max 37 mg/L, mon avg
		Total Suspended Solids	88 mg/L, daily max 27 mg/L, mon avg
		Ammonia	10 mg/L, daily max 4.9 mg/L, mon avg
		Alpha Terpineol	0.033 mg/L, daily max 0.016 mg/L, mon avg
		Benzoic Acid	0.12 mg/L, daily max 0.071 mg/L, mon avg
		p-Cresol	0.025 mg/L, daily max 0.014 mg/L, mon avg
		Phenol	0.026 mg/L, daily max 0.015 mg/L, mon avg
		Zinc (Total)	0.20 mg/L, daily max 0.11 mg/L, mon avg
		pH	6.0 – 9.0 S.U.

* **Coal Pile Runoff.** The numeric effluent limitation guidelines for coal pile runoff at steam electric generating facilities have been adopted as standard numeric limits for all coal pile runoff when the coal pile is at a facility included in the industrial sectors that discharge storm water associated with industrial activity. If such a facility has storm water discharges from coal storage piles, they must comply with the limitations and monitoring requirements for all discharges containing the coal pile runoff. DEQ has adopted the technology-based pH limitations from the general storm water permit in accordance with setting limits on a case-by-case basis, as allowed under 9 VAC 25-31-220.A. These case by case limits are derived by transferring the known achievable technology from an effluent guideline to a similar type of discharge. When developing these technology-based limitations, variables such as rainfall pH, sizes of coal piles, pollutant characteristics, and runoff volume were considered. Therefore, these variables need not be considered again.

The coal pile runoff must not be diluted with storm water or other flows in order to meet the limitation. If the facility is designed, constructed and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

b. Compliance Monitoring. Compliance monitoring requirements are imposed to ensure that discharges subject to numerical effluent limitations under the storm water effluent limitation guidelines are in compliance with those limitations. Monitoring shall be done at least once per year. All samples shall be grabs taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. The samples shall be taken from the discharges subject to the numeric effluent limitations prior to mixing with other discharges. Samples shall be collected from the discharge from a storm event that results in an actual discharge from the site (defined as a "measurable storm event").

In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall total (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previously measurable storm event. This requirement should be placed at the bottom of the storm event monitoring Part I- A page.

c. Analytical (Benchmark) Monitoring. Certain categories of industrial facilities require monitoring of their storm water discharges because, due to the nature of the industrial activity or materials stored on site, they have significant potential to contribute pollutants to their storm water discharges. This is called "analytical monitoring" or "benchmark monitoring" and it also is placed on the Part I- A page for the storm water outfall. This monitoring is done to evaluate the effectiveness of the storm water BMPs, but it is not as intensive as the Storm Water Management Evaluation monitoring (discussed in the next section). Analytical monitoring should be done annually.

Samples shall be collected from the discharge from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"). In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall total (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previously measurable storm event. This requirement should be placed at the bottom of the storm event monitoring Part I A page.

The following table lists the recommended analytical monitoring for specific industrial sectors. If the monitoring data reported by the permittee indicates conclusively that a parameter is not present in the storm water runoff above the benchmark concentration (formerly called "monitoring cutoff concentration'), then that parameter may be dropped. Note that all metals should be listed as "Total Recoverable" on the Part I A page.

Analytical (Benchmark) Monitoring for Storm Water Discharges

Industrial Sector	Industrial Activity	Parameter	Benchmark Concentration
Sector A – Timber Products	General Sawmills and Planing Mills (SIC 2421)	TSS	100 mg/L
	Wood Preserving (SIC 2491)*	As	50 µg/L

	* - Do not include metals monitoring for wood preserving facilities using only oil-based preservatives.	Cu	18 µg/L
		Cr	16 µg/L
	Log Storage and Handling (SIC 2411)	TSS	100 mg/L
	Hardwood Dimension, Flooring and Special Products Mills (SIC 2426, 2429, 2431-2439 (except 2434), 2448, 2449, 2451, 2452, 2493 and 2499)	TSS	100 mg/L
Sector B - Paper and Allied Products Manufacturing	Paperboard Mills (SIC 2631)	BOD_5	30 mg/L
Sector C – Chemical and Allied Products Manufacturing	Agricultural Chemicals (SIC 2873-2879)	Total N	2.2 mg/L
		Fe	1.0 mg/L
		Zn	120 µg/L
		P	2.0 mg/L
	Industrial Inorganic Chemicals (SIC 2812-2819)	Al	750 µg/L
		Fe	1.0 mg/L
		Total N	2.2 mg/L
	Soaps, Detergents Cosmetics and Perfumes (SIC 2841-2844)	Total N	2.2 mg/L
		Zn	120 µg/L
	Plastics, Synthetics and Resins (SIC 2821-2824)	Zn	120 µg/L
Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturers	Asphalt Paving and Roofing Materials (SIC 2951, 2952)	TSS	100 mg/L
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products	Clay Product Manufacturers (SIC 3251-3259, 3261-3269)	Al	750 µg/L
	Lime and Gypsum Product Manufacturers (SIC -3274, 3275)	TSS	100 mg/L
		pH	6.0 – 9.0 S.U.
		Fe	1.0 mg/L
Sector F – Primary Metals	Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Al	750 µg/L
		Zn	120 µg/L
	Iron and Steel Foundries (SIC 3321-3325)	TSS	100 mg/L
		Al	750 µg/L
		Cu	18 µg/L
		Fe	1.0 mg/L
		Zn	120 µg/L
	Rolling, Drawing, and Extruding of Non-Ferrous Metals (SIC 3351-3357)	Cu	18 µg/L
		Zn	120 µg/L
	Non-Ferrous Foundries (SIC 3363-3369)	Cu	18 µg/L
		Zn	120 µg/L
Sector G – Metal Mining (Ore Mining and Dressing)	Active Copper Ore Mining and Dressing Facilities (SIC 1021)	TSS	100 mg/L
	Discharges From Waste Rock and Overburden Piles From Active Ore Mining or Dressing Facilities, Inactive Ore Mining or Dressing Facilities, and Sites Undergoing Reclamation: Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores Except Vanadium; Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)	TSS	100 mg/L
		Turbidity (NTUs)	50 NTU
		pH	6.0 – 9.0 S.U.
		Hardness (as CaCO3)	No benchmark value
		Sb	640 µg/L
		As	50 µg/L
		Be	130 µg/L
		Cd	2.1 µg/L
		Cu	18 µg/L
		Fe	1.0 mg/L

		Pb	120 µg/L
		Hg	1.4 µg/L
		Ni	470 µg/L
		Se	5.0 µg/L
		Ag	3.8 µg/L
		Zn	120 µg/L
Sector H – Coal Mines and Coal Mining-Related Facilities	Coal Mines and Related Areas (SIC 1221-1241)	Al	750 µg/L
		Fe	1.0 mg/L
		TSS	100 mg/L
Sector J – Mineral Mining and Dressing	Sand and Gravel Mining (SIC 1442,1446)	NO2+NO3	0.68 mg/L
		TSS	100 mg/L
	Dimension and Crushed Stone and Non-Metallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	TSS	100 mg/L
Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities	Hazardous Waste Treatment Storage and Disposal Facilities	TKN	1.5 mg/L
		TOC	110 mg/L
		TSS	100 mg/L
		As	50 µg/L
		Cd	2.1 µg/L
		CN	22 µg/L
		Pb	120 µg/L
		Hg	1.4 µg/L
		Se	5.0 µg/L
		Ag	3.8 µg/L
Section L – Landfills, Land Application Sites and Open Dumps	Landfills, Land Application Sites and Open Dumps	TSS	100 mg/L
	Landfills, Land Application Sites and Open Dumps, Except MSWLF Areas Closed in Accordance with the Requirements of the Virginia Solid Waste Management Regulation, 9 VAC 20-80	Fe	1.0 mg/L
Section M – Automobile Salvage Yards	Automobile Salvage Yards (SIC 5015)	TSS	100 mg/L
		Al	750 µg/L
		Fe	1.0 mg/L
		Pb	120 µg/L
Sector N – Scrap Recycling and Waste Recycling Facilities	Scrap Recycling and Waste Recycling Facilities (nonsource-separated facilities only) (SIC 5093)	TSS	100 mg/L
		Al	750 µg/L
		Cu	18 µg/L
		Cd	2.1 µg/L
		Cr	16 µg/L
		Fe	1.0 mg/L
		Pb	120 µg/L
		Zn	120 µg/L
	Facilities Engaged in Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships For Scrap (SIC 4499, limited to list)	TSS	100 mg/L
		Al	750 µg/L
		Cu	18 µg/L
		Cd	2.1 µg/L
		Cr	16 µg/L
		Fe	1.0 mg/L
		Pb	120 µg/L
		Zn	120 µg/L
Sector O – Steam Electric Generating Facilities	Steam Electric Generating Facilities	Fe	1.0 mg/L
Sector P – Land Transportation and Warehousing	Land Transportation and Warehousing Facilities (SIC 4011, 4013, 4111-4173, 4212-4231, 4311, and 5171)	TPH	15.0 mg/L
		TSS	100 mg/L

Sector Q – Water Transportation	Water Transportation Facilities (SIC 4412-4499)	Al	750 µg/L
		Fe	1.0 mg/L
		Zn	120 µg/L
Sector R – Ship and Boat Building or Repair Yards	Ship and Boat Building or Repair Yards (SIC 3731, 3732)	TSS	100 mg/L
Sector S – Air Transportation	Facilities at airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis: monitor ONLY those outfalls from the airport facility that collect runoff from areas where deicing/ anti-icing activities occur (SIC 45)	BOD_5	30 mg/L
		TKN	1.5 mg/L
		pH	6.0 – 9.0 S.U.
		COD	120 mg/L
		TSS	100 mg/L
Sector U – Food and Kindred Products	Dairy Products (SIC 2021-2026)	BOD_5	30 mg/L
		TSS	100 mg/L
	Grain Mill Products (SIC 2041-2048)	TKN	1.5 mg/L
		TSS	100 mg/L
	Fats and Oils Products (SIC 2074-2079)	TSS	100 mg/L
		BOD_5	30 mg/L
		Total N	2.2 mg/L
Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	Tires and Inner Tubes; Rubber Footwear; Gaskets, Packing and Sealing Devices; Rubber Hose and Belting; and Fabricated Rubber Products, Not Elsewhere Classified (SIC 3011-3069)	Zn	120 µg/L
Sector Z – Leather Tanning and Finishing	Leather Tanning and Finishing (SIC 3111)	TKN	1.5 mg/L
Sector AA – Fabricated Metal Products	Fabricated Metal Products Except Coating (SIC 3411-3471, 3482-3499, 3911-3915)	Al	750 µg/L
		Fe	1.0 mg/L
		Zn	120 µg/L
	Fabricated Metal Coating and Engraving (SIC 3479)	Zn	120 µg/L
Sector AD – Non-classified Facilities	Non-classified Facilities/Storm Water Discharges Designated by the Board as Requiring Permits	TSS	100 mg/L

d. Additional Information/Considerations. The applicable storm water limits and monitoring requirements are to be applied at outfalls that are composed entirely of storm water, or that have storm water 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.)

Develop a separate DMR for the storm event monitoring. An outfall that contains storm water and other wastewaters 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 storm water 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 storm water 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 storm water, the designation can follow the usual numeric order as with any other outfalls (i.e., 001, 002, etc.). All internal outfalls will continue to be numbered as per existing procedures.

All outfalls that discharge storm water 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 storm water,

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 annual and quarterly monitoring overlap, a single sample can satisfy both monitoring requirements.

An example storm water Part I- A page follows for a sawmill with a wood storage area. (For this example, we are assuming that the sawmill also has a process wastewater discharge from the same outfall, so the storm event monitoring outfall number is 901.) Since the sawmill has the wood storage area, the page contains the mandatory effluent guideline limitations as well as the analytical (benchmark) monitoring parameters. In addition, the available effluent data for this outfall indicated that the parameter "di-butyl mucktane" was present at more than 2 times the acute water quality criterion for that parameter. This resulted in a requirement for quarterly storm water management evaluation monitoring. For more complicated outfall scenarios or assistance, contact OWPCA.

Section 1.02 <u>Storm Water Management Evaluation.</u>

Where storm water discharge data submitted by a permittee are greater than two times the acute criterion for a given parameter, the permit should require a storm water management evaluation.

a. Background. The Clean Water Act (CWA) Section 402(p)(2)(B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water 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 Storm Water General Permit (published in the Federal Register 09/09/92) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220.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 Storm Water Permits". This document indicated that an interim approach to limiting storm water 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 "<u>any</u> 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 storm water outfalls at this time because the methodology for developing limits and the proper method of sampling is still a concern and under review/reevaluation by EPA. There are **two exceptions** to this: (1) where a VPDES permit for a storm water 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

A. 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 number 901. This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type*
pH (standard units)	NA	NA	6.0	9.0	1/Year	Grab
Total Suspended Solids	NA	NA	NA	NL	1/Year	Grab
Total Recoverable Zinc	NA	NA	NA	NL	1/Year	Grab
Di-butyl mucktane	NA	NA	NA	NL	1/Quarter	Grab

NL = No Limitation; monitoring required
NA = Not Applicable

a. There shall be no discharge of woody material such as bark, twigs, branches, heartwood or sapwood that will pass through a 1 inch diameter round opening and is present in the discharge from a wet deck storage area.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

c. In addition to the analytical results, the permittee shall provide the date and duration (in hours) of the storm event(s) sampled; rainfall total (in inches) of the storm event that generated the sampled runoff; and the duration between the storm event sampled and the end of the previous measurable storm event (a "measurable storm event" is defined as a storm event that results in an actual discharge from the site).

* See monitoring requirements in **Part I B 1** *(reference storm water sample type special condition)*.

indicates the need for an effluent limitation which the Regional Office believes is justified and can be defended, then they should proceed accordingly.

b. Screening Criteria. Permit writers should make a pollutant-by-pollutant comparison of storm water 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 based upon best professional judgment. 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 Storm Water 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 a Whole Effluent Toxicity (WET) testing special condition. The permit writer should include the results of this screening in the fact sheet as part of the rationale for the storm water 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 storm water 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 storm water outfalls, including the screening criteria parameters and toxicity 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 amend 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 biological 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.

c. Suggested Language for the Storm Water Management Conditions.

Note: The permit section numbering shown below starts with Part I B (Storm Water Management Conditions) for illustration purposes. Cross-references within the body of the conditions that must be changed to match the actual Part designations in the issued permit are shown in* Boldface *in the conditions.

Use the following condition where screening criteria for toxic pollutants (and others) have been established and BMPs are necessary to control the specific contaminants/toxicity contained in storm water. If screening criteria are set, the whole effluent toxicity testing should accompany it for the same outfalls. If the condition is unnecessary, delete and change numbering as appropriate. The numbering presented here is for demonstration purposes only and may need to be changed for the format of the permit.* * * * *

B. STORM WATER MANAGEMENT CONDITIONS

1. Storm Water Management Evaluation

The Storm Water Pollution Prevention Plan (SWPPP), which is to be developed and maintained in accordance with subsection 3 below, shall have a goal of reducing pollutants discharged from all the regulated industrial activity storm water outfalls.

a. Pollutant Specific Screening.

One goal of the SWPPP shall place emphasis on reducing, to the maximum extent practicable, the following pollutants in the outfalls noted below.

OUTFALL NO.	POLLUTANTS	COMPARATIVE VALUE
[*List*]	**[*List*]**	***[List]***

b. Whole Effluent Toxicity Testing.

With the exception noted in 1.d below, the permittee shall conduct **annual acute toxicity tests** on the outfalls noted in a above using grab samples of the discharge from the storm water outfall. These acute screening tests shall be 48-hour static tests using ***Ceriodaphnia dubia* and *Pimephales promelas***, conducted in such a manner and at sufficient dilutions for calculation of a valid LC_{50}. The tests shall be conducted on a calendar year basis with one copy of all results and all supporting information submitted with the annual report due by **[*February 10th*]** of each year. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3. Additional technical assistance in developing the procedures for these tests will be provided by the Department of Environmental Quality (DEQ), if requested by the permittee. If any of the biological tests are invalidated, an additional test shall be conducted within thirty (30) days of notification. If there is no discharge during this 30-day period, a sample must be taken during the first qualifying discharge.

* * * * *

Include any specific sampling requirements next – below is an example. If not used, change d. below to c.

* * * * *

c. The permittee shall submit the following information with the results of the toxicity tests.

(1) The actual or estimated effluent flow at the time of the sampling.

(2) The time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.

d. Waiver of Toxicity Screening

The annual acute toxicity tests required by paragraph 1.b. above for outfall ___ and/or outfall ___ may be waived by the permittee under the following circumstance:

When the quarterly monitoring results for both dissolved _____ and dissolved ____ as required by Part I A __ of this permit, for the specific outfall are below the comparative value(s) noted in 1.a. above for four consecutive quarters in a complete calendar year (applicable calendar years are _____).

e. The effectiveness of the SWPPP will be evaluated via the required monitoring for all parameters listed in Part I- A of this permit for the regulated storm water outfalls, including the specific pollutants noted in a. above and the toxicity screening required by this special condition. Monitoring results that are above the comparative value for the specific pollutants in a. above or, in the case of toxicity, result in an LC50 of less than 100% effluent, will justify the need to reexamine the SWPPP and any best management practices (BMPs) being utilized for the affected outfalls. In addition, the permittee shall amend 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.

By February 10 of each year, the permittee shall submit to the DEQ Regional Office an annual report which includes the pollutant-specific and biological monitoring data from the outfalls included in this condition along with a summary of any steps taken to modify either the SWPPP or any BMPs based on the monitoring data.

First Annual Toxicity Screening and Annual Report Due: No later than February 10, _____ (NO MORE THAN 2 YEARS FROM THE EFFECTIVE DATE OF THE PERMIT).

* * * * *

Use the following condition where screening criteria have been established only for pollutants other than toxic parameters and BMPs are necessary to control the specific contaminants contained in storm water. In this particular case, there is no requirement for either the annual acute tests or the annual reports. Again, if the condition is unnecessary, delete and change numbering as appropriate.

* * * * *

1. Storm Water Management Evaluation

a. The Storm Water Pollution Prevention Plan (SWPPP), which is to be developed and maintained in accordance with subsection 3 below, shall have a goal of reducing pollutants discharged from all the regulated storm water outfalls. One goal of the SWPPP shall place emphasis on reducing, to the maximum extent practicable, the following pollutants in the outfalls noted below.

OUTFALL NO.	POLLUTANTS	COMPARATIVE VALUE
[List]	***[List]***	***[List]***

b. The effectiveness of the SWPPP will be evaluated via the required monitoring for all parameters listed in Part I A of this permit for the regulated storm water outfalls, including the specific pollutants noted above. Monitoring results that are above the comparative value for the specific pollutants above will justify the need to reexamine the effectiveness of the SWPPP and any best management practices (BMPs) being utilized for the affected outfalls. In addition, the permittee shall amend the SWPPP whenever there is a change in the facility or its operation that materially increases the potential for activities to result in a discharge of significant amounts of pollutants.

* * * * *

FACT SHEET RATIONALE

THE FOLLOWING PARAGRAPHS SHOULD BE INCLUDED IN THE EFFLUENT LIMITATIONS/ MONITORING RATIONALE SECTION OF THE FACT SHEET WHEN SCREENING CRITERIA FOR TOXIC POLLUTANTS (AND OTHERS) HAVE BEEN ESTABLISHED AND TOXICITY SCREENING/BMPs ARE TO BE USED FOR STORM WATER CONTROL.

* * * * *

Guidance Memo 96-001 recommends that chemical-specific water quality-based limits not be placed on storm water outfalls at this time because the methodology for developing limits and the proper method of sampling is still a concern and under review/reevaluation by EPA. Exceptions would be where a VPDES permit for a storm water discharge has been issued that includes effluent limitations (backsliding must be considered before these limitations can be modified) and where there are reliable data, obtained using sound, scientifically defensible procedures, which provide the justification and defense for an effluent limitation. Therefore, in lieu of limitations, pollutants are assessed against screening criteria developed solely to identify those pollutants that should be given special emphasis during development and assessment of the Storm Water Pollution Prevention Plan (SWPPP).

Each screening criterion is established as the most stringent of either (1) two times the applicable pollutant's acute criterion, (2) the pollutants waste load allocation, on the basis of the discharge going to a large receiving stream and utilizing conservative assumptions (i.e., Tier 2) or, where applicable, (3) the pollutant's benchmark monitoring concentration as contained in DEQ's VPDES general permit for storm water associated with industrial activity. Any storm water outfall effluent data submitted by the permittee that contained pollutants above the established screening criteria triggered the need for monitoring of that specific pollutant in Part I A of the permit for that outfall. The screening criteria are then utilized in the permit as a comparative value. Based on the above, monitoring was established for the pollutants noted in the table below. In addition, annual toxicity screening was required for these same outfalls.

The SWPPP required by Part I B 3 of the permit is designed to reduce pollutants in storm water runoff. Quarterly monitoring for the pollutants noted in the table below and annual whole effluent toxicity testing is recommended. Pollutant specific monitoring results above the established comparative value or whole effluent toxicity testing which results in an LC_{50} of less than 100% effluent will justify the need to reexamine the effectiveness of the SWPPP and any best management practices (BMPs) being utilized. The goal of the SWPPP is to reduce pollutants to the maximum extent practicable. An annual report is to be submitted to the Regional office and shall include the

data collected the previous year with an indication if the SWPPP or any BMPs were modified based on the monitoring results.

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Section 1.03 General Storm Water Special Conditions.

The General Storm Water Special Conditions should be placed in every individual permit that covers storm water from one of the 30 regulated industrial sectors. The suggested language for the conditions is given below. ***Note: There are several cross-references within the body of the conditions that must be changed to match the actual Part designations in the issued permit. These are shown in* Boldface *in the conditions.***

* * * * *

2. General Storm Water Special Conditions

a. Sample Type.

For all storm water monitoring required in Part I A or other applicable sections of this permit, a minimum of one grab sample shall be taken. Unless otherwise specified, all such samples shall be collected from the discharge resulting from a storm event that occurs at least 72 hours from the previously measurable storm event (a "measurable storm event" is defined as a storm event that results in an actual discharge from the site). The required 72-hour storm event interval is waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

Sampling Methodology for Specific Outfalls **[Insert specific Outfall numbers here]** ***(Use this paragraph to include any discharge specific sampling requirements. For example:)***

Due to the nature of the effluent discharged at these outfalls (contaminated storm water associated with a regulated industrial activity), the following shall be required when obtaining samples required by Part I A of this permit:

(1) At the time of sampling, the permittee shall ensure that the effects of tidal influences are kept to an absolute minimum. This can be achieved by:

(a) Sampling at low tide and/or

(b) Sampling at a representative point which has been demonstrated to be free of tidal influences

(2) In the event that sampling of an outfall is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to DEQ with the DMR for the month following the period in which samples were to be collected.

b. Recording of Results.

For each measurement or sample taken pursuant to the storm event monitoring requirements of this permit, the permittee shall record and report with the Discharge Monitoring Reports (DMRs) the following information:

(1) The date and duration (in hours) of the storm event(s) sampled;

(2) The rainfall total (in inches) of the storm event which generated the sampled discharge; and

(3) The duration between the storm event sampled and the end of the previous measurable storm event.

In addition, the permittee shall maintain a monthly log documenting the amount of rainfall received at this facility on a daily basis. A summarization of this information shall also be submitted with the DMRs.

c. Sampling Waiver.

When a permittee is unable to collect storm water samples required in Part I A or other applicable sections of this permit within a specified sampling period due to adverse climatic conditions, the permittee shall collect a substitute sample from a separate qualifying event in the next period and submit these data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

d. Representative Discharges.

When a facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may test the effluent of one of such outfalls and report that the quantitative data also apply to the substantially identical outfall(s) provided that: (1) the representative outfall determination has been approved by DEQ prior to data submittal; and, (2) the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents.

e. Quarterly Visual Examination of Storm Water Quality.

(1) The permittee must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination(s) must be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination must be made during daylight hours (e.g., normal working hours). If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation must be signed and certified in accordance with **Part II K *(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)*** of this permit.

(2) Visual examinations must be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging from the facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snowmelt samples) must be collected from the discharge resulting from a storm event that results in an actual discharge from the site (defined as a "measurable storm event"), and that occurs at least 72 hours from the previously measurable storm event. The 72-hour storm interval is waived if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred during daylight hours that resulted in storm water runoff during that quarter. The documentation must be signed and certified in accordance with **Part II K *(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)***.

(3) The visual examination reports must be maintained on-site with the Storm Water Pollution Prevention Plan (SWPPP). The report must include the outfall location, the

examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) If the facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may conduct visual monitoring on the effluent of just one of the outfalls and report that the observations also apply to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (i.e., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)) shall be provided in the plan.

(5) When the permittee is unable to conduct the visual examination due to adverse climatic conditions, the permittee must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

f. Allowable Non-Storm Water Discharges.

(1) The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with f(2) below:

(a) Discharges from fire fighting activities;

(b) Fire hydrant flushings;

(c) Potable water including water line flushings;

(d) Uncontaminated air conditioning or compressor condensate;

(e) Irrigation drainage;

(f) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;

(g) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);

(h) Routine external building wash down which does not use detergents;

(i) Uncontaminated ground water or spring water;

(j) Foundation or footing drains where flows are not contaminated with process materials; and

(k) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

(2) Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

(a) Identification of each allowable non-storm water source;

(b) The location where the non-storm water is likely to be discharged; and

(c) Descriptions of appropriate BMPs for each source.

(3) If mist blown from cooling towers is included as one of the allowable non-storm water discharges from the facility, the permittee must specifically evaluate the discharge for the presence of chemicals used in the cooling tower. The evaluation shall be included in the SWPPP.

g. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities.

The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

(1) The permittee is required to notify the Department in accordance with the requirements of **Part II G *(change this to the correct "Reports of Unauthorized Discharges" section of the "Conditions Applicable to All VPDES Permits" Part)*** as soon as he or she has knowledge of the discharge;

(2) Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner or the MS4; and

(3) The storm water pollution prevention plan required by this permit must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

h. Additional Requirements for Salt Storage.

Storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes shall be enclosed or covered to prevent exposure to precipitation. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. All salt storage piles shall be located on an impervious surface. All runoff from the pile, and/or runoff that comes in contact with salt, including under drain systems, shall be collected and contained within a bermed basin lined with concrete or other impermeable materials., or within an underground storage tank(s), or within an above ground storage tank(s), or disposed of through a sanitary sewer (with the permission of the treatment facility). A combination of any or all of these methods may be used. In no case shall salt contaminated storm water be allowed to discharge directly to the ground or to state waters.

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Section 1.04 General Storm Water Pollution Prevention Plan Requirements.

The general Storm Water Pollution Prevention Plan requirements should be placed in every permit that covers storm water associated with industrial activity. The suggested language for the requirements is given below. ***Note: There are several cross-references within the body of the conditions that must be changed to match the actual Part designations in the issued permit. These are shown in* Boldface *in the conditions.***

* * * * *

3. Storm Water Pollution Prevention Plan

Refer to **Part I B 4** for sector-specific storm water management requirements.

[*For reissuances with existing SWPPPs:* A storm water pollution prevention plan (SWPPP) for the facility was required to be developed and implemented under the previous permit. The existing storm water pollution prevention plan shall be reviewed and modified, as appropriate, to conform to the requirements of this section.**]**

[*For new SWPPP requirements:* A storm water pollution prevention plan (SWPPP) is required to be developed and implemented for the facility. The plan shall include Best Management Practices

(BMPs) that are reasonable, economically practicable, and appropriate in light of current industry practices. The BMPs shall be selected, designed, installed, implemented and maintained in accordance with good engineering practices to eliminate or reduce the pollutants in all storm water discharges from the facility. The plan shall also include any control measures necessary for the storm water discharges to meet applicable water quality standards.**]**

Permittees shall implement the provisions of the storm water pollution prevention plan as a condition of this permit.

The storm water pollution prevention plan requirements of this permit may be fulfilled, in part, by incorporating by reference other plans or documents such as a spill prevention control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act, or best management practices (BMP) programs otherwise required for the facility, provided that the incorporated plan meets or exceeds the plan requirements of **Part I B 3 b** (Contents of the Plan). All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP of **Part I B 3 b** the permittee shall develop the missing SWPPP elements and include them in the required plan.

a. Deadlines for Plan Preparation and Compliance.

(1) The facility shall prepare and implement the plan as expeditiously as practicable, but not later than 270 days from the effective date of the permit. **[*Optional wording:*** Verification of compliance with the above deadline shall be provided, in writing, within 10 days of either the deadline or the actual completion date, if completed earlier.**]**

(2) Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than 3 years after the effective date of this permit. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate nonstructural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

b. Contents of the Plan.

The contents of the SWPPP shall comply with the requirements listed below and those in **Part I B 4 [5, 6, 7, etc.]**. The plan shall include, at a minimum, the following items:

(1) Pollution Prevention Team. The plan shall identify the staff individuals by name or title that comprise the facility's storm water pollution prevention team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining, revising, and ensuring compliance with the facility's SWPPP. Specific responsibilities of each staff individual on the team shall be identified and listed.

(2) Site Description. The plan shall include the following:

(a) Activities at the Facility. A description of the nature of the industrial activities at the facility.

(b) General Location Map. A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility.

(c) Site Map. A site map identifying the following:

(i) The size of the property (in acres);

(ii) The location and extent of significant structures and impervious surfaces (roofs, paved areas and other impervious areas);

(iii) Locations of all storm water conveyances including ditches, pipes, swales, and inlets, and the directions of storm water flow (use arrows to show which ways storm water will flow);

(iv) Locations of all existing structural and source control BMPs;

(v) Locations of all surface water bodies, including wetlands;

(vi) Locations of potential pollutant sources identified under **Part I B 3 b (3)**;

(vii) Locations where significant spills or leaks identified under **Part I B 3 b (4)** have occurred;

(viii) Locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing and storage areas; access roads, rail cars and tracks; transfer areas for substances in bulk; and machinery;

(ix) Locations of storm water outfalls and an approximate outline of the area draining to each outfall, and location of municipal storm sewer systems, if the storm water from the facility discharges to them;

(x) Location and description of all non-storm water discharges;

(xi) Location of any storage piles containing salt used for deicing or other commercial or industrial purposes; and

(xii) Locations and sources of runon to the site from adjacent property where the runon contains significant quantities of pollutants. The permittee shall include an evaluation with the SWPPP of how the quality of the storm water running onto the facility impacts the facility's storm water discharges.

(d) Receiving Waters and Wetlands. The name of all surface waters receiving discharges from the site, including intermittent streams, dry sloughs, and arroyos. Provide a description of wetland sites that may receive discharges from the facility. If the facility discharges through a municipal separate storm sewer system (MS4), identify the MS4 operator, and the receiving water to which the MS4 discharges.

(3) Summary of Potential Pollutant Sources. The plan shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, industrial production and processes, intermediate products, byproducts, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description shall include:

(a) Activities in Area. A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

(b) Pollutants. A list of the associated pollutant(s) or pollutant constituents (e.g., crankcase oil-zinc, sulfuric acid, cleaning solvents, etc.) for each activity. The pollutant list shall include all significant materials handled, treated, stored or disposed that have been exposed to storm water in the three years prior to the date this SWPPP was prepared or amended. The list shall include any hazardous substances or oil at the facility.

(4) Spills and Leaks. The SWPPP shall clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur and their corresponding outfalls. The plan shall include a list of significant spills and leaks of toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance during the three-year period prior to the date this SWPPP was prepared or amended. The list shall be updated if significant spills or leaks occur in exposed areas of the facility during the term of the permit. Significant spills and leaks include releases of oil or hazardous substances in excess of reportable quantities, and may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(5) Sampling Data. The plan shall include a summary of existing storm water discharge sampling data taken at the facility. The summary shall include, at a minimum, any data collected during the previous permit term.

(6) Storm Water Controls.

(a) BMPs shall be implemented for all the areas identified in **Part I B 3 b (3)** (Summary of Potential Pollutant Sources) to prevent or control pollutants in storm water discharges from the facility. All reasonable steps shall be taken to control or address the quality of discharges from the site that may not originate at the facility. The SWPPP shall describe the type, location and implementation of all BMPs for each area where industrial materials or activities are exposed to storm water. Selection of BMPs shall take into consideration:

(i) That preventing storm water from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from storm water;

(ii) BMPs generally shall be used in combination with each other for most effective water quality protection;

(iii) Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures;

(iv) That minimizing impervious areas at the facility can reduce runoff and improve groundwater recharge and stream base flows in local streams (however, care must be taken to avoid ground water contamination);

(v) Flow attenuation by use of open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;

(vi) Conservation or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

(vii) Treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

(b) Control Measures. The permittee shall implement the following types of BMPs to prevent and control pollutants in the storm water discharges from the facility~~.~~, unless it can be demonstrated and documented that such controls are not relevant to the discharges (e.g., there are no storage piles containing salt).

(i) Good Housekeeping. The permittee shall keep clean all exposed areas of the facility that are potential sources of pollutants to storm water discharges. Typical problem areas include areas around trash containers, storage areas, loading docks, and vehicle fueling and maintenance areas. The plan shall include a schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers. The introduction of raw, final or waste materials to exposed areas of the facility shall be minimized to the maximum extent practicable. The generation of dust, along with off-site vehicle tracking of raw, final or waste materials, or sediments, shall be minimized to the maximum extent practicable.

(ii) Eliminating and Minimizing Exposure. To the extent practicable, industrial materials and activities shall be located inside, or protected by a storm-resistant covering to prevent exposure to rain, snow, snowmelt, and runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 E, thereby eliminating the need to have a permit.

(iii) Preventive Maintenance. The permittee shall have a preventive maintenance program that includes **regular** inspection, testing, maintenance and repairing of all industrial equipment and systems to avoid breakdowns or failures that could result in leaks, spill and other releases. This program is in addition to the specific BMP maintenance required under **Part I B 3 c** (Maintenance of BMPs).

(iv) Spill Prevention and Response Procedures. The plan shall describe the procedures that will be followed for preventing and responding to spills and leaks.

(A) Preventive measures include barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.

(B) Response procedures shall include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing and cleaning up spills. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265. Employees who may cause, detect or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals shall be a member of the Pollution Prevention Team.

(C) Contact information for individuals and agencies that must be notified in the event of a spill shall be included in the SWPPP, and in other locations where it will be readily available.

(v) Routine Facility Inspections. Facility personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs shall regularly inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under **Part I B 3 d**. At least one member of the Pollution Prevention Team shall participate in the routine facility inspections.

The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit or written approval is received from the Department for less frequent intervals. At least once each calendar year, the routine facility inspection must be conducted during a period when a storm water discharge is occurring.

Any deficiencies in the implementation of the SWPPP that are found shall be corrected as soon as practicable, but not later than within 30 days of the inspection, unless permission for a later date is granted in writing by the Director. The results of the inspections shall be documented in the SWPPP, along with the date(s) and description(s) of any corrective actions that were taken in response to any deficiencies or opportunities for improvement that were identified.

(vi) Employee Training. The permittee shall implement a storm water employee training program for the facility. The SWPPP shall include a schedule for all types of necessary training, and shall document all training sessions and the employees who received the training. Training shall be provided for all employees who work in areas where industrial materials or activities are exposed to storm water, and for employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel, etc.). The training shall cover the components and goals of the SWPPP, and include such topics as spill response, good housekeeping, material management practices, BMP operation and maintenance, etc. The SWPPP shall include a summary of any training performed.

(vii) Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction, landscaping, site grading), or other factors, have a potential for soil erosion. The permittee shall identify and implement structural, vegetative, and/or stabilization BMPs to prevent or control on-site and off-site erosion and sedimentation. Flow velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel if the flows would otherwise create erosive conditions.

(viii) Management of Runoff. The plan shall describe the storm water runoff management practices (i.e., permanent structural BMPs) for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site.

Structural BMPs may require a separate permit under § 404 of the CWA and the Virginia Water Protection Permit Program Regulation (9 VAC 25-210) before installation begins.

c. Maintenance.

All BMPs identified in the SWPPP shall be maintained in effective operating condition. Storm water BMPs identified in the SWPPP shall be observed during active operation (i.e., during a storm water runoff event) to ensure that they are functioning correctly. Where discharge locations are inaccessible, nearby downstream locations shall be observed. The observations shall be documented in the SWPPP.

The SWPPP shall include a description of procedures and a regular schedule for preventive maintenance of all BMPs, and shall include a description of the back-up practices that are in place should a runoff event occur while a BMP is off-line. The effectiveness of nonstructural BMPs shall also be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

If site inspections required by **Part I B 3 b(6)(b)(v)** (Routine Facility Inspections) or **Part I B 3 d** (Comprehensive Site Compliance Evaluation) identify BMPs that are not operating effectively, repairs or maintenance shall be performed before the next anticipated storm event. If maintenance prior to the next anticipated storm event is not possible, maintenance shall be scheduled and accomplished as soon as practicable. In the interim, back-up measures shall be employed and documented in the SWPPP until repairs or maintenance is complete. Documentation shall be kept with the SWPPP of maintenance and repairs of BMPs, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair or replacement, and for repairs, date(s) that the BMP(s) returned to full function, and the justification for any extended maintenance or repair schedules.

d. Comprehensive Site Compliance Evaluation.

The permittee shall conduct comprehensive site compliance evaluations at least once a year. The evaluations shall be done by qualified personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs. The personnel conducting the evaluations may be either facility employees or outside constituents hired by the facility.

(1) Scope of the Compliance Evaluation. Evaluations shall include all areas where industrial materials or activities are exposed to storm water, as identified in **Part I B 3 b(3)**. The personnel shall evaluate:

(a) Industrial materials, residue or trash that may have or could come into contact with storm water;

(b) Leaks or spills from industrial equipment, drums, barrels, tanks or other containers that have occurred within the past three years;

(c) Off-site tracking of industrial or waste materials or sediment where vehicles enter or exit the site;

(d) Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;

(e) Evidence of, or the potential for, pollutants entering the drainage system~~.~~;

(f) Evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall, including flow dissipation measures to prevent scouring;

(g) Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs;

(h) Results of both visual and any analytical monitoring done during the past year shall be taken into consideration during the evaluation.

(2) Based on the results of the evaluation, the SWPPP shall be modified as necessary (e.g., show additional controls on the map required by **Part I B 3 b(2)(c)**; revise the description of controls required by **Part I B 3 b(6)** to include additional or modified BMPs designed to correct problems identified). Revisions to the SWPPP shall be completed within 30 days following the evaluation, unless permission for a later date is granted in writing by the Director. If existing BMPs need to be modified or if additional BMPs are necessary, implementation shall be completed before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the Department;

(3) Compliance Evaluation Report. A report shall be written summarizing the scope of the evaluation, name(s) of personnel making the evaluation, the date of the evaluation, and all observations relating to the implementation of the SWPPP, including elements stipulated in **Part I B 3 d(1) (a) through (f)** above. Observations shall include such things as: the location(s) of discharges of pollutants from the site; location(s) of previously unidentified sources of pollutants; location(s) of BMPs that need to be maintained or repaired; location(s) of failed BMPs that need replacement; and location(s) where additional BMPs are needed. The report shall identify any incidents of noncompliance that were observed. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with **Part II K *(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)*** and maintained with the SWPPP.

(4) Where compliance evaluation schedules overlap with routine inspections required under **Part I B 3 b(6)(b)(v)**, the annual compliance evaluation may be used as one of the routine inspections.

e. Signature and Plan Review.

(1) Signature/Location. The SWPPP shall be signed in accordance with **Part II K *(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)***, dated, and retained on-site at the facility covered by this permit in accordance with **Part II B 2 *(change this to the correct "Records" section of the "Conditions Applicable to All VPDES Permits" Part)***. All other changes to the SWPPP, and other permit compliance documentation, must be signed and dated by the person preparing the change or documentation.

(2) Availability. The permittee shall make the SWPPP, annual site compliance evaluation report, and other information available to the Department upon request.

(3) Required Modifications. The Director may notify the permittee at any time that the SWPPP, BMPs, or other components of the facility's storm water program do not meet one or more of the requirements of this permit. The notification shall identify specific provisions of the permit that are not being met, and may include required modifications to the storm water program, additional monitoring requirements, and special reporting requirements. The permittee shall make any required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by the Director, and shall submit a written certification to the Director that the requested changes have been made.

f. Maintaining an Updated SWPPP.

(1) The permittee shall review and amend the SWPPP as appropriate whenever:

(a) There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

(b) Routine inspections or compliance evaluations determine that there are deficiencies in the BMPs;

(c) Inspections by local, state, or federal officials determine that modifications to the SWPPP are necessary;

(d) There is a spill, leak or other release at the facility; or

(e) There is an unauthorized discharge from the facility.

(2) SWPPP modifications shall be made within 30 calendar days after discovery, observation or event requiring a SWPPP modification. Implementation of new or modified BMPs (distinct from regular preventive maintenance of existing BMPs described in **Part I B 3 b(6)(b)(iii)**) shall be initiated before the next storm event if possible, but no later than 60 days after discovery, or as otherwise provided or approved by the Director. The amount of time taken to modify a BMP or implement additional BMPs shall be documented in the SWPPP.

(3) If the SWPPP modification is based on a release or unauthorized discharge, include a description and date of the release, the circumstances leading to the release, actions taken in response to the release, and measures to prevent the recurrence of such releases. Unauthorized releases and discharges are subject to the reporting requirements of Part II G of this permit.

* * * * *

Section 1.05 Sector-Specific SWPPP Requirements.

The following sector-specific storm water pollution prevention plan requirements should be included in the permit where the "industrial sector" located at a facility contributes storm water associated with industrial activity to the outfall. ***(NOTE: The description of the discharges that are covered by the special conditions at the beginning of each of the following sections should not be used in the permit itself.)*** The following table lists the industrial sectors and the associated SIC or Industrial Activity codes.

INDUSTRIAL SECTORS AND ASSOCIATED SIC OR INDUSTRIAL ACTIVITY CODES

SIC or Industrial 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 Planning 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.
Sector B: Paper and Allied Products	
2611	Pulp Mills.
2621	Paper Mills.
2631	Paperboard Mills.
2652-2657	Paperboard Containers and Boxes.
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes.
Sector C: Chemical and Allied Products	
2812-2819	Industrial Inorganic Chemicals.
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances.
2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
2861-2869	Industrial Organic Chemicals.
2873-2879	Agricultural 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.
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	
3211	Flat Glass.
3221, 3229	Glass and Glassware, Pressed or Blown.
3231	Glass Products Made of Purchased Glass.
3241	Hydraulic Cement.
3251-3259	Structural Clay Products.
3261-3269	Pottery and Related Products.
3271-3275	Concrete, Gypsum and Plaster Products.
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products.
Sector F: Primary Metals	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills.
3321-3325	Iron and Steel Foundries.
3331-3339	Primary Smelting and Refining of Nonferrous Metals.
3341	Secondary Smelting and Refining of Nonferrous Metals.
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals.
3363-3369	Nonferrous Foundries (Castings).
3398, 3399	Miscellaneous Primary Metal Products.
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 I: Oil and Gas Extraction and Refining	
1311	Crude Petroleum and Natural Gas.
1321	Natural Gas Liquids.
1381-1389	Oil and Gas Field Services.
2911	Petroleum Refineries.
Sector J: Mineral Mining and Dressing	
1411	Dimension Stone.
1422-1429	Crushed and Broken Stone, Including Rip Rap.
1442, 1446	Sand and Gravel.
1455, 1459	Clay, Ceramic, and Refractory Materials.
1474-1479	Chemical and Fertilizer Mineral Mining.
1481	Nonmetallic Minerals Services, Except Fuels.
1499	Miscellaneous Nonmetallic Minerals, Except Fuels.
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 P: Land Transportation and Warehousing	
4011, 4013	Railroad Transportation.
4111-4173	Local and Highway Passenger Transportation.
4212-4231	Motor Freight Transportation and Warehousing.
4311	United States Postal Service.
5171	Petroleum Bulk Stations and Terminals.
Sector Q: Water Transportation	
4412-4499 (except 4499 facilities as specified in Sector N)	Water Transportation.
Sector R: Ship and Boat Building or Repairing Yards	
3731, 3732	Ship and Boat Building or Repairing Yards.
Sector S: Air Transportation	
4512-4581	Air Transportation Facilities.
Sector T: Treatment Works	

TW	Treatment Works.
Sector U: Food and Kindred Products	
2011-2015	Meat Products.
2021-2026	Dairy Products.
2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties.
2041-2048	Grain Mill Products.
2051-2053	Bakery Products.
2061-2068	Sugar and Confectionery Products.
2074-2079	Fats and Oils.
2082-2087	Beverages.
2091-2099	Miscellaneous Food Preparations and Kindred Products.
2111-2141	Tobacco Products.
Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products	
2211-2299	Textile Mill Products.
2311-2399	Apparel and Other Finished Products Made From Fabrics and Similar Materials.
3131-3199 (except 3111 - see ..... Sector Z)	Leather and Leather Products, except Leather Tanning and Finishing.
Sector W: Furniture and Fixtures	
2434	Wood Kitchen Cabinets.
2511-2599	Furniture and Fixtures.
Sector X: Printing and Publishing	
2711-2796	Printing, Publishing, and Allied Industries.
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.
3081-3089	Miscellaneous Plastics Products.
3931	Musical Instruments.
3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods.
3951-3955 (except 3952 facilities .. as specified in Sector C).	Pens, Pencils, and Other Artists' Materials.
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal.
3991-3999	Miscellaneous Manufacturing Industries.
Sector Z: Leather Tanning and Finishing	
3111	Leather Tanning, Currying and Finishing.
Sector AA: Fabricated Metal Products	
3411–3499	Fabricated Metal Products, Except Machinery and Transportation Equipment.
3911–3915	Jewelry, Silverware, and Plated Ware
Sector AB: Transportation Equipment, Industrial or Commercial Machinery	
3511-3599 (except 3571-3579 - .... see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment).
3711-3799 (except 3731, 3732 - ... see Sector R)	Transportation Equipment (Except Ship and Boat Building and Repairing).
Sector AC: Electronic, Electrical, Photographic, and Optical Goods	
3571-3579	Computer and Office Equipment.
3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment.
3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods.
Sector AD: Non-Classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits	
N/A	Other Storm Water Discharges Designated By the Board As Needing a Permit (see 9 VAC 25-31-120 A 1 c) or Any Facility Discharging Storm Water Associated With Industrial Activity Not Described By Any of Sectors A-AC.

Sector A – Timber Products.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities generally classified under Standard Industrial Classification (SIC) Major Group 24 that are engaged in the following activities: cutting timber and pulpwood (those that have log storage or handling areas), mills, including merchant, lath, shingle, cooperage stock, planing, plywood and veneer, and producing lumber and wood materials; wood preserving, manufacturing wood buildings or mobile homes; and manufacturing finished articles made entirely of wood or related materials, except for wood kitchen cabinet manufacturers (SIC Code 2434), which are addressed under Sector W (Furniture and Fixtures).

(1) Effluent Limitations. Wet Decking Discharges at Log Storage and Handling Areas (SIC 2411).
pH .....6.0 - 9.0 s.u.
There shall be no discharge of debris (woody material such as bark, twigs, branches, heartwood or sapwood) that will not pass through a 1 inch (2.54 cm) diameter round opening.

(2) Analytical (Benchmark) Monitoring.
General Sawmills and Planing Mills (SIC 2421) .....TSS
Wood Preserving Facilities (SIC 2491) .....As, Cu, Cr *
_* - do not include metals monitoring (arsenic, chromium and copper) for wood preserving facilities that use only oil-based preservatives.
Log Storage and Handling Facilities (SIC 2411) .....TSS
Hardwood Dimension and Flooring Mills, and Special Products .....TSS
Sawmills, not elsewhere classified; Millwork, Veneer, Plywood and Structural Wood; Wood Containers; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC Codes 2426, 2429, 2431-2439 (except 2434), 2448, 2449, 2451, 2452, 2493, and 2499).

(3) Non-Storm Water Discharges.
(a) Prohibition of Non-storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: storm water from areas where there may be contact with chemical formulations sprayed to provide surface protection.
(b) Authorized Non-storm Water Discharges: Discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray down waters and no chemicals are applied to the wood during storage are authorized non-storm water discharges under this section.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: processing areas; treatment chemical storage areas; treated wood and residue storage areas; wet decking areas; dry decking areas; untreated wood and residue storage areas; and treatment equipment storage areas.

(2) Summary of Potential Pollutant Sources. Where information is available, facilities that have used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or wood preserving activities on-site in the past shall identify in the inventory the following: areas where contaminated soils, treatment equipment, and stored materials still remain, and the management practices employed to minimize the contact of these materials with storm water runoff.

b. Storm Water Controls.

The description of storm water management controls shall address the following areas of the site: log, lumber and other wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment/vehicle maintenance, storage and repair areas. Facilities that surface protect and/or preserve wood products shall address specific BMPs for wood surface protection and preserving activities. The SWPPP shall address the following minimum components:

(1) Good Housekeeping. Good housekeeping measures in storage areas, loading and unloading areas, and material handling areas shall be designed to:

(a) Limit the discharge of wood debris;

(b) Minimize the leachate generated from decaying wood materials; and

(c) Minimize the generation of dust.

(2) Routine Facility Inspections. Inspections at processing areas, transport areas, and treated wood storage areas of facilities performing wood surface protection and preservation activities shall be performed monthly to assess the usefulness of practices in minimizing the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with storm water discharges.

Sector B - Paper and Allied Products Manufacturing.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities generally classified under SIC Major Group 26 that are engaged in the following activities: the manufacture of pulps from wood and other cellulose fibers and from rags; the manufacture of paper and paperboard into converted products, such as paper coated off the paper machine, paper bags, paper boxes and envelopes; and the manufacture of bags of plastic film and sheet.

(1) Effluent Limitations. ..... None

(2) Analytical (Benchmark) Monitoring.
Paperboard Mills (SIC 2631) ..... BOD_5

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

None

Sector C - Chemical and Allied Products Manufacturing.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities engaged in manufacturing the following products and generally described by the SIC code shown:

- Basic industrial inorganic chemicals (including SIC Code 281);
- Plastic materials and synthetic resins, synthetic rubbers, and cellulosic and other human-made fibers, except glass (including SIC Code 282);
- Medicinal chemicals and pharmaceutical products, including the grading, grinding and milling of botanicals (including SIC Code 283).
- Soap and other detergents, including facilities producing glycerin from vegetable and animal fats and oils; specialty cleaning, polishing, and sanitation preparations; surface active preparations used as emulsifiers, wetting agents, and finishing agents, including sulfonated oils; and perfumes, cosmetics, and other toilet preparations (including SIC Code 284);
- Paints (in paste and ready-mixed form); varnishes; lacquers; enamels and shellac; putties, wood fillers, and sealers; paint and varnish removers; paint brush cleaners; and allied paint products (including SIC Code 285);
- Industrial organic chemicals (including SIC Code 286);
- Nitrogenous and phosphatic basic fertilizers, mixed fertilizer, pesticides, and other agricultural chemicals (including SIC Code 287);
- Industrial and household adhesives, glues, caulking compounds, sealants, and linoleum, tile, and rubber cements from vegetable, animal, or synthetic plastics materials; explosives; printing ink, including gravure ink, screen process and lithographic inks; miscellaneous chemical preparations, such as fatty acids, essential oils, gelatin (except vegetable), sizes, bluing, laundry sours, and writing and stamp pad ink; industrial compounds, such as boiler and heat insulating compounds; and chemical supplies for foundries (including SIC Code 289); and

- Ink and paints, including china painting enamels, India ink, drawing ink, platinum paints for burnt wood or leather work, paints for china painting, artists' paints and artists' water colors (SIC Code 3952, limited to those listed; for others in SIC Code 3952 not listed above, see Sector Y (Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries).

(1) Effluent Limitations. Phosphate Subcategory of the Fertilizer Manufacturing Point Source Category (40 CFR 418.10) - applies to precipitation runoff that, during manufacturing or processing, comes into contact with any raw materials, intermediate product, finished product, by-products or waste product (SIC 2874).
Total Phosphorus (as P) ..... 105 mg/L daily maximum, 35 mg/L 30-day average
Fluoride ..... 75 mg/L daily maximum, 25 mg/L 30-day average

(2) Analytical (Benchmark) Monitoring.
Agricultural Chemicals (SIC 2873-2879) ..... Total N, Fe, Zn, P
Industrial Inorganic Chemicals (SIC 2812-2819) ..... Al, Fe, Total N
Soaps, Detergents, Cosmetics and Perfumes (SIC 2841-2844) ..... Total N, Zn
Plastics, Synthetics and Resins (SIC 2821-2824) ..... Zn

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: inks, paints, or substances (hazardous, non-hazardous, etc.) resulting from an on-site spill, including materials collected in drip pans; washwaters from material handling and processing areas; or washwaters from drum, tank, or container rinsing and cleaning.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: processing and storage areas; access roads, rail cars and tracks; areas where substances are transferred in bulk; and operating machinery.

(2) Summary of Potential Pollutant Sources. A description of the following sources and activities that have potential pollutants associated with them: loading, unloading and transfer of chemicals; outdoor storage of salt, pallets, coal, drums, containers, fuels, fueling stations; vehicle and equipment maintenance/cleaning areas; areas where the treatment, storage or disposal (on-site or off-site) of waste/wastewater occur; storage tanks and other containers; processing and storage areas; access roads, rail cars and tracks; areas where the transfer of substances in bulk occurs; and areas where machinery operates.

b. Storm Water Controls.

Good Housekeeping. The SWPPP shall include:

(1) A schedule for regular pickup and disposal of garbage and waste materials, or a description of other appropriate measures used to reduce the potential for the discharge of storm water that has come into contact with garbage or waste materials;

(2) Routine inspections of the condition of drums, tanks and containers for potential leaks.

Sector D - Asphalt Paving and Roofing Materials and Lubricant Manufacturers.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities engaged in the following activities: manufacturing asphalt paving and roofing materials, including those facilities commonly identified by SIC Codes 2951 and 2952; portable asphalt plants (also commonly identified by SIC Code 2951); and manufacturing miscellaneous products of petroleum and coal, including those facilities classified as SIC Code 2992 and 2999.

(1) Limitations on Coverage. The following storm water discharges associated with industrial activity are not authorized by this section, and if present, may require additional controls and/or limitations:

a. Storm water discharges from petroleum refining facilities, including those that manufacture asphalt or asphalt products that are classified as SIC Code 2911;

b. Storm water discharges from oil recycling facilities; and

c. Storm water discharges associated with fats and oils rendering.

(2) Effluent Limitations. Discharges from areas where production of asphalt paving and roofing emulsions occurs (SIC 2951, 2952).
Total Suspended Solids (TSS) .....23 mg/L daily maximum, 15 mg/L 30-day average
Oil & Grease .....15 mg/L daily maximum, 10 mg/L 30-day average
pH .....6.0 - 9.0 s.u..

(3) Analytical (Benchmark) Monitoring.
Asphalt Paving and Roofing Materials (SIC 2951, 2952) ..... TSS

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following item:

Routine Facility Inspections.

Material storage and handling areas, liquid storage tanks, hoppers or silos, vehicle and equipment maintenance, cleaning, and fueling areas, material handling vehicles, equipment and processing areas shall be inspected at least once per month, as part of the maintenance program. The permittee shall ensure that appropriate action is taken in response to the inspection by implementing tracking or follow-up procedures.

Sector E - Glass, Clay, Cement, Concrete, and Gypsum Products.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities generally classified under SIC Major Group 32 that are engaged in either manufacturing the following products or performing the following activities: flat, pressed, or blown glass or glass containers; hydraulic cement; clay products including tile and brick; pottery and porcelain electrical supplies; concrete products; gypsum products; non-clay refractories; minerals and earths, ground or otherwise treated; lime manufacturing; cut stone and stone products; asbestos products; and mineral wool and mineral wool insulation products.

(1) Effluent Limitations. Cement Manufacturing Facility, Material Storage Runoff: Any discharge composed of runoff that derives from the storage of materials including raw materials, intermediate products, finished products, and waste materials that are used in or derived from the manufacture of cement.
Total Suspended Solids (TSS) .....50 mg/L daily maximum
pH .....6.0 - 9.0 s.u.

(2) Analytical (Benchmark) Monitoring.
Clay Product Manufacturers (SIC 3251-3259, 3261-3269) ..... Al
Concrete and Gypsum Product Manufacturers (SIC 3271-3275) ..... TSS, pH, Fe

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: process wastewater that results from washing of trucks, mixers, transport buckets, forms or other equipment at facilities engaged in production of ready-mix concrete, concrete block, brick or similar products.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description and Site Map.

The site map shall identify the locations of the following, if applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier or other device used for the treatment of process wastewater and the areas that drain to the treatment device.

b. Storm Water Controls.

(1) Good Housekeeping.

(a) Facilities shall prevent or minimize the discharge of: spilled cement; aggregate (including sand or gravel); kiln dust; fly ash; settled dust; and other significant materials in storm water from paved portions of the site that are exposed to storm water. Measures used to minimize the presence of these materials may include regular sweeping, or other equivalent measures. The plan shall indicate the frequency of sweeping or equivalent measures. The frequency shall be determined based upon consideration of the amount of industrial activity occurring in the area and frequency of precipitation, but shall not be less than once per week if cement, aggregate, kiln dust; fly ash, or settled dust are being handled or processed.

(b) Facilities shall prevent the exposure of fine granular solids (such as cement, fly ash, kiln dust, etc.) to storm water. Where practicable, these materials shall be stored in enclosed silos or hoppers, buildings, or under other covering.

(2) Routine Facility Inspections. The inspection shall take place while the facility is in operation and shall include all of the following areas that are exposed to storm water: material handling areas, aboveground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down/equipment cleaning areas.

Sector F - Primary Metals.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from the following types of facilities in the primary metal industry, and generally described by the SIC code shown:

- Steel works, blast furnaces, and rolling and finishing mills, including: steel wire drawing and steel nails and spikes; cold-rolled steel sheet, strip, and bars; and steel pipes and tubes (SIC Code 331).
- Iron and steel foundries, including: gray and ductile iron, malleable iron, steel investment, and steel foundries not elsewhere classified (SIC Code 332).
- Primary smelting and refining of nonferrous metals, including: primary smelting and refining of copper, and primary production of aluminum (SIC Code 333).
- Secondary smelting and refining of nonferrous metals (SIC Code 334).
- Rolling, drawing, and extruding of nonferrous metals, including: rolling, drawing, and extruding of copper; rolling, drawing and extruding of nonferrous metals except copper and aluminum; and drawing and insulating of nonferrous wire (SIC Code 335).
- Nonferrous foundries (castings), including: aluminum die-castings, nonferrous die-castings, except aluminum, aluminum foundries, copper foundries, and nonferrous foundries, except copper and aluminum (SIC Code 336).
- Miscellaneous primary metal products, not elsewhere classified, including: metal heat treating, and primary metal products, not elsewhere classified (SIC Code 339).

Activities covered include, but are not limited to, storm water discharges associated with coking operations, sintering plants, blast furnaces, smelting operations, rolling mills, casting operations, heat treating, extruding, drawing, or forging of all types of ferrous and nonferrous metals, scrap, and ore.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring:

Steel Works, Blast Furnaces and Rolling and Finishing Mills (SIC 3312-3317) ..... Al, Zn

Iron and Steel Foundries (SIC 3321-3325) ..... TSS, Al, Cu, Fe, Zn

Rolling, Drawing and Extruding of Nonferrous Metals (SIC 3351-3357) ..... Cu, Zn

Nonferrous Foundries (SIC 3363-3369) ..... Cu, Zn

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following activities may be exposed to precipitation/surface runoff: storage or disposal of wastes such as spent solvents/baths, sand, slag/dross; liquid storage tanks/drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw materials such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate sources where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal/coke handling operations, etc., and that could result in a discharge of pollutants to surface waters.

(2) Summary of Potential Pollutant Sources. The inventory of materials handled at the site that potentially may be exposed to precipitation/runoff shall include areas where deposition of particulate matter from process air emissions or losses during material handling activities are possible.

b. Storm Water Controls.

(1) Good Housekeeping. The SWPPP shall consider implementation of the following measures, or equivalent measures, where applicable.

(a) Establishment of a cleaning/maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading/unloading, storage, handling, and processing occur.

(b) The paving of areas where vehicle traffic or material storage occur, but where vegetative or other stabilization methods are not practicable. Sweeping programs shall be instituted in these areas as well.

(c) For unstabilized areas of the facility where sweeping is not practical, the permittee shall consider using storm water management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures, that effectively trap or remove sediment.

(2) Routine Facility Inspections. Inspections shall be conducted monthly, and shall address all potential sources of pollutants, including (if applicable):

(a) Air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones) shall be inspected for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. The permittee shall consider monitoring air flow at inlets/outlets, or equivalent measures, to check for leaks (e.g., particulate deposition) or blockage in ducts;

(b) All process or material handling equipment (e.g., conveyors, cranes, and vehicles) shall be inspected for leaks, drips, or the potential loss of materials; and

(c) Material storage areas (e.g., piles, bins or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks/drums) shall be examined for signs of material losses due to wind or storm water runoff.

Sector G - Metal Mining (Ore Mining and Dressing).

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from active, temporarily inactive and inactive metal mining and ore dressing facilities including mines abandoned on federal lands, as classified under SIC Major Group 10. Coverage is required for facilities that discharge storm water that has come into contact with, or is contaminated by, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation. SIC Major Group 10 includes establishments primarily engaged in mining of ores, developing mines, or exploring for metallic minerals (ores) and also includes ore dressing and beneficiating operations, whether performed at co-located, dedicated mills or at separate mills, such as custom mills. For the purposes of this section, the term "metal mining" includes any of the separate activities listed above. Covered discharges include:

- All storm water discharges from inactive facilities;
- Storm water discharges from the following areas of active and temporarily inactive metal mining facilities: waste rock/overburden piles if composed entirely of storm water and not combining with mine drainage; topsoil piles; off-site haul/access roads; on-site haul/access roads constructed of waste rock/overburden if composed entirely of storm water and not combining with mine drainage; on-site haul/access roads not constructed of waste rock/overburden/spent ore except if mine drainage is used for dust control; runoff from tailings dams/dikes when not constructed of waste rock/tailings and no process fluids are present; runoff from tailings dams/dikes when constructed of waste rock/tailings and no process fluids are present if composed entirely of storm water and not combining with mine drainage; concentration building if no contact with material piles; mill site if no contact with material piles; office/administrative building and housing if mixed with storm water from industrial area; chemical storage area; docking facility if no excessive contact with waste product that would otherwise constitute mine drainage; explosive storage; fuel storage; vehicle/equipment maintenance area/building; parking areas (if necessary); power plant; truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage; unreclaimed, disturbed areas outside of active mining area; reclaimed areas released from reclamation bonds prior to December 17, 1990; and partially/inadequately reclaimed areas or areas not released from reclamation bonds.
- Storm water discharges from exploration and development of metal mining and/or ore dressing facilities; and
- Storm water discharges from facilities at mining sites undergoing reclamation.

Note: Discharges that come in contact with overburden/waste rock are subject to 40 CFR Part 440, providing: the discharges drain to a point source (either naturally or as a result of intentional diversion), and they combine with mine drainage that is otherwise regulated under 40 CFR Part 440.

The following definitions may be useful to the permit writer:

"Active metal mining facility" means a place where work or other related activity to the extraction, removal, or recovery of metal ore is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun.

"Active phase" means activities including each step from extraction through production of a salable product.

"Exploration and development phase" entails exploration and land disturbance activities to determine the financial viability of a site. Development includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals.

"Final stabilization" - a site or portion of a site is “finally stabilized” when:

1. All soil-disturbing activities at the site have been completed and either of the two following criteria are met:

   a. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or

   b. Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

2. When background native vegetation will cover less than 100% of the ground (e.g., arid areas, beaches), the 70% coverage criteria is adjusted as follows: if the native vegetation covers 50% of the ground, 70% of 50% (0.70 x 0.50 = 0.35) would require 35% total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.

"Inactive metal mining facility" means a site or portion of a site where metal mining and/or milling occurred in the past but is not an active facility as defined in this permit, and where the inactive portion is not covered by an active mining permit issued by the applicable federal or state governmental agency.

"Mining operation" typically consists of three phases, any one of which individually qualifies as a "mining activity." The phases are the exploration and development phase, the active phase, and the reclamation phase.

"Reclamation phase" means activities intended to return the land to its premining use.

"Temporarily inactive metal mining facility" means a site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable federal or state government agency.

(1) Limitations on Coverage. Storm water discharges from active metal mining facilities that are subject to the effluent limitation guidelines for the Ore Mining and Dressing Point Source Category, 40 CFR Part 440, are not authorized by this section, and if present, may require additional controls and/or limitations. In addition, mining related non-storm water discharges, such as adit drainage, contaminated springs or seeps, and contaminated seeps and springs discharging from waste rock dumps that do not directly result from precipitation events, are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations.

(2) Effluent Limitations. ..... NONE

(3) Analytical (Benchmark) Monitoring.

Active Copper Ore Mining and Dressing Facilities (SIC 1021) ..... TSS

Discharges From Waste Rock and Overburden Piles From Active Ore Mining or Dressing Facilities, Inactive Ore Mining or Dressing Facilities, and Sites Undergoing Reclamation: Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores Except Vanadium; Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099) ..... TSS, Turbidity, pH, Hardness (as CaCO3), Sb, As, Be, Cd, Cu, Fe, Pb, Hg, Ni, Se, Ag, Zn

Additional Monitoring Requirements for Discharges From Waste Rock and Overburden Piles From Active Ore Mining or Dressing Facilities, Inactive Ore Mining or Dressing Facilities, and Sites Undergoing Reclamation.

Type of Ore Mined	Pollutants of Concern		
	TSS (mg/L)	pH	Metals, Total Recoverable
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H).
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H).
Aluminum Ore	X	X	Iron.
Mercury Ore	X	X	Nickel (H).

Iron Ore	X	X	Iron (Dissolved).
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H).
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H).
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H).
Copper, Lead, Zinc, Gold, Silver and Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H).
Uranium, Radium and Vanadium	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total Recoverable), Uranium, Zinc (H).

Note: (H) indicates that hardness must also be measured when this pollutant is measured.

(4) Permit Special Condition - Clearing, Grading, and Excavation Activities. The following special condition should be included in the permit for this industrial sector:

[*Insert SC #]* Clearing, Grading, and Excavation Activities. Clearing, grading, and excavation activities being conducted as part of the exploration and development phase of a mining operation are covered under this permit.

a. Management Practices for Clearing, Grading, and Excavation Activities.

(1) Selecting and Installing Control Measures. A combination of erosion and sedimentation control measures are required to achieve maximum pollutant prevention and removal. All control measures shall be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices.

(2) Removal of Sediment. If sediment escapes the site, off-site accumulations of sediment shall be removed at a frequency sufficient to prevent off-site impacts.

(3) Good Housekeeping. Litter, debris, and chemicals shall be prevented from becoming a pollutant source in storm water discharges.

(4) Velocity Dissipation. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from disturbed areas and from any storm water retention or detention facilities to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

(5) Retention and Detention of Storm Water Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a two-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.

(6) Temporary Stabilization of Disturbed Areas. Stabilization measures shall be initiated immediately in portions of the site where development activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In arid, semiarid, and drought-stricken areas where initiating perennial vegetative stabilization measures is not possible within 14 days after construction activity has temporarily or permanently ceased, final vegetative stabilization measures shall be initiated as soon as possible. Until full vegetative stabilization is achieved, interim measures such as blankets and tackifiers shall be employed.

b. Requirements for Inspection of Clearing, Grading, and Excavation Activities.

(1) Inspection Frequency. Inspections shall be conducted at least once every seven calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

(2) Qualified Personnel for Inspections. Inspections shall be conducted by qualified personnel. "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment control who possesses the skills to assess conditions at the construction site that could impact storm water quality and the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the clearing, grading, and excavation activities.

(3) Location of Inspections. Inspections shall include all areas of the site disturbed by clearing, grading, and excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures identified in the SWPPP shall be observed to ensure proper operation. Discharge locations shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to state waters, where accessible. Where discharge locations are inaccessible, nearby downstream locations shall be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.

(4) Inspection Reports. For each inspection required above, an inspection report shall be completed. At a minimum, the inspection report shall include:

(a) The inspection date;

(b) Names, titles, and qualifications of personnel making the inspection;

(c) Weather information for the period since the last inspection (or note if it is the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;

(d) Weather information and a description of any discharges occurring at the time of the inspection;

(e) Location(s) of discharges of sediment or other pollutants from the site;

(f) Location(s) of BMPs that need to be maintained;

(g) Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;

(h) Location(s) where additional BMPs are needed that did not exist at the time of inspection; and

(i) Corrective action(s) required, including any changes to the SWPPP necessary and implementation dates.

A record of each inspection and of any actions taken in accordance with this section shall be retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports shall identify any incidents of noncompliance with the permit conditions. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the clearing, grading, and excavation activities are in compliance with the SWPPP and this permit. The report shall be signed in accordance with Part II K of the permit.

c. Maintenance of Controls for Clearing, Grading, and Excavation Activities.

(1) Maintenance of BMPs. All erosion and sediment control measures and other protective measures identified in the SWPPP shall be maintained in effective operating condition. If site inspections required by subdivision 2 of this subsection identify BMPs that are not operating effectively, maintenance shall be performed as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of storm water controls.

(2) Modification of BMPs. Existing BMPs need to be modified or, if additional BMPs are necessary for any reason, implementation shall be completed before the next storm event whenever practicable. If implementation before the next storm event is

impracticable, the situation shall be documented in the SWPPP and alternative BMPs shall be implemented as soon as possible.

(3) Maintenance of Sediment Traps and Ponds. Sediment from sediment traps or sedimentation ponds shall be removed when design capacity has been reduced by 50%.

d. Requirements for Cessation of Clearing, Grading, and Excavation Activities.

(1) Inspections and Maintenance. Inspections and maintenance of BMPs associated with clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of a mining operation shall continue until final stabilization has been achieved on all portions of the disturbed area.

(2) Final Stabilization. Stabilization measures shall be initiated immediately in portions of the site where development activities have permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas where initiating perennial vegetative stabilization measures is not possible within 14 days after construction activity has temporarily or permanently ceased, final vegetative stabilization measures shall be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as blankets and tackifiers, shall be used.

(5) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. SWPPP Requirements For Active, Inactive and Temporarily Inactive Metal Mining Facilities, and Sites Undergoing Reclamation.

(1) Site Description.

(a) Activities at the Facility. A description of the mining and associated activities taking place at the site that can potentially affect storm water discharges covered by this permit. The description shall include a general description of the location of the site relative to major transportation routes and communities.

(b) Site Map. The site map shall identify the locations of the following, as appropriate: mining/milling site boundaries; access and haul roads; an outline of the drainage areas of each storm water outfall within the facility, and an indication of the types of discharges from the drainage areas; equipment storage, fueling and maintenance areas; materials handling areas; outdoor manufacturing, storage or material disposal areas; storage areas for chemicals and explosives; areas used for storage of overburden, materials, soils or wastes; location of mine drainage (where water leaves mine) or any other process water; tailings piles/ponds, both proposed and existing; heap leach pads; points of discharge from the property for mine drainage/process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

(2) Summary of Potential Pollutant Sources. For each area of the mine/mill site where storm water discharges associated with industrial activities occur, the plan shall identify the types of pollutants likely to be present in significant amounts (e.g., heavy metals, sediment). The following factors shall be considered: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced or discharged; the likelihood, if any, of contact with storm water; vegetation of site; history of significant leaks/spills of toxic or hazardous pollutants. A summary of any existing ore or waste rock/overburden characterization data and test results for potential generation of acid rock shall also be included. If the ore or waste rock/overburden characterization data are updated due to a change in the ore type being mined, the SWPPP shall be updated with the new data.

(3) Storm Water Controls.

(a) Routine Facility Inspections. Sites shall be inspected at least monthly unless adverse weather conditions make the site inaccessible.

(b) Employee Training. Employee training shall be conducted at least annually at active mining and temporarily inactive sites. All employee training shall be documented in the SWPPP.

(c) Structural BMPs. Each of the following BMPs shall be considered in the SWPPP. The potential pollutants identified in subpart 1 b above (Summary of Potential Pollutant Sources) shall determine the priority and appropriateness of the BMPs selected. If BMPs are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), descriptions of them shall be included in the SWPPP.

(i) Sediment and Erosion Control. The measures to consider include: diversion of flow away from areas susceptible to erosion (measures such as interceptor dikes and swales, diversion dikes, curbs and berms); stabilization methods to prevent or minimize erosion (such as temporary or permanent seeding; vegetative buffer strips; protection of trees; topsoiling; soil conditioning; contouring; mulching; geotextiles (matting, netting, or blankets); riprap; gabions; and retaining walls); and structural methods for controlling sediment (such as check dams; rock outlet protection; level spreaders; gradient terraces; straw bale barriers; silt fences; gravel or stone filter berms; brush barriers; sediment traps; grass swales; pipe slope drains; earth dikes; other controls such as entrance stabilization, waterway crossings or wind breaks; or other equivalent measures).

(ii) Storm Water Diversion. A description of how and where storm water will be diverted away from potential pollutant sources to prevent storm water contamination. BMP options may include the following: interceptor dikes and swales; diversion dikes, curbs and berms; pipe slope drains; subsurface drains; drainage/storm water conveyance systems (channels or gutters, open top box culverts and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts) or equivalent measures.

(iii) Management of Runoff. The potential pollutant sources given in subpart 1 b above (Summary of Potential Pollutant Sources) must be considered when determining reasonable and appropriate measures for managing runoff.

(iv) Capping. When capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source shall be identified.

(v) Treatment. If treatment of a storm water discharge is necessary to protect water quality, include a description of the type and location of storm water treatment that will be used. Storm water treatments include the following: chemical or physical systems; oil/water separators; artificial wetlands; etc. The permittee is encouraged to use both passive and/or active treatment of storm water runoff. Treated runoff may be discharged as a storm water source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

b. Termination of Permit Coverage.

(1) Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit, provided that the covered storm water discharges do not have the potential to cause or contribute to violations of state water quality standards. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in subpart 2 b below.

(2) Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation

requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if storm water runoff that comes into contact with:

(a) Raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards;

(b) Soil-disturbing activities related to mining at the sites or portion of the site have been completed;

(c) The site or portion of the site has been stabilized to minimize soil erosion; and

(d) As appropriate depending on location, size, and the potential to contribute pollutants to storm water discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Sector H - Coal Mines and Coal Mining-Related Facilities.

Discharges Covered Under This Section. Coal mining related discharges are normally permitted by the Department of Mines, Minerals and Energy, Division of Mined Land Reclamation. DMME issues NPDES permits under the authority of Code of Virginia § 45.1-254. Mining related discharges of storm water that are not permitted by DMME should be covered by the industrial storm water general permit, 9 VAC 25-151. In rare instances, individual permits might be written for these discharges by DEQ. The requirements listed under this section apply to storm water discharges associated with industrial activity from coal mining-related areas (SIC Major Group 12) if (i) they are not subject to effluent limitations guidelines under 40 CFR Part 434 or (ii) they are not subject to the standards of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) (30 USC § 1201 et seq.) and the Virginia Department of Mines, Minerals and Energy's individual permit requirements. The requirements of this section shall apply to storm water discharges from coal mining-related activities exempt from SMCRA, including the public financed exemption, the 16-2/3% exemption, the private use exemption, the under 250 tons exemption, the non-incidental tipple exemption, and the exemption for coal piles and preparation plants associated with the end user.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Coal Mines and Related Areas (SIC 1221-1241) ..... Al, Fe, TSS
(**should be permitted by DMME or under general VPDES**)

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: discharges from pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not result from precipitation events; and discharges from floor drains in maintenance buildings and other similar drains in mining and preparation plant areas.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff:

(a) Drainage direction and discharge points from all applicable mining-related areas;

(b) Acidic spoil, refuse or unreclaimed disturbed areas; and

(c) Liquid storage tanks containing pollutants such as caustics, hydraulic fluids and lubricants.

(2) Summary of Potential Pollutant Sources. A description of the potential pollutant sources from the following activities: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid or other potential harmful liquids; and loading or temporary storage of acidic refuse/spoil.

b. Storm Water Controls.

(1) Good Housekeeping. As part of the facility's good housekeeping program, the permittee shall consider the following: using sweepers, covered storage, and watering of haul roads to minimize dust generation; and conservation of vegetation (where possible) to minimize erosion.

(2) Preventive Maintenance. The permittee shall also perform inspections of storage tanks and pressure lines for fuels, lubricants, hydraulic fluid or slurry to prevent leaks due to deterioration or faulty connections; or other equivalent measures.

c. Comprehensive Site Compliance Evaluation.

The evaluation program shall also include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected: haul and access roads; railroad spurs, sliding and internal hauling lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings/structures; and inactive mines and related areas.

Sector I - Oil and Gas Extraction and Refining.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from oil and gas extraction and refining facilities listed under SIC Major Group 13 which have had a discharge of a reportable quantity (RQ) of oil or a hazardous substance for which notification is required under 40 CFR 110.6, 40 CFR 117.21 or 40 CFR 302.6. These include oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden raw material, intermediate products, finished products, by-products or waste products located on the site of such operations. Industries in SIC Major Group 13 include the extraction and production of crude oil, natural gas, oil sands and shale; the production of hydrocarbon liquids and natural gas from coal; and associated oilfield service, supply and repair industries. This section also covers petroleum refineries listed under SIC Code 2911.

Contaminated storm water discharges from petroleum refining or drilling operations may be subject to nationally established BAT or BPT guidelines found at 40 CFR Part 419 and 40 CFR Part 435 (most contaminated discharges from petroleum refining and drilling facilities are subject to these effluent guidelines.)

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: discharges of vehicle and equipment washwater, including tank cleaning operations.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: reportable quantity (RQ) releases; locations used for the treatment, storage or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirement of "No Discharge" in accordance with 40 CFR 435.32 and the structural controls to achieve compliance with the "No Discharge" requirement.

(2) Summary of Potential Pollutant Sources.

(a) The plan shall also include a description of the potential pollutant sources from the following activities: chemical, cement, mud or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities.

(b) The plan shall include information about the RQ release which triggered the permit application requirements, including: the nature of the release (e.g., spill of oil from a drum storage area); the amount of oil or hazardous substance released; amount of substance recovered; date of the release; cause of the release (e.g., poor handling techniques and lack of containment in the area); areas affected by the release, including land and waters; procedure to cleanup release; actions or procedures implemented to prevent or improve response to a release; and remaining potential contamination of storm water from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

b. Storm Water Controls.

(1) Routine Facility Inspections. All equipment and areas addressed in the SWPPP shall be inspected at least monthly. Equipment and vehicles which store, mix (including all on-site and off-site mixing tanks) or transport chemicals/hazardous materials (including those transporting supplies to oil field activities) will be inspected on a monthly basis. For temporarily or permanently inactive oil and gas extraction facilities within Major SIC Group 13, which are remotely located and unstaffed, the inspections shall be performed at least annually.

(2) Sediment and Erosion Control. The erosion control requirement for well drillings and sand/shale mining areas are as follows:

(a) Site Description. Each plan shall provide a description of the following:

(i) A description of the nature of the exploration activity;

(ii) Estimates of the total area of the site and the area of the site that is expected to be disturbed due to the exploration activity;

(iii) An estimate of the runoff coefficient of the site;

(iv) A site map indicating drainage patterns and approximate slopes; and

(v) The name of all receiving water(s).

(b) Vegetative Controls. The SWPPP shall include a description of vegetative practices designed to preserve existing vegetation where attainable and revegetate open areas as soon as practicable after grade drilling. Such practices may include: temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, tree protection practices. The permittee shall initiate appropriate vegetative practices on all disturbed areas within 14 calendar days of the last activity at that area.

(c) Off-site vehicle tracking of sediments shall be minimized.

(d) Procedures in the plan shall provide that all erosion controls on the site are inspected at least once every seven calendar days.

(3) Good Housekeeping Measures.

(a) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting or having completed maintenance shall be confined to designated areas (delineated on the site map). The plan shall describe measures that prevent or minimize

contamination of the storm water runoff from these areas (e.g., drip pans under equipment, indoor storage, use of berms and dikes, or other equivalent measures.

(b) Materials and Chemical Storage Areas. Storage units of all chemicals and materials shall be maintained in good condition so as to prevent contamination of storm water. Hazardous materials shall be plainly labeled.

(c) Chemical Mixing Areas. The plan shall describe measures that prevent or minimize contamination of the storm water runoff from chemical mixing areas.

(4) Contact with waste water pollutants at exploration and production facilities. The permittee shall take all measures necessary to prevent the discharge of storm water that has come into contact with waste water pollutants from any sources associated with production, field exploration, drilling, well completion, or well treatment (i.e., produced water, drilling muds, drill cuttings, and produced sand).

Sector J - Mineral Mining and Dressing.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from active and inactive mineral mining and dressing facilities listed under SIC Major Group 14. SIC Major Group 14 includes establishments primarily engaged in exploring for minerals (e.g., stone, sand, clay, chemical and fertilizer minerals, non-metallic minerals, etc.), developing mines and the mining of minerals; and mineral dressing, and non-metallic mineral services.

The following definitions may be useful to the permit writer:

"Mining Operation" - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

"Exploration Phase" - entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of "mining operations".

"Construction Phase" - includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of "mining operations".

"Active Phase" - activities including the extraction, removal or recovery of minerals. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a). The active phase is considered part of "mining operations".

"Reclamation phase" - activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations".

Note: The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

"Active Mineral Mining Facility" - a place where work or other activity related to the extraction, removal or recovery of minerals is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a).

"Inactive Mineral Mining Facility" - a site or portion of a site where mineral mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive mineral mining facility has an identifiable owner/operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, and sites where minimal activities are undertaken for the sole purpose of maintaining a

mining claim are not considered either active or inactive mining facilities and do not require an VPDES industrial storm water permit.

"Temporarily Inactive Mineral Mining Facility" - a site or portion of a site where mineral mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

"Final Stabilization" - a site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

"Uncontaminated" - Free from the presence of pollutants attributable to industrial activity.

(1) Limitations on Coverage. Most storm water discharges subject to an existing effluent limitation guideline at 40 CFR part 436 are not authorized by this section, and if present, may require additional controls and/or limitations. The exceptions to this limitation (and which are therefore covered by this section) are mine dewatering discharges composed entirely of storm water or ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities.

(2) Effluent Limitations.

(a) Mine Dewatering Discharges at Crushed Stone Mining Facilities (SIC 1422-1429.
pH .....6.0 - 9.0 s.u.

(b) Mine Dewatering Discharges at Construction Sand and Gravel Mining Facilities (SIC 1442).
pH .....6.0 - 9.0 s.u.

(c) Mine Dewatering Discharges at Industrial Sand Mining Facilities (SIC 1446).
Total Suspended Solids (TSS) .....45 mg/L daily maximum, 25 mg/L 30-day average
pH .....6.0 - 9.0 s.u.

(3) Analytical (Benchmark) Monitoring.

Sand and Gravel Mining (SIC 1442, 1446) ..... NO2+NO3, TSS
Dimension and Crushed Stone and Non-metallic Minerals ..... TSS
(except fuels) (SIC 1411, 1422-1429, 1481, 1499)

(4) Permit Special Condition - Clearing, Grading, and Excavation Activities. The following special condition should be included in the permit for this industrial sector:

[*Insert SC #]* Clearing, Grading, and Excavation Activities. Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

a. Management Practices for Clearing, Grading, and Excavation Activities.

(1) Selecting and Installing Control Measures. For all areas affected by clearing, grading, and excavation activities, the permittee shall select, design, install, and implement control measures that meet applicable effluent limits.

(2) Good Housekeeping. Litter, debris, and chemicals must be prevented from becoming a pollutant source in storm water discharges.

(3) Retention and Detention of Storm Water Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.

b. Inspection of Clearing, Grading, and Excavation Activities.

(1) Inspection Frequency. Inspections must be conducted either at least once every 7 calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least

once every month if the entire site is temporarily stabilized pursuant to subsection c (2) below, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

(2) Location of Inspections. Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures implemented must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to surface waters, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

(3) Inspection Reports. For each inspection required above, an inspection report shall be completed. At a minimum, the inspection report shall include:

(a) The inspection date;

(b) Names, titles, and qualifications of personnel making the inspection;

(c) Weather information for the period since the last inspection (or note if it is the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;

(d) Weather information and a description of any discharges occurring at the time of the inspection;

(e) Location(s) of discharges of sediment or other pollutants from the site;

(f) Location(s) of BMPs that need to be maintained;

(g) Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;

(h) Location(s) where additional BMPs are needed that did not exist at the time of inspection; and

(i) Corrective action(s) required, including any changes to the SWPPP necessary and implementation dates.

A record of each inspection and of any actions taken in accordance with this section shall be retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports shall identify any incidents of noncompliance with the permit conditions. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the clearing, grading, and excavation activities are in compliance with the SWPPP and this permit. The report shall be signed in accordance with Part II K of the permit.

c. <u>Requirements for Cessation of Clearing, Grading, and Excavation Activities.</u>

(1) Inspections and Maintenance. Inspections and maintenance of control measures, including any BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.

(2) Temporary Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing

conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

(3) Final Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where mining, exploration, and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers must be used.

(5) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

The requirements in subsections a and b below are applicable for: sites undergoing exploration and construction; active mineral mining facilities; temporarily inactive mineral mining facilities; and sites undergoing reclamation. The requirements are not applicable to inactive mineral mining facilities.

a. Site Description.

(1) Activities at the Facility. The permittee shall document in the SWPPP the mining and associated activities that can potentially affect the storm water discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities**.**

(2). Site Map. The permittee shall document in the SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each storm water outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all discharges; outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

b. Summary of Potential Pollution Sources. For each area of the mine or mill site where storm water discharges associated with industrial activities occur, the permittee shall document in the SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. The following factors should be considered: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with storm water; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also, the permittee shall include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage.

c. Storm Water Controls.

(1) Employee Training. The permittee shall conduct employee training at least annually at active and temporarily inactive sites. All employee training shall be documented in the SWPPP.

(2) Control Measures. The permittee shall implement the following control measures where necessary at the site to minimize pollutant discharges:

(a) Storm Water Diversions: The permittee shall consider diverting storm water away from potential pollutant sources. Some control measure options are as follows: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

(b) Capping: When capping is necessary to minimize pollutant discharges in storm water, the permittee shall identify the source being capped and the material used to construct the cap.

(c) Treatment: If treatment of storm water (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, the permittee shall describe the type and location of treatment used. Passive and/or active treatment of storm water runoff is encouraged.

Any of the control measures described above that are used by the permittee shall be documented in the SWPPP. If control measures are implemented or planned but are not listed above (e.g., substituting a less toxic chemical for a more toxic one), the permittee shall include descriptions of them in the SWPPP.

d. Additional Inspection Requirements.

Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, the permittee shall inspect sites at least quarterly, unless adverse weather conditions make the site inaccessible.

e. Termination of Permit Coverage.

(1) Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in subsection b below.

(2) Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if:

(a) Storm water runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards;

(b) Soil disturbing activities related to mining at the sites or portion of the site have been completed;

(c) The site or portion of the site has been stabilized to minimize soil erosion; and

(d) As appropriate depending on location, size, and the potential to contribute pollutants to storm water discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Sector K - Hazardous Waste Treatment, Storage or Disposal Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes (SIC 4953), including those that are operating under interim status or a permit under subtitle C of RCRA. Disposal facilities that have been properly closed and capped, and have no significant materials exposed to storm water, are considered inactive and do not require permits.

The following definitions may be useful to the permit writer:

"Contaminated storm water" means storm water that comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in this section. Some specific areas of a landfill that may produce contaminated storm water include, but are not limited to: the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment or machinery that has been in direct contact with the waste; and waste dumping areas.

"Drained free liquids" means aqueous wastes drained from waste containers (e.g., drums, etc.) prior to landfilling.

"Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

"Landfill" means an area of land or an excavation in which wastes are placed for permanent disposal, that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, a salt bed formation, an underground mine or a cave as these terms are defined in 40 CFR 257.2, 40 CFR 258.2 and 40 CFR 260.10.

"Landfill wastewater" as defined in 40 CFR Part 445 (Landfills Point Source Category) means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated ground water, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

"Leachate" means liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

"Non-contaminated storm water" means storm water that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined above. Non-contaminated storm water includes storm water that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

"Pile" means any non-containerized accumulation of solid, non-flowing hazardous waste that is used for treatment or storage and that is not a containment building.

"Surface impoundment" means a facility or part of a facility that is a natural topographic depression, man-made excavation or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds and lagoons.

(1) Effluent Limitations. Contaminated storm water discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the facilities described in "a" through "d" below:

a. Landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operation directly associated with the landfill;

b. Landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes provided the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

c. Landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437 so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

d. Landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

BOD_5	220 mg/L, daily max, 56 mg/L, mon avg
Total Suspended Solids	88 mg/L, daily max, 27 mg/L, mon avg
Ammonia	10 mg/L, daily max, 4.9 mg/L, mon avg
Alpha Terpineol	0.042 mg/L, daily max, 0.019 mg/L, mon avg
Aniline	0.024 mg/L, daily max, 0.015 mg/L, mon avg
Benzoic Acid	0.119 mg/L, daily max, 0.073 mg/L, mon avg
Naphthalene	0.059 mg/L, daily max, 0.022 mg/L, mon avg
p-Cresol	0.024 mg/L, daily max, 0.015 mg/L, mon avg
Phenol	0.048 mg/L, daily max, 0.029 mg/L, mon avg
Pyridine	0.072 mg/L, daily max, 0.025 mg/L, mon avg
Arsenic (Total)	1.1 mg/L, daily max, 0.54 mg/L, mon avg
Chromium (Total)	1.1 mg/L, daily max, 0.46 mg/L, mon avg
Zinc (Total)	0.535 mg/L, daily max, 0.296 mg/L, mon avg
pH	6.0 – 9.0 S.U.

(2) Analytical (Benchmark) Monitoring.

Hazardous Waste Treatment Storage or Disposal Facilities (SIC 4953 or RCRA subtitle C)	TKN, TOC, TSS, As, Cd, CN, Pb, Hg, Se, Ag

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

None

<u>Sector L - Landfills, Land Application Sites and Open Dumps</u>.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from waste disposal at landfills, land application sites, and open dumps that receive or have received industrial wastes, including sites subject to regulation under Subtitle D of RCRA. Open dumps are solid waste disposal units that are not in compliance with state/federal criteria established under RCRA Subtitle D. Landfills, land application sites, and open dumps that have storm water discharges from other types of industrial activities such as vehicle maintenance, truck washing, and/or recycling may be subject to additional requirements specified elsewhere in this permit.

The following definitions may be useful to the permit writer:

"Contaminated storm water" means storm water that comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined below. Some specific areas of a landfill that may produce contaminated storm water include, but are not limited to: the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment or machinery that has been in direct contact with the waste; and waste dumping areas.

"Drained free liquids" means aqueous wastes drained from waste containers (e.g., drums, etc.) prior to landfilling.

"Landfill wastewater" as defined in 40 CFR Part 445 (Landfills Point Source Category) means all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated storm water, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated storm water and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

"Leachate" means liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

"Non-contaminated storm water" means storm water that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined above. Non-contaminated storm water includes storm water that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

(1) Effluent Limitations. Contaminated storm water discharges from municipal solid waste landfills (MSWLFs) that have not been closed in accordance with 40 CFR 258.60, and contaminated storm water discharges from those landfills that are subject to the provisions of 40 CFR Part 257 (these include CDD landfills (also known as C&D landfills), and industrial landfills) except for discharges from any of the facilities described in "a" through "d" below:

a. Landfills operated in conjunction with other industrial or commercial operations when the landfill only receives wastes generated by the industrial or commercial operation directly associated with the landfill;

b. Landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes provided the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

c. Landfills operated in conjunction with centralized waste treatment (CWT) facilities subject to 40 CFR Part 437 so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

d. Landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

BOD_5 ..... 140 mg/L, daily max, 37 mg/L, mon avg
Total Suspended Solids (TSS) ..... 88 mg/L, daily max, 27 mg/L, mon avg
Ammonia ..... 10 mg/L, daily max, 4.9 mg/L, mon avg
Alpha Terpineol ..... 0.033 mg/L, daily max, 0.016 mg/L, mon avg

Benzoic Acid ..... 0.12 mg/L, daily max, 0.071 mg/L, mon avg
p-Cresol ..... 0.025 mg/L, daily max, 0.014 mg/L, mon avg
Phenol ..... 0.026 mg/L, daily max, 0.015 mg/L, mon avg
Zinc (Total) ..... 0.20 mg/L, daily max, 0.11 mg/L, mon avg
pH ..... 6.0 – 9.0 S.U.

(2) Analytical (Benchmark) Monitoring.
Landfills, Land Application Sites and Open Dumps (SIC 4953 or RCRA subtitle D) ..... TSS
Landfills, Land Application Sites and Open Dumps, <u>except</u> MSWLF areas closed in accordance with the requirements of the Virginia Solid Waste Management Regulation, 9 VAC 20-80 ..... Fe

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. <u>Site Description.</u>

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: active and closed landfill cells or trenches; active and closed land application areas; locations where open dumping is occurring or has occurred; locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff; and leachate collection and handling systems.

(2) Summary of Potential Pollutant Sources. The SWPPP shall also include a description of potential pollutant sources associated with any of the following: fertilizer, herbicide and pesticide application; earth/soil moving; waste hauling and loading/unloading; outdoor storage of significant materials including daily, interim and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

b. <u>Storm Water Controls.</u>

(1) Preventive Maintenance Program. As part of the preventive maintenance program, the permittee shall maintain: all containers used for outdoor chemical/significant materials storage to prevent leaking; all elements of leachate collection and treatment systems to prevent commingling of leachate with storm water; and the integrity and effectiveness of any intermediate or final cover (including making repairs to the cover as necessary to minimize the effects of settlement, sinking, and erosion).

(2) Good Housekeeping Measures. As part of the good housekeeping program, the permittee shall consider providing protected storage areas for pesticides, herbicides, fertilizer and other significant materials.

(3) Routine Facility Inspections.

(a) Inspections of Active Sites. Operating landfills, open dumps, and land application sites shall be inspected at least once every seven days. Qualified personnel shall inspect areas of landfills that have not yet been finally stabilized, active land application areas, areas used for storage of materials/wastes that are exposed to precipitation, stabilization and structural control measures, leachate collection and treatment systems, and locations where equipment and waste trucks enter and exit the site. Erosion and sediment control measures shall be observed to ensure they are operating correctly. For

stabilized sites and areas where land application has been completed, or where the climate is seasonally arid (annual rainfall averages from 0 to 10 inches) or semi-arid (annual rainfall averages from 10 to 20 inches), inspections shall be conducted at least once every month.

(b) Inspections of Inactive Sites. Inactive landfills, open dumps, and land application sites shall be inspected at least quarterly. Qualified personnel shall inspect landfill (or open dump) stabilization and structural erosion control measures and leachate collection and treatment systems, and all closed land application areas.

(4) Recordkeeping and Internal Reporting Procedures. Landfill and open dump owners shall provide for a tracking system for the types of wastes disposed of in each cell or trench of a landfill or open dump. Land application site owners shall track the types and quantities of wastes applied in specific areas.

(5) Sediment and Erosion Control Plan. Landfill and open dump owners shall provide for temporary stabilization of materials stockpiled for daily, intermediate, and final cover. Stabilization practices to consider include, but are not limited to, temporary seeding, mulching, and placing geotextiles on the inactive portions of the stockpiles. Landfill and open dump owners shall provide for temporary stabilization of inactive areas of the landfill or open dump which have an intermediate cover but no final cover. Landfill and open dump owners shall provide for temporary stabilization of any landfill or open dumping areas which have received a final cover until vegetation has established itself. Land application site owners shall also stabilize areas where waste application has been completed until vegetation has been established.

(6) Comprehensive Site Compliance Evaluation. Areas contributing to a storm water discharge associated with industrial activities at landfills, open dumps and land application sites shall be evaluated for evidence of, or the potential for, pollutants entering the drainage system.

Sector M - Automobile Salvage Yards.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities engaged in dismantling or wrecking used motor vehicles for parts recycling/resale and for scrap (SIC Code 5015).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Automobile Salvage Yards (SIC 5015) ..... TSS, Al, Fe, Pb

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The map shall include the location of each monitoring point, and an estimation (in acres) of the total area used for industrial activity including, but not limited to, dismantling, storage, and maintenance of used motor vehicle parts. The site map shall also identify where any of the following may be exposed to precipitation/surface runoff: vehicle storage areas; dismantling areas; parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers); and liquid storage tanks and drums for fuel and other fluids.

(2) Summary of Potential Pollutant Sources. The permittee shall assess the potential for the following activities to contribute pollutants to storm water discharges: vehicle storage areas; dismantling areas; parts storage areas (e.g., engine blocks, tires, hub caps, batteries, and hoods); fueling stations.

b. Storm Water Controls.

(1) Spill and Leak Prevention Procedures. All vehicles that are intended to be dismantled must be properly drained of all fluids prior to being dismantled or crushed, or other equivalent means shall be taken to prevent leaks or spills of fluids.

(2) Inspections. Upon arrival at the site, or as soon as thereafter feasible, vehicles shall be inspected for leaks. Any equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches shall be inspected at least quarterly (four times per year) for signs of leaks. All vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze, **shall** be inspected at least quarterly for leaks.

(3) Employee Training. Employee training shall, at a minimum, address the following areas when applicable to a facility: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

(4) Management of Runoff. The plan shall consider management practices, such as berms or drainage ditches on the property line, to help prevent run-on from neighboring properties. Berms shall be considered for uncovered outdoor storage of oily parts, engine blocks, and aboveground liquid storage. The permittee shall consider the installation of detention ponds, filtering devices, and oil/water separators.

Sector N - Scrap Recycling and Waste Recycling Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities that are engaged in the processing, reclaiming and wholesale distribution of scrap and waste materials such as ferrous and nonferrous metals, paper, plastic, cardboard, glass, animal hides (these types of activities are typically identified as SIC Code 5093), and facilities that are engaged in reclaiming and recycling liquid wastes such as used oil, antifreeze, mineral spirits, and industrial solvents (also identified as SIC Code 5093). Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (also identified as SIC Code 5093) (e.g., common consumer products including paper, newspaper, glass, cardboard, plastic containers, aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF). Separate permit requirements have also been established for facilities that are engaged in dismantling ships, marine salvaging, and marine wrecking - ships for scrap (SIC 4499, limited to those listed; for others in SIC 4499 not listed above, see Sector Q (Water Transportation)).

(1) Effluent Limitations. .....NONE

(2) Analytical (Benchmark) Monitoring.

Scrap Recycling and Waste Recycling Facilities (nonsource-separated facilities only) (SIC 5093)	TSS, Al, Cu, Cd, Cr, Fe, Pb, Zn
Facilities Engaged in Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap (SIC 4499, limited to list)	TSS, Al, Cu, Cd, Cr, Fe, Pb, Zn

(3) Non-Storm Water Discharges. Discharges from turnings containment areas are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, all facilities are required to comply with the general SWPPP requirement in subdivision 1 of this subsection. Subdivisions 2 through 5 of this subsection have SWPPP requirements for specific types of recycling facilities. The permittee shall implement and describe in the SWPPP a program to address those items that apply. Included are lists of BMP options that, along with any functional equivalents, shall be considered for implementation. Selection or de-selection of a particular BMP or approach is up to the best professional judgment of the permittee, as long as the objective of the requirement is met.

a. Site Description.

Site Map. The site map shall identify the locations where any of the following activities or sources may be exposed to precipitation/surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment, and containment areas for turnings exposed to cutting fluids.

b. Scrap Recycling and Waste Recycling Facilities (Nonsource-Separated, Non-liquid Recyclable Materials).

The following SWPPP special conditions have been established for facilities that receive, process and do wholesale distribution of non-liquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard and paper). These facilities may receive both non-recyclable and recyclable materials. This section is not intended for those facilities that only accept recyclable materials primarily from non-industrial and residential sources.

(1) Inbound Recyclable and Waste Material Control Program. The plan shall include a recyclable and waste material inspection program to minimize the likelihood of receiving materials that may be significant pollutant sources to storm water discharges. BMP options:

(a) Provide information/education flyers, brochures and pamphlets to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids prior to delivery to the facility (e.g., from vehicles and equipment engines, radiators, and transmissions, oil-filled transformers, and individual containers or drums), and on removal of mercury switches prior to delivery to the facility;

(b) Establish procedures to minimize the potential of any residual fluids from coming in contact with precipitation/runoff.

(c) Establish procedures for accepting scrap lead-acid batteries. Additional requirements for the handling, storage and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in subpart 2 f below;

(d) Provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials;

(e) Establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and disposed or recycled in accordance with all requirements under the Resource Recovery and Conservation Act (RCRA), and other state or local requirements.

(2) Scrap and Waste Material Stockpiles/Storage (Outdoor). The plan shall describe measures and controls to minimize contact of storm water runoff with stockpiled materials, processed materials and non-recyclable wastes. BMP options:

(a) Permanent or semi-permanent covers;

(b) The use of sediment traps, vegetated swales and strips, catch basin filters and sand filters to facilitate settling or filtering of pollutants;

(c) Diversion of runoff away from storage areas via dikes, berms, containment trenches, culverts and surface grading;

(d) Silt fencing;

(e) Oil/water separators, sumps and dry adsorbents for areas where potential sources of residual fluids are stockpiled (e.g., automotive engine storage areas).

(3) Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage). The plan shall implement measures necessary to minimize contact of surface runoff with residual cutting fluids. BMP options (use singularly or in combination):

(a) Storage of all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover. Storm water discharges from these areas are permitted provided the runoff is first treated by an oil/water separator or its equivalent. Procedures to collect, handle, and dispose or recycle residual fluids that may be present shall be identified in the plan;

(b) Establish dedicated containment areas for all turnings that have been exposed to cutting fluids. Storm water runoff from these areas can be discharged provided:

(i) The containment areas are constructed of either concrete, asphalt or other equivalent type of impermeable material;

(ii) There is a barrier around the perimeter of the containment areas to prevent contact with storm water run-on (e.g., berms, curbing, elevated pads, etc.);

(iii) There is a drainage collection system for runoff generated from containment areas;

(~~d~~iv) There is a schedule to maintain the oil/water separator (or its equivalent); and

(v) Procedures are identified for the proper disposal or recycling of collected residual fluids.

(4) Scrap and Waste Material Stockpiles/Storage (Covered or Indoor Storage). The plan shall address measures and controls to minimize contact of residual liquids and particulate matter from materials stored indoors or under cover from coming in contact with surface runoff. BMP options:

(a) Good housekeeping measures, including the use of dry absorbent or wet vacuum clean up methods, to contain or dispose/recycle residual liquids originating from recyclable containers, or mercury spill kits from storage of mercury switches;

(b) Prohibiting the practice of allowing washwater from tipping floors or other processing areas from discharging to the storm sewer system;

(c) Disconnecting or sealing off all floor drains connected to the storm sewer system.

(5) Scrap and Recyclable Waste Processing Areas. The plan shall include measures and controls to minimize surface runoff from coming in contact with scrap processing equipment. In the case of processing equipment that generate visible amounts of particulate residue (e.g., shredding facilities), the plan shall describe measures to minimize the contact of residual fluids and accumulated particulate matter with runoff (i.e., through good housekeeping, preventive maintenance, etc.). BMP options:

(a) A schedule of regular inspections of equipment for leaks, spills, malfunctioning, worn or corroded parts or equipment;

(b) A preventive maintenance program for processing equipment;

(c) Removal of mercury switches from the hood and trunk lighting units, and removal of anti-lock brake system units containing mercury switches;

(d) Use of dry-absorbents or other cleanup practices to collect and to dispose/recycle spilled/leaking fluids, or use of mercury spill kits for spills from storage of mercury switches;

(e) Installation of low-level alarms or other equivalent protection devices on unattended hydraulic reservoirs over 150 gallons in capacity. Alternatively, provide secondary containment with sufficient volume to contain the entire volume of the reservoir;

(f) Containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of storm water runoff with outdoor processing equipment or stored materials;

(g) Oil/water separators or sumps;

(h) Permanent or semi-permanent covers in processing areas where there are residual fluids and grease;

(i) Retention and detention basins or ponds, sediment traps, vegetated swales or strips, to facilitate pollutant settling/ filtration;

(j) Catch basin filters or sand filters.

(6) Scrap Lead-Acid Battery Program. The plan shall address measures and controls for the proper handling, storage and disposal of scrap lead-acid batteries. BMP options:

(a) Segregate scrap lead-acid batteries from other scrap materials;

(b) A description of procedures and/or measures for the proper handling, storage and disposal of cracked or broken batteries;

(c) A description of measures to collect and dispose of leaking lead-acid battery fluid;

(d) A description of measures to minimize and, whenever possible, eliminate exposure of scrap lead-acid batteries to precipitation or runoff;

(e) A description of employee training for the management of scrap batteries.

(7) Spill Prevention and Response Procedures. The SWPPP shall include measures to minimize storm water contamination at loading/unloading areas, and from equipment or container failures. BMP options:

(a) Description of spill prevention and response measures to address areas that are potential sources of fluid leaks or spills;

(b) Immediate containment and clean up of spills/leaks. If malfunctioning equipment is responsible for the spill/leak, repairs shall also be conducted as soon as possible;

(c) Cleanup procedures shall be identified in the plan, including the use of dry absorbents. Where dry absorbent cleanup methods are used, an adequate supply of dry absorbent material shall be maintained on-site. Used absorbent material shall be disposed of properly;

(d) Drums containing liquids, especially oil and lubricants, shall be stored: indoors; in a bermed area; in overpack containers or spill pallets; or in similar containment devices;

(e) Overfill prevention devices shall be installed on all fuel pumps or tanks;

(f) Drip pans or equivalent measures shall be placed under any leaking piece of stationary equipment until the leak is repaired. The drip pans shall be inspected for leaks and potential overflow and all liquids properly disposed of in accordance with RCRA requirements;

(g) An alarm and/or pump shut off system shall be installed on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in order to prevent draining the tank contents in the event of a line break. Alternatively, the equipment may have a secondary containment system capable of containing the contents of the hydraulic reservoir plus adequate freeboard for precipitation. A mercury spill kit shall be used for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

(8) Inspection Program. All designated areas of the facility and equipment identified in the plan shall be inspected at least monthly.

(9) Supplier Notification Program. The plan shall include a program to notify major suppliers which scrap materials will not be accepted at the facility or are only accepted under certain conditions.

c. Waste Recycling Facilities (Liquid Recyclable Materials).

(1) Waste Material Storage (Indoor). The plan shall include measures and controls to minimize/eliminate contact between residual liquids from waste materials stored indoors and surface runoff. The plan may refer to applicable portions of other existing plans such as SPCC plans required under 40 CFR Part 112. BMP options:

(a) Procedures for material handling (including labeling and marking);

(b) A sufficient supply of dry-absorbent materials or a wet vacuum system to collect spilled or leaked materials (note: spilled or leaking mercury should never be vacuumed);

(c) An appropriate containment structure, such as trenches, curbing, gutters or other equivalent measures;

(d) A drainage system, including appurtenances (e.g., pumps or ejectors, or manually operated valves), to handle discharges from diked or bermed areas. Drainage shall be discharged to an appropriate treatment facility, sanitary sewer system, or otherwise disposed of properly. Discharges from these areas may require coverage under a separate VPDES permit or industrial user permit under the pretreatment program.

(2) Waste Material Storage (Outdoor). The plan shall describe measures and controls to minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil shall also be in accordance with applicable sections of 40 CFR Part 112. BMP options:

(a) Appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest single tank, with sufficient extra capacity for precipitation;

(b) Drainage control and other diversionary structures;

(c) For storage tanks, provide corrosion protection and/or leak detection systems;

(d) Dry-absorbent materials or a wet vacuum system to collect spills.

(3) Truck and Rail Car Waste Transfer Areas. The plan shall describe measures and controls to minimize pollutants in discharges from truck and rail car loading/unloading areas. The plan shall also address measures to clean up minor spills/leaks resulting from the transfer of liquid wastes. BMP options:

(a) Containment and diversionary structures to minimize contact with precipitation or runoff;

(b) Use of dry cleanup methods, wet vacuuming, roof coverings, or runoff controls.

(4) Inspections. Inspections shall be made monthly and shall also include all areas where waste is generated, received, stored, treated or disposed that are exposed to either precipitation or storm water runoff.

d. Recycling Facilities (Source Separated Materials).

The following SWPPP special conditions have been established for facilities that receive only source-separated recyclable materials primarily from non-industrial and residential sources.

(1) Inbound Recyclable Material Control. The plan shall include an inbound materials inspection program to minimize the likelihood of receiving non-recyclable materials (e.g., hazardous materials) that may be a significant source of pollutants in surface runoff. BMP options:

(a) Provide information and education measures to inform suppliers of recyclable materials on the types of materials that are acceptable and those that are not acceptable;

(b) A description of training measures for drivers responsible for pickup of recyclable materials;

(c) Clearly mark public drop-off containers regarding which materials can be accepted;

(d) Rejecting non-recyclable wastes or household hazardous wastes at the source;

(e) Establish procedures for the handling and disposal of non-recyclable materials.

(2) Outdoor Storage. The plan shall include procedures to minimize the exposure of recyclable materials to surface runoff and precipitation. The plan shall include good housekeeping measures to prevent the accumulation of particulate matter and fluids, particularly in high traffic areas. BMP options:

(a) Provide totally-enclosed drop-off containers for the public;

(b) Install a sump/pump with each containment pit, and discharge collected fluids to a sanitary sewer system;

(c) Provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper);

(d) Divert surface runoff away from outside material storage areas;

(e) Provide covers over containment bins, dumpsters, roll-off boxes;

(f) Store the equivalent one day's volume of recyclable materials indoors.

(3) Indoor Storage and Material Processing. The plan shall include measures to minimize the release of pollutants from indoor storage and processing areas. BMP options:

(a) Schedule routine good housekeeping measures for all storage and processing areas;

(b) Prohibit a practice of allowing tipping floor washwaters from draining to any portion of the storm sewer system; and

(c) Provide employee training on pollution prevention practices.

(4) Vehicle and Equipment Maintenance. The plan shall also provide for BMPs in those areas where vehicle and equipment maintenance is occurring outdoors. BMP options:

(a) Prohibit vehicle and equipment washwater from discharging to the storm sewer system;

(b) Minimize or eliminate outdoor maintenance areas, wherever possible;

(c) Establish spill prevention and clean-up procedures in fueling areas;

(d) Avoid topping off fuel tanks;

(e) Divert runoff from fueling areas;

(f) Store lubricants and hydraulic fluids indoors;

(g) Provide employee training on proper, handling, storage of hydraulic fluids and lubricants.

e. Facilities Engaged in Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap.

The following SWPPP special conditions have been established for facilities that are engaged in dismantling ships, marine salvaging, and marine wrecking - ships for scrap.

Vessel Breaking/Scrapping Activities. Scrapping of vessels shall be accomplished ashore beyond the range of mean high tide, whenever practicable. If this activity must be conducted while a vessel is afloat or grounded in state waters, then the permittee shall employ BMPs to reduce the amount of pollutants released. The following BMPs shall be implemented during those periods when vessels (ships, barges, yachts, etc.) are brought to the facility's site for recycling, scrapping and storage prior to scrapping.

(1) Fixed or floating platforms sufficiently sized and constructed to catch and prevent scrap materials and pollutants from entering state waters (or equivalent measures approved by the Department) shall be used as work surfaces when working on or near the water surface. These platforms shall be cleaned as required to prevent pollutants from entering state waters and at the end of each work shift. All scrap metals and pollutants shall be collected in a manner to prevent releases (containerization is recommended).

(2) There shall be no discharge of oil or oily wastewater at the facility. Drip pans and other protective devices shall be required for all oil and oily waste transfer operations to catch incidental spillage and drips from hose nozzles, hose racks, drums or barrels. Drip pans and other protective devices shall be inspected and maintained to prevent releases. Oil and oily waste shall be disposed at a permitted facility and adequate documentation of off-site disposition shall be retained for review by the board upon request.

(3) During the storage/breaking/scrapping period, oil containment boom(s) shall be deployed either around the vessel being scrapped, or across the mouth of the facility's wetslip, to contain pollutants in the event of a spill. Booms shall be inspected, maintained, and repaired

as needed. Oil, grease and fuel spills shall be prevented from reaching state waters. Cleanup shall be carried out promptly after an oil, grease, and/or fuel spill is detected.

(4) Paint and solvent spills shall be immediately cleaned up to prevent pollutants from reaching storm drains, deck drains, and state waters.

(5) Contaminated bilge and ballast water shall not be discharged to state waters. If it becomes necessary to dispose of contaminated bilge and ballast waters during a vessel breaking activity, the wastewater shall be disposed at a permitted facility and adequate documentation of off-site disposition shall be retained for review by the board upon request.

Sector O - Steam Electric Generating Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from steam electric power generating facilities (SIC 4911 in part) using coal, natural gas, oil, nuclear energy, etc. to produce a steam source, including coal handling areas. Storm water discharges from coal pile runoff subject to numeric effluent limitations are eligible for coverage under this permit, but are subject to the limitations established by **Part I A**. Storm water discharges from ancillary facilities (e.g., fleet centers, gas turbine stations, and substations) that are not contiguous to a steam electric power generating facility are not covered by this permit. Heat capture/heat recovery combined cycle generation facilities are also not covered by this permit; however, dual fuel co-generation facilities that generate electric power are included.

(1) Effluent Limitations. Coal Pile Runoff.
Total Suspended Solids (TSS) .....50 mg/L daily maximum
pH .....6.0 - 9.0 s.u.

(2) Analytical (Benchmark) Monitoring.
Steam Electric Generating Facilities (SIC 4911 in part) .....Fe

(3) Non-Storm Water Discharges. Non-storm water discharges subject to effluent limitation guidelines are not covered under this section, and if present, may require additional controls and/or limitations.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

Site Map. The site map shall identify the locations of any of the following activities or sources that may be exposed to precipitation/surface runoff: storage tanks, scrap yards, general refuse areas; short and long term storage of general materials (including, but not limited to: supplies, construction materials, plant equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills; construction sites; and stock pile areas (such as coal or limestone piles).

b. Storm Water Controls.

(1) Good Housekeeping Measures.

(a) Fugitive Dust Emissions. The permittee shall describe and implement measures that prevent or minimize fugitive dust emissions from coal handling areas. The permittee shall consider establishing procedures to minimize off-site tracking of coal dust such as installing specially designed tires, or washing vehicles in a designated area before they leave the site, and controlling the wash water.

(b) Delivery Vehicles. The plan shall describe measures that prevent or minimize contamination of storm water runoff from delivery vehicles arriving on the plant site. At a minimum the permittee shall consider the following:

(i) Develop procedures for the inspection of delivery vehicles arriving on the plant site, and ensure overall integrity of the body or container; and

(ii) Develop procedures to deal with leakage/spillage from vehicles or containers.

(c) Fuel Oil Unloading Areas. The plan shall describe measures that prevent or minimize contamination of precipitation/surface runoff from fuel oil unloading areas. At a minimum the permittee shall consider using the following measures, or an equivalent:

(i) Use of containment curbs in unloading areas;

(ii) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

(iii) Use of spill and overflow protection (e.g., drip pans, drip diapers, and/or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

(d) Chemical Loading/Unloading Areas. The permittee shall describe and implement measures that prevent or minimize the contamination of precipitation/surface runoff from chemical loading/unloading areas. At a minimum the permittee shall consider using the following measures (or their equivalents):

(i) Use of containment curbs at chemical loading/unloading areas to contain spills;

(ii) During deliveries, having station personnel familiar with spill prevention and response procedures present to ensure that any leaks/spills are immediately contained and cleaned up; and

(iii) Covering chemical loading/unloading areas, and storing chemicals indoors.

(e) Miscellaneous Loading/Unloading Areas. The permittee shall describe and implement measures that prevent or minimize the contamination of storm water runoff from loading and unloading areas. The permittee shall consider the following, at a minimum (or their equivalents):

(i) covering the loading area;

(ii) grading, berming, or curbing around the loading area to divert run-on; or

(iii) locating the loading/unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

(f) Liquid Storage Tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from aboveground liquid storage tanks. At a minimum the permittee shall consider employing the following measures (or their equivalents):

(i) Use of protective guards around tanks;

(ii) Use of containment curbs;

(iii) Use of spill and overflow protection; and

(iv) Use of dry cleanup methods.

(g) Large Bulk Fuel Storage Tanks. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from large bulk fuel storage tanks. At a minimum the permittee shall consider employing containment berms (or its equivalent). The permittee shall also comply with applicable state and federal laws, including Spill Prevention Control and Countermeasures (SPCC).

(h) Spill Reduction Measures. The permittee shall describe and implement measures to reduce the potential for an oil/chemical spill, or reference the appropriate section of their SPCC plan. At a minimum the structural integrity of all aboveground tanks, pipelines, pumps and other related equipment shall be visually inspected on a weekly basis. All repairs deemed necessary based on the findings of the inspections shall be completed

immediately to reduce the incidence of spills and leaks occurring from such faulty equipment.

(i) Oil bearing Equipment in Switchyards. The permittee shall describe and implement measures to prevent or minimize contamination of surface runoff from oil bearing equipment in switchyard areas. The permittee shall consider the use of level grades and gravel surfaces to retard flows and limit the spread of spills, and the collection of storm water runoff in perimeter ditches.

(j) Residue Hauling Vehicles. All residue hauling vehicles shall be inspected for proper covering over the load, adequate gate sealing and overall integrity of the container body. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds shall be repaired as soon as practicable.

(k) Ash Loading Areas. The permittee shall describe and implement procedures to reduce or control the tracking of ash/residue from ash loading areas where practicable, clear the ash building floor and immediately adjacent roadways of spillage, debris and excess water before departure of each loaded vehicle.

(l) Areas Adjacent to Disposal Ponds or Landfills. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from areas adjacent to disposal ponds or landfills. The permittee shall develop procedures to:

(i) Reduce ash residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles; and

(ii) Reduce ash residue on exit roads leading into and out of residue handling areas.

(m) Landfills, Scrapyards, Surface Impoundments, Open Dumps, General Refuse Sites. The plan shall address and include appropriate BMPs for landfills, scrapyards, surface impoundments, open dumps and general refuse sites.

(n) Vehicle Maintenance Activities. For vehicle maintenance activities performed on the plant site, the permittee shall use the applicable BMPs outlined in Sector P (Land Transportation and Warehousing).

(o) Material Storage Areas. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from material storage areas (including areas used for temporary storage of miscellaneous products, and construction materials stored in lay-down areas). The permittee shall consider the use of the following measures (or their equivalents): flat yard grades; runoff collection in graded swales or ditches; erosion protection measures at steep outfall sites (e.g., concrete chutes, riprap, stilling basins); covering lay-down areas; storing materials indoors; and covering materials temporarily with polyethylene, polyurethane, polypropylene, or hypalon. Storm water run-on may be minimized by constructing an enclosure or building a berm around the area.

(2) Comprehensive Site Compliance Evaluation. As part of the evaluation, qualified facility personnel shall inspect the following areas on a monthly basis: coal handling areas, loading/unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

Sector P - Land Transportation and Warehousing.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from ground transportation facilities and rail transportation facilities (generally identified by SIC Codes 40, 41, 42, 43, and 5171), that have vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling and lubrication) and/or equipment cleaning operations. Also covered under this section are facilities found under SIC Codes 4221 through 4225 (public warehousing and storage) that do not have vehicle and equipment maintenance shops and/or equipment cleaning operations.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.

Land Transportation and Warehousing Facilities ..... TPH, TSS
(SIC 4011, 4013, 4111-4173, 4212-4231, 4311,
and 5171)

(3) Non-Storm Water Discharges. Discharges of vehicle/equipment/surface washwater, including tank-cleaning operations are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

Site Map. The site map shall identify the locations of any of the following activities and indicate whether the activities may be exposed to precipitation/surface runoff: fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

b. Summary of Potential Pollutant Sources.

The plan shall describe and assess the potential for the following to contribute pollutants to storm water discharges: on-site waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; and fueling areas.

c. Storm Water Controls.

(1) Good Housekeeping.

(a) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks shall be confined to designated areas (delineated on the site map). The permittee shall consider the following measures (or their equivalents): the use of drip pans under vehicles and equipment; indoor storage of vehicles and equipment; installation of berms or dikes; use of absorbents; roofing or covering storage areas; and cleaning pavement surface to remove oil and grease.

(b) Fueling Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider the following measures (or their equivalents): covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing storm water run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected storm water runoff.

(c) Material Storage Areas. Storage vessels of all materials (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) shall be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil," "spent solvents," etc.). The permittee shall consider the following measures (or their equivalents): indoor storage of the materials; installation of berms/dikes around the areas, minimizing runoff of storm water to the areas; using dry cleanup methods; and treating and/or recycling the collected storm water runoff.

(d) Vehicle and Equipment Cleaning Areas. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from all areas used for vehicle/equipment cleaning. The permittee shall consider the following measures (or their equivalents): performing all cleaning operations indoors; covering the cleaning operation; ensuring that all washwaters drain to a proper collection system (i.e., not the storm water drainage system unless VPDES permitted); and treating and/or recycling the collected storm water runoff.

(e) Vehicle and Equipment Maintenance Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle/equipment maintenance. The permittee shall consider the following measures (or their equivalents): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluids prior to disposal; prohibiting wet clean up practices where the practices would result in the discharge of pollutants to storm water drainage systems; using dry cleanup methods; treating and/or recycling collected storm water runoff; and minimizing run-on/runoff of storm water to maintenance areas.

(f) Locomotive Sanding (Loading Sand for Traction) Areas. The plan ~~must~~ shall describe measures that prevent or minimize contamination of the storm water runoff from areas used for locomotive sanding. The permittee shall consider the following measures (or their equivalents): covering sanding areas; minimizing storm water run-on/runoff; or appropriate sediment removal practices to minimize the off-site transport of sanding material by storm water.

(2) Routine Facility Inspections. The following areas/activities shall be included in all inspections: storage area for vehicles/equipment awaiting maintenance; fueling areas; indoor and outdoor vehicle/equipment maintenance areas; material storage areas; vehicle/equipment cleaning areas; and loading/unloading areas.

(3) Employee Training. Employee training shall take place, at a minimum, annually (once per calendar year). Employee training shall address the following, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

Sector Q - Water Transportation.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from water transportation facilities that have vehicle (vessel) maintenance shops and/or equipment cleaning operations. The water transportation industry includes facilities engaged in foreign or domestic transport of freight or passengers in deep sea or inland waters; marine cargo handling operations; ferry operations; towing and tugboat services; and marinas (facilities commonly identified by Standard Industrial Classification (SIC) code Major Group 44).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Water Transportation Facilities (SIC 4412-4499) ..... Al, Fe, Zn

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify the locations where any of the following activities may be exposed to precipitation/surface runoff: fueling; engine maintenance/repair; vessel maintenance/repair, pressure washing; painting; sanding; blasting; welding; metal fabrication; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

(2) Summary of Potential Pollutant Sources. The plan shall describe the following additional sources and activities that have potential pollutants associated with them: outdoor

manufacturing or processing activities (i.e., welding, metal fabricating); and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, painting).

b. Storm Water Controls.

(1) Good Housekeeping.

(a) Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate VPDES permit. The SWPPP shall describe: the measures to collect or contain the discharge from the pressure washing area; the method for the removal of the visible solids; the methods of disposal of the collected solids; and where the discharge will be released.

(b) Blasting and Painting Areas. The permittee shall describe and implement measures to prevent spent abrasives, paint chips, and overspray from discharging into the receiving water or the storm sewer system. The permittee may consider containing all blasting/painting activities, or the use of other measures to prevent or minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). Storm water conveyances shall be regularly cleaned to remove deposits of abrasive blasting debris and paint chips. The plan shall include any standard operating practices with regard to blasting and painting activities, such as the prohibition of uncontained blasting/painting over open water, or the prohibition of blasting/painting during windy conditions which can render containment ineffective.

(c) Material Storage Areas. All containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) shall be plainly labeled and stored in a protected, secure location away from drains. The permittee shall describe and implement measures to prevent or minimize the contamination of precipitation/surface runoff from the storage areas. The plan shall specify which materials are stored indoors and consider containment or enclosure for materials that are stored outdoors. The permittee shall consider implementing an inventory control plan to limit the presence of potentially hazardous materials on-site. Where abrasive blasting is performed, the plan shall specifically include a discussion on the storage and disposal of spent abrasive materials generated at the facility.

(d) Engine Maintenance and Repair Areas. The permittee shall describe and implement measures to prevent or minimize contamination of precipitation/surface runoff from all areas used for engine maintenance and repair. The permittee shall consider the following measures (or their equivalent): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling storm water runoff collected from the maintenance area.

(e) Material Handling Areas. The permittee shall describe and implement measures to prevent or minimize contamination of precipitation/surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). The permittee shall consider the following measures (or their equivalents): covering fueling areas; using spill/overflow protection; mixing paints and solvents in a designated area (preferably indoors or under a shed); and minimizing run-on of storm water to material handling areas.

(f) Dry-dock Activities. The plan shall address the routine maintenance and cleaning of the dry-dock to minimize the potential for pollutants in the storm water runoff. The plan shall describe the procedures for cleaning the accessible areas of the dry-dock prior to flooding and final cleanup after the vessel is removed and the dock is raised. Cleanup procedures for oil, grease, or fuel spills occurring on the dry-dock shall also be included within the plan. The permittee shall consider the following measures (or their equivalents): sweeping rather than hosing off debris/spent blasting material from the accessible areas of the dry-dock prior to flooding; and having absorbent materials and oil containment booms readily available to contain/cleanup any spills.

(g) General Yard Area. The plan shall include a schedule for routine yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., shall be routinely removed from the general yard area.

(2) Preventative Maintenance. As part of the facility's preventive maintenance program, storm water management devices shall be inspected and maintained in a timely manner (e.g., oil/water separators and sediment traps cleaned to ensure that spent abrasives, paint chips and solids are intercepted and retained prior to entering the storm drainage system). Facility equipment and systems shall also be inspected and tested to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

(3) Routine Facility Inspections. The following areas shall be included in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; dry-dock area; and general yard area.

(4) Employee Training. Training shall address, at a minimum, the following activities (as applicable): used oil management; spent solvent management; disposal of spent abrasives; disposal of vessel wastewaters; spill prevention and control; fueling procedures; general good housekeeping practices; painting and blasting procedures; and used battery management.

5) Comprehensive Site Compliance Evaluation. The permittee shall conduct regularly scheduled evaluations at least once a year and address those areas contributing to a storm water discharge associated with industrial activity (e.g., pressure washing area, blasting/sanding areas, painting areas, material storage areas, engine maintenance/repair areas, material handling areas, and dry-dock area). These sources shall be inspected for evidence of, or the potential for, pollutants entering the drainage system.

Sector R - Ship and Boat Building or Repair Yards.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities engaged in ship building and repairing and boat building and repairing (SIC Code 373). (According to the U.S. Coast Guard, a vessel 65 feet or greater in length is referred to as a ship and a vessel smaller than 65 feet is a boat.)

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Ship and Boat Building or Repairing Yards (SIC 3731, 3732) ..... TSS

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: bilge and ballast water, pressure wash water, sanitary wastes, and cooling water originating from vessels.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify the locations where any of the following activities may be exposed to precipitation/surface runoff: fueling; engine maintenance/repair; vessel maintenance/repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

(2) Potential Pollutant Sources. The plan shall include a description of the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing/processing activities (e.g., welding, metal fabricating);

and significant dust/particulate generating processes (e.g., abrasive blasting, sanding, painting).

b. Storm Water Controls.

(1) Good Housekeeping Measures.

(a) Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted as a process wastewater by a separate VPDES permit.

(b) Blasting and Painting Areas. The permittee shall describe and implement measures to prevent spent abrasives, paint chips and overspray from discharging into the receiving waterbody or the storm sewer system. To prevent the discharge of contaminants, the permittee shall consider containing all blasting/painting activities, or using other methods, such as hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris. The plan shall include a schedule for regularly cleaning storm systems to remove deposits of abrasive blasting debris and paint chips. The plan shall include any standard operating practices with regard to blasting and painting activities, such as the prohibition of uncontained blasting/painting over open water or the prohibition of blasting/painting during windy conditions that can render containment ineffective.

(c) Material Storage Areas. All containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) shall be plainly labeled and stored in a protected, secure location away from drains. The permittee shall describe and implement measures to prevent or minimize contamination of precipitation/surface runoff from the storage areas. The plan shall specify which materials are stored indoors and consider containment or enclosure for materials that are stored outdoors. The permittee **shall** consider implementing an inventory control plan to limit the presence of potentially hazardous materials on-site. Where abrasive blasting is performed, the plan shall specifically include a discussion on the storage and disposal of spent abrasive materials generated at the facility.

(d) Engine Maintenance and Repair Areas. The permittee shall describe and implement measures to prevent or minimize contamination of precipitation/surface runoff from all areas used for engine maintenance and repair. The permittee shall consider the following measures (or their equivalent): performing all maintenance activities indoors; maintaining an organized inventory of materials used in the shop; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the shop floor; using dry cleanup methods; and treating and/or recycling storm water runoff collected from the maintenance area.

(e) Material Handling Areas. The permittee shall describe and implement measures to prevent or minimize contamination of precipitation/surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). The permittee shall consider the following methods (or their equivalents): covering fueling areas; using spill/overflow protection; mixing paints and solvents in a designated area (preferably indoors or under a shed); and minimizing run-on of storm water to material handling areas.

(f) Dry-Dock Activities. The plan shall address the routine maintenance and cleaning of the dry-dock to minimize the potential for pollutants in the storm water runoff. The plan shall describe the procedures for cleaning the accessible areas of the dry-dock prior to flooding and final cleanup after the vessel is removed and the dock is raised. Cleanup procedures for oil, grease, or fuel spills occurring on the dry-dock shall also be included within the plan. The permittee shall consider the following measures (or their equivalents): sweeping rather than hosing off debris/spent blasting material from the accessible areas of the dry-dock prior to flooding and having absorbent materials and oil containment booms readily available to contain/cleanup any spills.

(g) General Yard Area. The plan **shall** include a schedule for routine yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., shall be routinely removed from the general yard area.

(2) Preventative Maintenance. As part of the facility's preventive maintenance program, storm water management devices shall be inspected and maintained in a timely manner (e.g., oil/water separators and sediment traps cleaned to ensure that spent abrasives, paint chips and solids are intercepted and retained prior to entering the storm drainage system). Facility equipment and systems shall also be inspected and tested to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

(3) Routine Facility Inspections. The following areas shall be included in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance/repair areas; material handling areas; dry-dock area; and general yard area.

(4) Employee Training. Training shall address, at a minimum, the following activities (as applicable): used oil management; spent solvent management; proper disposal of spent abrasives; proper disposal of vessel wastewaters, spill prevention and control; fueling procedures; general good housekeeping practices; painting and blasting procedures; and used battery management.

(5) Comprehensive Site Compliance Evaluation. The permittee shall conduct regularly scheduled evaluations at least once a year and address those areas contributing to a storm water discharge associated with industrial activity (e.g., pressure washing area, blasting/sanding areas, painting areas, material storage areas, engine maintenance/repair areas, material handling areas, and dry-dock area). These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system.

Sector S - Air Transportation.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from air transportation facilities including airports, airport terminal services, air transportation (scheduled and nonscheduled), flying fields, air courier services, and establishments engaged in operating and maintaining airports, and servicing, repairing or maintaining aircraft (generally classified under SIC Code 45), which have vehicle maintenance shops, material handling facilities, equipment cleaning operations or airport and/or aircraft deicing/anti-icing operations. For the purpose of this section, the term "deicing" is defined as the process to remove frost, snow, or ice and "anti-icing" is the process which prevents the accumulation of frost, snow, or ice. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or deicing/anti-icing operations are addressed under this section.

(1) Effluent Limitations. .....NONE

(2) Analytical (Benchmark) Monitoring.

Facilities at airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis: monitor ONLY those outfalls from the airport facility that collect runoff from areas where deicing/anti-icing activities occur (SIC 45).	BOD_5, COD, KN, pH, TSS

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: aircraft, ground vehicle, runway and equipment washwaters, and dry weather discharges of deicing/anti-icing chemicals.

(4) Permit Special Condition - Releases of Reportable Quantities of Hazardous Substances and Oil. The following special condition should be included in the permit for this industrial sector:

[*Insert SC #]* **Releases of Reportable Quantities of Hazardous Substances and Oil.** Each individual permittee is required to report spills as described at **Part I B 2 g**. If an airport authority is the sole permittee, then the sum total of all spills at the airport shall be assessed against the reportable quantity. If the airport authority is a co-permittee with other deicing/anti-icing operators

at the airport, such as numerous different airlines, the assessed amount shall be the summation of spills by each co-permittee. If separate, distinct individual permittees exist at the airport, then the amount spilled by each separate permittee shall be the assessed amount for the reportable quantity determination.

(5) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

SWPPPs developed for areas of the facility occupied by tenants of the airport shall be integrated with the plan for the entire airport. For the purposes of this permit, tenants of the airport facility include airline passenger or cargo companies, fixed based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in storm water discharges associated with industrial activity. In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify the location of the following activities and indicate any of the activities that may be exposed to precipitation/surface runoff: aircraft and runway deicing/anti-icing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; and storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

(2) Summary of Potential Pollutant Sources. The plan shall include a narrative description of the potential pollutant sources from the following activities: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing/anti-icing operations (including apron and centralized aircraft deicing/anti-icing stations, runways, taxiways and ramps). Facilities which conduct deicing/anti-icing operations shall maintain a record of the types (including the Material Safety Data Sheets (MSDS)) and monthly quantities of deicing/anti-icing chemicals used, either as measured amounts, or in the absence of metering, as estimated amounts. This includes all deicing/anti-icing chemicals, not just glycols and urea (e.g., potassium acetate). Tenants and fixed-base operators who conduct deicing/anti-icing operations shall provide the above information to the airport authority for inclusion in the storm water pollution prevention plan for the entire facility.

The SWPPP shall define the average seasonal timeframe (e.g., December-February, October-March, etc.) during which deicing activities typically occur at the facility. Implementation of BMPs, facility inspections and monitoring shall be conducted with particular emphasis throughout the defined deicing season.

b. Storm Water Controls.

a.(1) Good Housekeeping.

(a) Aircraft, Ground Vehicle and Equipment Maintenance Areas. The permittee shall describe and implement measures that prevent or minimize the contamination of storm water runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangars). The following practices (or their equivalents) shall be considered: performing maintenance activities indoors; maintaining an organized inventory of materials used in the maintenance areas; draining all parts of fluids prior to disposal; preventing the practice of hosing down the apron or hangar floor; using dry cleanup methods; and collecting the storm water runoff from the maintenance area and providing treatment or recycling.

(b) Aircraft, Ground Vehicle and Equipment Cleaning Areas. Permittees shall ensure that cleaning of equipment is conducted in designated areas only and clearly identify these areas on the ground and delineate them on the site map. The permittee shall describe and implement measures that prevent or minimize the contamination of the storm water runoff from cleaning areas.

(c) Aircraft, Ground Vehicle and Equipment Storage Areas. The storage of aircraft, ground vehicles and equipment awaiting maintenance shall be confined to designated

areas (delineated on the site map). The following BMPs (or their equivalents) shall be considered: indoor storage of aircraft and ground vehicles; the use of drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding storage areas.

(d) Material Storage Areas. Storage vessels of all materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) shall be maintained in good condition, so as to prevent or minimize contamination of storm water, and plainly labeled (e.g., "used oil," "Contaminated Jet A," etc.). The permittee shall describe and implement measures that prevent or minimize contamination of precipitation/runoff from storage areas. The following BMPs or their equivalents shall be considered: indoor storage of materials; centralized storage areas for waste materials; and installation of berms/dikes around storage areas.

(e) Airport Fuel System and Fueling Areas. The permittee shall describe and implement measures that prevent or minimize the discharge of fuels to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. The following BMPs (or their equivalents) shall be considered: implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using dry cleanup methods; and collecting the storm water runoff.

(2) Source Reduction. Owners who conduct deicing/anti-icing operations shall consider alternatives to the use of urea and glycol-based deicing/anti-icing chemicals to reduce the aggregate amount of deicing/anti-icing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; anhydrous sodium acetate.

(a) Runway Deicing Operations. Owners shall evaluate present application rates to ensure against excessive over application by analyzing application rates and adjusting as necessary, consistent with considerations of flight safety. Also the following BMP options shall be considered (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installation of runway ice detection systems; implementing anti-icing operations as a preventive measure against ice buildup.

(b) Aircraft Deicing/Anti-Icing Operations. Owners shall determine whether excessive application of deicing/anti-icing chemicals occurs, and adjust as necessary, consistent with considerations of flight safety. This evaluation shall be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). The use of alternative deicing/anti-icing agents as well as containment measures for all applied chemicals shall be considered. Also, the following BMP options (or their equivalents) shall be considered for reducing deicing fluid use: forced-air deicing systems; computer-controlled fixed-gantry systems; infrared technology; hot water; varying glycol content to air temperature; enclosed-basket deicing trucks; mechanical methods; solar radiation; hangar storage; aircraft covers; and thermal blankets for MD-80s and DC-9s. The use of ice-detection systems and airport traffic flow strategies and departure slot allocation systems shall also be considered.

(3) Management of Runoff. Where deicing/anti-icing operations occur, owners shall describe and implement a program to control or manage contaminated runoff to reduce the amount of pollutants being discharged from the site. The plan shall describe the controls used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow. The following BMPs (or their equivalents) shall be considered: establishing a dedicated deicing facility with a runoff collection/recovery system; using vacuum/collection trucks; storing contaminated storm water/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. The plan shall consider the recovery of deicing/anti-icing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these

materials from later becoming a source of storm water contamination. Used deicing fluid shall be recycled whenever possible.

(4) Routine Facility Inspections. The inspection frequency shall be specified in the plan. At a minimum, inspections shall be conducted once per month during deicing/anti-icing season (e.g., October through April for most airports). If deicing occurs before or after this period, the inspections shall be expanded to include all months during which deicing chemicals may be used. Also, if significantly or deleteriously large quantities of deicing chemicals are being spilled or discharged, or if water quality impacts have been reported, the inspection frequency shall be increased to weekly until such time as the chemical spills/discharges or impacts are reduced to acceptable levels. The Director may specifically require increased inspections and the SWPPP to be reevaluated as necessary.

(5) Comprehensive Site Compliance Evaluation. The annual site compliance evaluations shall be conducted by qualified facility personnel during periods of actual deicing operations, if possible. If not practicable during active deicing or if the weather is too inclement, the evaluations shall be conducted when deicing operations are likely to occur and the materials and equipment for deicing are in place.

Sector T - Treatment Works.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from 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 lands dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of 1.0 MGD or more, or required to have a fully approved (not conditional) pretreatment program under 9 VAC 25-31-730. Farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located within the facility, or areas that are in compliance with § 405 of the CWA are not required to have permit coverage.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: sanitary and industrial wastewater; and equipment/vehicle washwaters.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides.

(2) Summary of Potential Pollutant Sources. The plan shall include a description of the potential pollutant sources from the following activities, as applicable: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads/rail lines.

b. Storm Water Controls.

(1) Best Management Practices (BMPs). In addition to the other BMPs considered, the following BMPs shall be considered: routing storm water to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings and other solids handling,

storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station).

(2) Inspections. The following areas shall be included in all inspections: access roads/rail lines, grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station areas.

(3) Employee Training. Employee training shall, at a minimum, address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and control; fueling procedures; general good housekeeping practices; proper procedures for using fertilizers, herbicides and pesticides.

Sector U - Food and Kindred Products.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from food and kindred products processing facilities (commonly identified by SIC Code 20), including: meat products; dairy products; canned, frozen and preserved fruits, vegetables, and food specialties; grain mill products; bakery products; sugar and confectionery products; fats and oils; beverages; and miscellaneous food preparations and kindred products and tobacco products manufacturing (SIC Code 21).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Dairy Products (SIC 2021-2026) ..... BOD_5, TSS
Grain Mill Products (SIC 2041-2048) ..... TKN, TSS
Fats and Oils Products (SIC 2074-2079) ..... TSS, BOD_5, Total N

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing/clean-out operations.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify the locations of the following activities if they are exposed to precipitation/surface runoff: vents/stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

(2) Summary of Potential Pollutant Sources. In addition to food and kindred products processing-related industrial activities, the plan shall also describe application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides, etc.) used on plant grounds.

b. Storm Water Controls.

(1) Routine Facility Inspections. At a minimum, the following areas, where the potential for exposure to storm water exists, shall be inspected on a monthly basis: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

(2) Employee Training. The employee training program shall also address pest control.

Sector V - Textile Mills, Apparel, and Other Fabric Products.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from textile mills, apparel and other fabric product manufacturing, generally described by SIC 22 and 23. This section also covers facilities engaged in manufacturing finished leather and artificial leather products (SIC 31, except 3111). Facilities in this sector are primarily engaged in the following activities: textile mill products, of and regarding facilities and establishments engaged in the preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage, the manufacturing of broad woven fabrics, narrow woven fabrics, knit fabrics, and carpets and rugs from yarn; processes involved in the dyeing and finishing of fibers, yarn fabrics, and knit apparel; the integrated manufacturing of knit apparel and other finished articles of yarn; the manufacturing of felt goods (wool), lace goods, non-woven fabrics, miscellaneous textiles, and other apparel products.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: discharges of wastewater (e.g., wastewater as a result of wet processing or from any processes relating to the production process); reused/recycled water; and waters used in cooling towers.

(4) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

Summary of Potential Pollutant Sources. The plan shall include a description of the potential pollutant sources from the following activities: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing, bonding carbonizing, carding, cut and sew operations, desizing, drawing, dyeing, flocking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

b. Storm Water Controls.

(1) Good Housekeeping Measures.

(a) Material Storage Areas. All containerized materials (e.g., fuels, petroleum products, solvents, dyes, etc.) shall be clearly labeled and stored in a protected area, away from drains. The permittee shall describe and implement measures that prevent or minimize contamination of storm water runoff from such storage areas, and must include a description of the containment area or enclosure for those materials that are stored outdoors. The permittee may consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. The permittee shall ensure that empty chemical drums/containers are clean (triple-rinsing shall be considered) and residuals are not subject to contact with precipitation/runoff. Washwater from these cleanings shall be collected and disposed of properly.

(b) Material Handling Area. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from materials handling operations and areas. The permittee shall consider the following measures (or their equivalents): use of spill/overflow protection; covering fueling areas; and covering and enclosing areas where the transfer of materials may occur. Where applicable, the plan shall address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, dyes, or wastewater.

(c) Fueling Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider the following measures (or their equivalents): covering the fueling area; using

spill and overflow protection; minimizing run-on of storm water to the fueling areas; using dry cleanup methods; and treating and/or recycling storm water runoff collected from the fueling area.

(d) Aboveground Storage Tank Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from aboveground storage tank areas, including the associated piping and valves. The permittee shall consider the following measures (or their equivalents): regular cleanup of these areas; preparation of a spill prevention control and countermeasure program (SPCC) to provide spill and overflow protection; minimizing run-on of storm water from adjacent areas; restricting access to the area; insertion of filters in adjacent catch basins; absorbent booms in un-bermed fueling areas; use of dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

(2) Routine Facility Inspections. Inspections shall be conducted at least monthly, and shall include the following activities and areas (at a minimum): transfer and transmission lines; spill prevention; good housekeeping practices; management of process waste products; all structural and nonstructural management practices.

(3) Employee Training. Employee training shall, at a minimum address, the following areas when applicable to a facility: use of reused/recycled waters; solvents management; proper disposal of dyes; proper disposal of petroleum products and spent lubricants; spill prevention and control; fueling procedures; and general good housekeeping practices.

(4) Comprehensive Site Compliance Evaluation. Regularly scheduled evaluations shall be conducted at least once a year and address those areas contributing to a storm water discharge associated with industrial activity. Inspections shall look for evidence of, or the potential for, pollutants entering the drainage system from the following areas, as appropriate: storage tank areas; waste disposal and storage areas; dumpsters and open containers stored outside; materials storage areas; engine maintenance and repair areas; material handling areas and loading dock areas.

Sector W - Wood and Metal Furniture and Fixture Manufacturing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities involved in the manufacturing of wood kitchen cabinets (generally described by SIC Code 2434), and furniture and fixtures (generally classified under SIC Major Group 25), including: household furniture (SIC 251); office furniture (SIC 252); public buildings and related furniture (SIC 253); partitions, shelving, lockers, and office and store fixtures (SIC 254); and miscellaneous furniture and fixtures (SIC 259).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following item:

<u>Site Map.</u>

The site map shall identify where any of the following may be exposed to precipitation/surface runoff: material storage areas (including tanks or other vessels used for liquid or waste storage); outdoor material processing areas; areas where wastes are treated, stored or disposed; access roads; and rail spurs.

Sector X - Printing and Publishing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from printing and publishing facilities (generally classified under SIC Major Group 27), and include the following types of facilities: newspaper, periodical, and

book publishing and/or printing (SIC Codes 271 through 273); miscellaneous publishing (SIC Code 274); commercial printing (SIC Code 275); manifold business forms, greeting cards, bankbooks, loose-leaf binders and book binding and related work (SIC Codes 276 through 278); and service industries for the printing trade (SIC 279).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: aboveground storage tanks, drums and barrels permanently stored outside.

(2) Summary of Potential Pollutant Sources. The plan shall include a description of the following additional sources and activities that have potential pollutants associated with them, as applicable: loading and unloading operations; outdoor storage activities; significant dust or particulate generating processes; and on-site waste disposal practices (e.g., blanket wash). Also, the pollutant or pollutant parameter (e.g., oil and grease, scrap metal, etc.) associated with each pollutant source shall be identified.

b. Storm Water Controls.

(1) Good Housekeeping Measures.

(a) Material Storage Areas. All containerized materials (skids, pallets, solvents, bulk inks, and hazardous waste, empty drums, portable/mobile containers of plant debris, wood crates, steel racks, fuel oil, etc.) shall be properly labeled and stored in a protected area, away from drains. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from such storage areas and shall include a description of the containment area or enclosure for those materials which are stored outdoors. The permittee may consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

(b) Material Handling Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading/unloading materials). The permittee shall consider the following measures (or their equivalents): the use of spill/overflow protection; covering fuel areas; and covering/enclosing areas where the transfer of materials may occur. When applicable, the plan shall address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, or wastewater.

(c) Fueling Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider the following measures (or their equivalents): covering the fueling area; using spill and overflow protection; minimizing run-on of storm water to the fueling area; using dry cleanup methods; and treating and/or recycling storm water runoff collected from the fueling areas.

(d) Aboveground Storage Tank Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from aboveground storage tank areas, including the associated piping and valves. The permittee shall consider the following measures (or their equivalents): regular cleanup of these areas; preparation of a spill prevention control and countermeasure program (SPCC) to provide spill and overflow protection; minimizing run-on of storm water from adjacent facilities and properties; restricting access to the area; insertion of filters in

adjacent catch basins; absorbent booms in un-bermed fueling areas; use of dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

(2) Employee Training. Employee training shall, at a minimum, address the following areas when applicable to a facility: spent solvent management; spill prevention and control; used oil management; fueling procedures; and general good housekeeping practices.

Sector Y - Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from rubber and miscellaneous plastic products manufacturing facilities (SIC Major Group 30) and miscellaneous manufacturing industries, except jewelry, silverware, and plated ware (SIC Major Group 39, except 391).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Tires and Inner Tubes; Rubber Footwear; Gaskets, Packing and Sealing Devices; Rubber Hose and Belting; and Fabricated Rubber Products, Not Elsewhere Classified (SIC 3011-3069). ..... Zn

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

Summary of Potential Pollutant Sources. Rubber manufacturing facilities shall review the use of zinc at the facility and the possible pathways through which zinc may be discharged in storm water runoff.

b. Storm Water Controls.

(1) Controls for Rubber Manufacturers. Rubber manufacturing facilities shall describe and implement specific controls to minimize the discharge of zinc in storm water discharges from the facility. Listed below are possible sources of zinc. These shall be reviewed and the accompanying BMPs (or their equivalents) shall be considered in the SWPPP. Also, some general BMP options to consider include: using chemicals that are purchased in pre-weighed, sealed polyethylene bags; storing materials that are in use in sealable containers; ensuring an airspace between the container and the cover to minimize "puffing" losses when the container is opened; and using automatic dispensing and weighing equipment.

(a) Inadequate Housekeeping. All permittees shall review the handling and storage of zinc bags at their facilities and consider the following BMP options: employee training regarding the handling/storage of zinc bags; indoor storage of zinc bags; cleanup of zinc spills without washing the zinc into the storm drain; and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

(b) Dumpsters. The following BMPs shall be considered to reduce discharges of zinc from dumpsters: providing a cover for the dumpster; move the dumpster to an indoor location; or provide a lining for the dumpster.

(c) Malfunctioning Dust Collectors or Baghouses. Permittees shall review dust collectors/baghouses as possible sources in zinc in storm water runoff. Improperly operating dust collectors/baghouses shall be replaced or repaired as appropriate.

(d) Grinding Operations. Permittees shall review dust generation from rubber grinding operations at their facility and, as appropriate, install a dust collection system.

(e) Zinc Stearate Coating Operations. Permittees shall include in the SWPPP appropriate measures to prevent or clean up drips/spills of zinc stearate slurry that may

be released to the storm drain. Alternate compounds to zinc stearate shall also be considered.

(2) Controls for plastic products manufacturers. Plastic products manufacturing facilities shall describe and implement specific controls to minimize the discharge of plastic resin pellets in stormwater discharges from the facility. The following BMPs (or their equivalents) shall be considered in the SWPPP: minimizing spills; cleaning up of spills promptly and thoroughly; sweeping thoroughly; pellet capturing; employee education; and disposal precautions.

Sector Z - Leather Tanning and Finishing.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from leather tanning, currying and finishing (commonly identified by SIC Code 3111).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Leather Tanning and Finishing (SIC 3111) ..... TKN

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: processing and storage areas of the beamhouse, tanyard, retan-wet finishing and dry finishing operations; and haul roads, access roads and rail spurs.

(2) Summary of Potential Pollutant Sources. A description of potential pollutant sources including (as appropriate): temporary or permanent storage of fresh and brine cured hides; chemical drums, bags, containers and aboveground tanks; leather dust, scraps, trimmings and shavings; spent solvents; extraneous hide substances and hair; empty chemical containers and bags; floor sweepings/washings; refuse, waste piles and sludge; and significant dust/particulate generating processes (e.g., buffing).

b. Storm Water Controls.

(1) Good Housekeeping.

(a) Storage areas for raw, semi-processed, or finished tannery by-products. Pallets/bales of raw, semi-processed or finished tannery by-products (e.g., splits, trimmings, shavings, etc.) shall be stored indoors or protected by polyethylene wrapping, tarpaulins, roofed storage area or other suitable means. Materials shall be placed on an impermeable surface, the area shall be enclosed or bermed or other equivalent measures shall be employed to prevent run-on/runoff of storm water.

(b) Material Storage Areas. Storage units of all materials should be labeled (e.g., specific chemicals, hazardous materials, spent solvents, waste materials). The permittee shall describe and implement measures that prevent or minimize contact with storm water.

(c) Buffing and Shaving Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff with leather dust from buffing/shaving areas. The permittee may consider dust collection enclosures, preventive inspection/maintenance programs or other appropriate preventive measures.

(d) Receiving, Unloading, and Storage Areas. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from receiving, unloading, and storage areas. The following measures (or their equivalents) shall be considered for exposed receiving, unloading and storage areas:

hides and chemical supplies protected by a suitable cover; diversion of drainage to the process sewer; and grade berming/curbing area to prevent runoff of storm water.

(e) Outdoor Storage of Contaminated Equipment. The permittee shall describe and implement measures that prevent or minimize contact of storm water with contaminated equipment. The following measures (or their equivalents) shall be considered: equipment protected by suitable cover; diversion of drainage to the process sewer; thorough cleaning prior to storage.

(f) Waste Management. The permittee shall describe and implement measures that prevent or minimize contamination of the storm water runoff from waste storage areas. The permittee shall consider the following measures (or their equivalents): inspection/maintenance programs for leaking containers or spills; covering dumpsters; moving waste management activities indoors; covering waste piles with temporary covering material such as tarpaulins or polyethylene; and minimizing storm water runoff by enclosing the area or building berms around the area.

Sector AA - Fabricated Metal Products.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from the fabricated metals industry listed below, except for electrical related industries: fabricated metal products, except machinery and transportation equipment (SIC Code 34); and jewelry, silverware, and plated ware (SIC Code 391).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Fabricated Metal Products Manufacturing except Coating ..... Al, Fe, Zn
(SIC 3411-3471, 3482-3499, 3911-3915)
Fabricated Metal Coating and Engraving (SIC 3479) ..... Zn

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary/permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps/barriers; processing areas including outside painting areas; wood preparation; recycling; and raw material storage.

(2) Spills and Leaks. When listing significant spills/leaks, the permittee shall pay attention to the following materials, at a minimum: chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals and hazardous chemicals and wastes.

(3) Summary of Potential Pollutant Sources. The plan shall include a description of the potential pollutant sources from the following activities: loading and unloading operations for paints, chemicals and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cob, chemicals, scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, brazing, etc.; and on-site waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingots pieces, refuse and waste piles.

b. Storm Water Controls.

(1) Good Housekeeping.

(1a) Raw Steel Handling Storage. The permittee shall describe and implement measures controlling or recovering scrap metals, fines, and iron dust, including measures for containing materials within storage handling areas.

(2b) Paints and Painting Equipment. The permittee shall describe and implement measures to prevent or minimize exposure of paint and painting equipment from exposure to storm water.

(2) Spill Prevention and Response Procedures. The permittee shall ensure that the necessary equipment to implement a clean up is available to personnel. The following areas shall be addressed:

(a) Metal Fabricating Areas. The permittee shall describe and implement measures for maintaining clean, dry, orderly conditions in these areas. Use of dry clean-up techniques shall be considered in the plan.

(b) Storage Areas for Raw Metal. The permittee shall describe and implement measures to keep these areas free of conditions that could cause spills or leakage of materials. The following measures (or their equivalents) shall be considered: storage areas maintained such that there is easy access in the event of a spill; stored materials labeled to aid in identifying spill contents.

(c) Receiving, Unloading, and Storage Areas. The permittee shall describe and implement measures to prevent spills and leaks; plan for quick remedial clean up and instruct employees on clean-up techniques and procedures.

(d) Storage of Equipment. The permittee shall describe and implement measures for preparing equipment for storage and the proper method to store equipment. The following measures (or their equivalents) shall be considered: protecting with covers; storing indoors; and cleaning potential pollutants from equipment to be stored outdoors.

(e) Metal Working Fluid Storage Areas. The permittee shall describe and implement measures for storage of metal working fluids.

(f) Cleaners and Rinse Water. The permittee shall describe and implement measures to control/cleanup spills of solvents and other liquid cleaners; control sand buildup and disbursement from sand-blasting operations; and prevent exposure of recyclable wastes. Environmentally benign cleaners shall be substituted when possible.

(g) Lubricating Oil and Hydraulic Fluid Operations. The permittee shall consider using devices or monitoring equipment or other devices to detect and control leaks/overflows. The installation of perimeter controls such as dikes, curbs, grass filter strips, or other equivalent measures shall also be considered.

(h) Chemical Storage Areas. The permittee shall describe and implement proper storage methods that prevent storm water contamination and accidental spillage. The plan shall include a program to inspect containers, and identify proper disposal methods.

(2) Inspections. Metal fabricators shall at a minimum include the following areas for inspection: raw metal storage areas; finished product storage areas; material and chemical storage areas; recycling areas; loading and unloading areas; equipment storage areas; paint areas; and vehicle fueling and maintenance areas.

(3) Comprehensive Site Compliance Evaluation. The site compliance evaluation shall also include inspections of: areas associated with the storage of raw metals; storage of spent solvents and chemicals; outdoor paint areas; and roof drainage. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel and other related materials.

Sector AB - Transportation Equipment, Industrial or Commercial Machinery.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from transportation equipment, industrial or commercial

machinery manufacturing facilities (commonly described by SIC Major Group 35 (except SIC Code 357), and SIC Major Group 37 (except SIC Code 373)).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 3**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: vents and stacks from metal processing and similar operations.

b. Storm Water Controls.

Non-Storm Water Discharges. For facilities that discharge wastewater, other than solely domestic wastewater, to the sanitary sewer system, the permittee shall notify the operator of the sanitary sewer and associated treatment works of its discharge. In such cases, a copy of a notification letter shall be attached to the plan. Any specific permit conditions shall be considered in the plan.

Sector AC - Electronic, Electrical Equipment And Components, Photographic And Optical Goods.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities that manufacture: electronic and other electrical equipment and components, except computer equipment (SIC Major Group 36); measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks (SIC Major Group 38) and computer and office equipment (SIC Code 357).

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

None

Sector AD - Non-Classified Facilities/Storm Water Discharges Designated By The Board As Requiring Permits.

Discharges Covered Under This Section. Sector AD is used to provide permit coverage for facilities designated by the Board as needing a storm water permit, or any discharges of industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC. Therefore, almost any type of storm water discharge could be covered under this sector. Permittees shall be assigned to Sector AD by the Director.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring.
Non-Classified Facilities/Storm Water Discharges ..... TSS
Designated By The Board As Requiring Permits

(3) Part I B 4. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

None

SECTION IN-5

INDUSTRIAL STANDARD PERMITS

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A. Standard Permit Development

These are recommendations for common types of discharges. Use them to facilitate permit writing. Check to make sure the discharge is not eligible for a general permit instead.

1. Coin Operated Laundries

a. Permitting Strategy

All coin operated 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 <u>except</u> the following parameters:

(1) Part A - BOD TSS Flow pH Temperature Ammonia

(2) Part B - must provide results for parameters "believed present". All applicants shall provide results for Chlorine and Fecal coliform

(3) Part C - In accordance with Paragraph 8 of the Natural Resources Defense Council, Inc. settlement agreement with EPA the "Auto and Other Laundries" industrial category is excluded from the testing requirements in Part C.

c. Suggested Effluent Limitations & Basis

( ) Final Limits ( ) Interim Limits Outfall No. Design Flow Effective Dates: to

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Month	Estimate
BOD_5[a]	4	NA	NA	60 mg/l	1/Month	Grab
Total Suspended Solids	BPJ	NA	NA	45 mg/l	1/Month	Grab
Fecal Coliform	3	200 N/Cml[c]	NA	NA	1/Month	Grab
Temperature[a]	3	NA	NA	^{o}C	1/Month	Immersion Stabilization
Dissolved Oxygen[a]	3	NA	mg/l	NA	1/Month	Grab
Total Residual Chlorine[a,b,d]	3	*	NA	*	1/Month	Grab
pH (s.u.)[a]	3	NA	*	*	1/Month	Grab

Technology-based Limits: BPJ
Water Quality-based Limits: 1. 208 Plan 2. 303(e) Plan 3. Water Quality Standards 4. Other (e.g. wasteload allocation model)
NL = No Limitation, monitoring required
NA = Not Applicable

a. Specify values for BOD_5, DO, temperature, TRC and pH which will maintain Water Quality Standards.
b. See Part I B for Quantification Levels and reporting instructions.
c. Geometric Mean.
d. See Section MN for chlorine limits determination

d. Special Conditions The following special conditions should be included in permits for coin operated laundries. See the Fact Sheet example for rationale and part E for special condition language unless specified below.

- Chlorine Monitoring and Compliance (*See Section IN Part E*)
- Notification Levels
- Operation and Maintenance Manual Requirement
- Quantification Levels (*Include for water quality-based parameters, if applicable*).
- Monitoring Frequency Reduction (*If monitoring is already quarterly, do not consider further reduction of the monitoring frequency.*)

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.

Rationale: 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 quarterly.

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 to it 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 storm water but no discharge of process wastewaters, consideration may be given to coverage under the Industrial Storm Water General Permit (Sector AD). 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 Storm Water 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 activities take place on site, include the section on **Storm Water 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 3 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^{-6} cm/sec coefficient of permeability. 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 (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 General VPDES Permit for Discharges from Petroleum Contaminated Sites, 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) Ground Water 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 Ground Water Standards. The ground water 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, in order to evaluate the need for remediation. Ground water 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 ground water 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 and PCS, 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 <u>except</u> the following parameters:

(1) Part A - BOD TOC TSS pH Flow

(2) Part B - must provide results for Oil & Grease and any other parameters "believed present".

(3) Part C - must provide results for any parameters "believed present". OWP&CA recommends testing for BTEX.

c. Form 2F Minimum Testing Requirements

(For point source discharge of storm water associated with industrial activity)

(1) Part A - must test for and report all parameters listed.

(2) Part B & C - must provide results for any parameters "believed present".

(3) Part D - must provide storm event data corresponding to the maximum values given in Parts A, B, & C.

d. Suggested Effluent Limitations & Basis

These limits assume the discharge is treated with a minimum treatment technology comparable to an oil/water separator.

( ) Final Limits ( ) Interim Limits Outfall No. Design Flow Effective Dates:

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)	BPJ	NL	NA	15	1/M	Grab
pH (s.u.)	3	NA	*	*	1/M	Grab

Technology-based Limits: BPJ
Water Quality-based Limits: 1. 208 Plan 2. 303(e) Plan 3. Water Quality Standards 4. Other (e.g. wasteload allocation model)

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.

* *Establish pH limits that will maintain water quality standards in the receiving stream*

Hydrostatic Test Waters are subject to the following effluent limitations and monitoring requirements:

( ) Final Limits ( ) Interim Limits Outfall No. Design Flow Effective Dates: to

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow	NA	NL	NA	NL	1/Discharge	Estimate
TPH (mg/l)	BPJ	NL	NA	15	1/Discharge	Grab

Technology-based Limits: BPJ
NL = No Limitation, monitoring required
NA = Not Applicable

Add limits for BTEX, naphthalene, lead, etc if discharge will occur more than once in three years.

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. See Part I B for Quantification Levels and reporting instructions.

e. Special Conditions The following special conditions should be included in permits for petroleum storage or transportation facilities. See the earlier parts of Section IN for rationale and special condition language unless specified below.

- Notification Levels
- Materials Handling/Storage
- Operation and Maintenance Manual Requirement
- Toxic Management Program (TMP)

- Water Quality Criteria Monitoring (*Include for all facilities which require a TMP*)
- Quantification Levels (*Include for water quality-based parameters, if applicable. Adapt for BTEX, lead and naphthalene*)
- Ground water 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 ground water 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

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	Maximum Limitation
Flow	Report flow volume as MGD
TPH	15 mg/l

Add limits for BTEX, naphthalene, lead, etc if discharge will occur more than once in three years.

All samples shall be grab samples. The effluent shall be free of sheens.

Rationale: (*TPH limit is BPJ. See the fact sheet for the VPDES general permit for Discharges from Petroleum Contaminated Sites, VAG83 for the basis for effluent limits for BTEX, lead and naphthalene if discharge is more than once per three years.)*

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 reorganizes 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 were promulgated for the two subcategories "Bleached Papergrade Kraft and Soda" and "Papergrade Sulfite". These new BAT effluent limitations should impact three existing mills in the State.

The new 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. In this rule EPA also introduces a "Voluntary Advanced Technology Incentives Program" (VATIP) whereby a mill will be given more time to meet BAT limitations, and various other incentives, in exchange for accepting more stringent BAT limitations than the BAT "baseline" limitations. Discussions were held with the industry as to how the State would interpret various sections of the new rule and how State regulations and policies accommodate the incentives that EPA set forth as federally available. The major incentive that could be allowed under State programs is reduced monitoring of the above specified BAT pollutant parameters. This, some other Cluster Rule issues that have been discussed, and how to incorporate the new requirements into the reissuance drafts are discussed below with recommendations.

b. Issues:

(1) Reduced Monitoring Frequency.

The monitoring frequency for mills that do not enroll in VATIP is set by the federal rule. For those that enroll, there is an interim period before attainment of the more stringent BAT effluent limitations where no monitoring frequency is established. Upon attainment of the more stringent BAT limitations, one year of monitoring at a frequency set by the rule is required, after which the permitting authority is again at liberty to choose a monitoring frequency (assuming the mill has certified that they have advanced elemental chlorine free technology) for parameters other than AOX. The agency should be consistent in determining the monitoring frequency for the two above specified periods.

Agency reduced monitoring guidance is available in Guidance Memorandum 98-2005. For mills that do not opt into the incentives program and thereby accept BAT baseline limits, this guidance will be applicable to any consideration of reduced monitoring in their next permit reissuance should monitoring frequencies not be specified by federal rule. For mills that do opt into the incentives program, the guidance in 98-2005 is not applicable to the two situations described in the above paragraph. The guidance addresses reward for past good performance, where the Cluster Rule reduced monitoring addresses a different concept, an incentive for better future performance.

Recommendation: In keeping with the Cluster Rule focus on providing incentives and because the BAT parameters are EPA technology limits rather than water quality based (also they are either new parameters for which we don't have criteria, are limited at an internal monitoring point and/or will be further controlled by a water quality limit at the end of the pipe) it is recommended that the minimum monitoring frequency allowed by regulation be specified except for the parameter AOX which is an indicator parameter for potential dioxin and furan formation and for which there is a relatively inexpensive test. This is in agreement with the monitoring frequencies discussed at recent Agency/Virginia Paper Council meetings.

Existing water quality based dioxin limits should continue to be monitored at the end of pipe. However, 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.

Additionally, EPA has proposed end of pipe COD limits. Until finalized they recommend a BPJ COD limit. We feel that rather than propose a BPJ limit, COD monitoring is more appropriate.

To summarize, the monitoring frequencies for VATIP enrolled mills during the interim period before attainment of more stringent BAT effluent limitations, and for the period following one year of VATIP compliance monitoring would be as follows:

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.

For BAT baseline permits, and for the first year of VATIP compliance monitoring the frequency must be as specified by the federal rule, except end of pipe dioxin monitoring can be reduced to quarterly and monthly COD monitoring should continue. For seasonal dischargers, once per season or once per discharge-month frequencies can be substituted where appropriate for the above frequencies.

For other parameters that may require monitoring in the permit, no recommendations are being made.

(2) Other Incentives.

Other incentives that EPA published in the final rule and how they are affected by state regulations or programs are as follow:

Permit Certainty. The industry has been informed that the state cannot provide this incentive as state requirements affecting the permit may change. (According to EPA, effluent guidelines will not change.) Greater than 5 year term permits are not possible other than through administrative continuance, and this will not be granted on a routine basis.

Reduced Inspections. Inspections are subject to our inspection strategy and MOA with EPA which requires annual inspections of majors; therefore no changes are allowed.

Public Recognition. It may be possible to announce enrollees on the agency website.

Reduced Penalties. Enforcement discretion is all that can be assured.

(3) Best Management Practices.

The federal rule specifies BMP's that are to be implemented by all paper mills.

Recommendation: The attached BMP's have 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 specified in C.8.d.

(4) 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.

(5) Kappa Number.

For VATIP enrollees, the final limits include an annual average Kappa Number limit. There is no EPA approved test for this parameter. Also, it has been agreed to report this as a monthly rolling average. Once the limit becomes effective there will be 11 months of data gathering before an annual average can be determined for the sake of compliance reporting. This presents a problem in the first 11 months as to how to report a measured number that may exceed the limit on the DMR but does not constitute a violation. Additionally, there are different Kappa Number limits for hardwood and softwood, and the mills can switch back and forth within a permit term.

Recommendation: Kappa Number is a production control parameter that the mills already test for using TAPPI (standard setting organization for the pulp and paper industry) test methods. If a Kappa Number limit will be necessary for a mill, the exact test method used by that mill should be submitted to the regional office for review so they can check to see if it is consistent with the method used by other mills that are compliance monitoring for Kappa Number. Then it is recommended that the attached Kappa Number Reporting special condition be used to maintain consistency.

Three CEDS parameter codes have been established for Kappa Number - Kappa Monthly Average, Kappa Hardwood Annual Average, and Kappa Softwood Annual Average. If Kappa Number limits are required, it is recommended that the DMR show both the hardwood and softwood annual average limits, and NL for the Kappa Monthly Average. That way, the mill can provide monthly data in the first 11 months and thereafter without provoking compliance monitoring errors, and the rolling average can be reported beginning in the 12th month for the appropriate annual average limit. NA can be reported for annual average limits prior to 12 months of data or for the type of wood not being processed. It is recommended that the attached special condition explaining this reporting requirement be put in the permit.

(6) Other:

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.

c. 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.

(**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. They are:

(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 storm water 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 storm water 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. as needed to maintain water quality standards, based on information provided in the permit application and from other sources. Storm event monitoring is documented with a separate DMR and Part I A. page. 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. Storm Water 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 storm water runoff, for other contaminated non-process wastewater, or if appropriate, for process wastewater.

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.

Best Management Practices (BMP)

a. 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 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 required by Part b. below. 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.

b. 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 **[and B]** to this permit.

ATTACHMENT A

DEPARTMENT OF ENVIRONMENTAL QUALITY SHIPYARD BMP COMPLIANCE REPORT

Facility Name:
Address:

VPDES Permit No.: VA00

Report Period: From __/__/__ To __/__/

OUTFALL NO. COMPLIANCE / NONCOMPLIANCE *
(check as appropriate)

001 _____ _____

002 _____ _____

002 _____ _____

004 _____ _____

005 _____ _____

*Comments on Noncompliance

_____
Name of Principal Exec. Officer or Authorized Agent / Title

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

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.

(b) 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.

(c) 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 Tidewater 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 Tidewater Regional Office by not later than March 01 and September 01, of each year.** The March 01 report shall include data obtained between July 01 and December 31. The September 01 report shall include data obtained between January 01 and June 30.

Within thirty (30) 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.

PART I

A. 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

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.

5. Water Treatment Plants

a. Permitting Strategy

The limits presented in this section for Water Treatment Plants must be effective immediately upon permit issuance/ reissuance. Previous versions of this permit manual contained a schedule of compliance for WTP compliance with the TSS limit. This is no longer appropriate and the schedule has been removed. The statutory deadline for compliance with technology-based limits (such as TSS) was March 31, 1989.

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 <u>except</u> the following parameters:

(1) Part A - TSS Flow pH

(2) Part B - 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".

(3) Part C - 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 Zinc

The RO may request that application test data for metals also be reported as dissolved.

For facilities using reverse osmosis, the RO should request TDS testing on the application.

c. Suggested Effluent Limitations & Basis

( ) Final Limits ( ) Interim Limits Outfall No. Design Flow Effective Dates:

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	5G/8H*
Total Residual Chlorine or CPO	3	**	NA	**	1/Month	Grab
pH (s.u.)	3	NA	**	**	1/Month	Grab

Technology-based Limits: BPJ

Water Quality-based Limits: 1. 208 Plan 2. 303(e) Plan 3. Water Quality Standards
4. Other (e.g. wasteload allocation model)

NL = No Limitation, monitoring required

NA = Not Applicable

* Because WTP's generally discharge for short periods of time (often 15 minutes), the permit writer may specify an alternative type and frequency of composite samples to be used.
** Specify values for TRC/CPO and pH which will maintain Water Quality Standards. If the discharge is short duration, apply acute TRC/CPO limits only.
*** 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:

EFFLUENT CHARACTERISTICS	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
	Monthly Average	Minimum	Maximum	Frequency	Sample Type
Total Dissolved Solids (mg/l)	NA	NA	NL	1/ Month	5G/8HC

d. Special Conditions The following special conditions should be included in permits for water treatment plants. See the Fact Sheet example for rationale and Part E for special condition language unless specified below.

- 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 monitoring per GM 00-2012 Toxics Management Program Implementation Guidance. Note that whole effluent toxicity testing is required before a General Permit for a potable WTP is allowed. See 9VAC 25-860 for requirements.

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 ground water, 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 storm water general permit. Permit writers should evaluate the operation to determine whether or not the general permit is appropriate. Those wood preservers that discharge only storm water and do not have the potential for ground water 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. Storm water 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 storm water pollution prevention plan.

(3) Storm Water Management

Storm water discharges from wood preserving operations are classified as dischargers of storm water associated with industrial activity. Because of this designation, the individual VPDES permit must contain a Storm Water Management section. This will include the generic storm water pollution prevention plan requirements and the applicable sector-specific requirements. Permit writers should refer to Part G of this Section for further guidance.

Additional parameters may be considered for storm water 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) Ground Water Monitoring

The decision to require ground water 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 ground water, 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 as may be pertinent. 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 ground water monitoring program in place, the ground water monitoring plan may be developed, and submitted to the Regional Office for approval through a permit special condition. See the example in Part F. At a minimum, the ground water 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 ground water 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 ground water monitoring plan required for the surface impoundment closure (under the RCRA rules) often does not serve the need of the ground water protection measure for the storage woodyard.

Minimum sampling frequency should be once per quarter. 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.

For a facility that already has an approved ground water monitoring program, include the groundwater monitoring in Part I.B.

(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, and the data reported with the DMR submission.

(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 <u>except</u> the following parameters:

(1) Part 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:

(a) 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

(b) Pentachlorophenol Preservative Process

4-Chloro-3-methylphenol (or p-Chloro-M-Cresol) 2-Chlorophenol 2,4-Dichlorophenol
2,4-Dimethylphenol 2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol (or 4,6-Dinitro-O- Cresol) 2-Nitrophenol
4-Nitrophenol Pentachlorophenol Phenol
2,4,6-Trichlorophenol

c. Suggested Effluent Limitations & Basis

( ) Final Limits ( ) Interim Limits Outfall No. Effective Dates: to

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	3	*	NA	*	1/3 Months	Grab
Dissolved Chromium VI	3	*	NA	*	1/3 Months	Grab
Dissolved Copper	3	*	NA	*	1/3 Months	Grab
Dissolved Arsenic	3	*	NA	*	1/3 Months	Grab
Hardness (mg/l as $CaCo_3$)	NA	NA	NL	NA*	1/Month	Grab
pH (s.u.)	3	NA	*	*	1/Month	Grab

Technology-based Limits: BPJ
Water Quality-based Limits: 1. 208 Plan 2. 303(e) Plan 3. Water Quality Standards
4. Other (e.g. wasteload allocation model)
NL = No Limitation, monitoring required
NA = Not Applicable

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.
* *Specify values for metals and pH which will maintain Water Quality Standards.*
Add additional water quality-based limits or monitoring requirements for pollutants of concern based on the activities at the facility.

Part I.A. footnote for storm event sampling:
a. 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 the discharge. Once every 6 months, the sampled discharge must meet the following criteria: the discharge must result from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours after the previously measurable (greater than 0.1 inch) rainfall. The permittee shall also report an estimate of the total volume of the discharge during the storm event

d. Special Conditions

- 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).

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.

- 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.

  Treated wood shall be held on the drip pad until drippage has ceased.

Rationale: Ground water and surface water contamination can be minimized by containing the chemicals that will initially drip from the lumber following treatment.

- Quantification Levels
- TMP
- Ground Water Monitoring Plan

e. Part I A. Ground water Monitoring

1. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage pollutants from (**state well number or other monitoring location**)

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
Static Water Level	NL	ft	1/3 Months	Measured
pH	NL	SU	1/3 Months	Grab
Dissolved Chromium	NL	ug/l	1/3 Months	Grab
Dissolved Copper	NL	ug/l	1/3 Months	Grab
Dissolved Arsenic	NL	ug/l	1/3 Months	Grab

Add ground water monitoring for other pollutants of concern based on the activities at the facility.

SECTION MN-1
MUNICIPAL VPDES FORMATS

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A. Fact Sheet

*NOTE TO PERMIT WRITER: remove text in italics before you print this document. Where language appears in **bold**, choose the correct response or supply the necessary information.*

VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the **issuance/reissuance/modification** of the VPDES permit listed below. This permit is being processed as a **Major/Minor, Municipal** permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq. The discharge results from the operation of a **describe the facility.** This permit action consists of *(Summarize what is happening in this permit action: updating boilerplate, adding ammonia or toxics limits, etc)*. SIC Code: *(frequently used codes: 4952 for sewage facilities, 4941 for water treatment facilities, 8052 for intermediate care facilities, 8211 for elementary and secondary schools, 9211 courthouse facilities, 9223 correctional institutions)*

1. Facility Name and Address:

   Location:

2. Permit No. VA00**00000** Existing Permit Expiration Date: *(if reissuance)*

3. Owner Contact: Name: Title:
   Telephone No:

4. Application Complete Date:
   Permit Drafted By: _____ Date:_____ **(name your)** Regional Office
   Reviewed By: _____ Date:_____
   Public Comment Period Dates: from_____to_____

5. Receiving Stream Name: River Mile:
   Basin: Subbasin: Section: Class: Special Standards:

   7-Day, 10-Year Low Flow (7Q10): MGD 1-Day, 10-Year Low Flow (1Q10): MGD

   7Q10 High Flow months 1Q10 High Flow months

   30-Day, 5-Year Low Flow (30Q5): MGD Harmonic Mean Flow (HM): MGD

   30-Day, 10-Year Low Flow (30Q10):

   Tidal? YES/NO On 303(d) list? YES/NO

   [Attach Flow Frequency Analysis documentation or indicate why no flow analysis was made]

6. Operator License Requirements:

7. Reliability Class:

8. Permit Characterization:
( ) Private ( ) Federal ( ) State ( ) POTW ( ) PVOTW

( ) Possible Interstate Effect ( ) Interim Limits in Other Document (*attach copy of CSO*)

9. Provide a brief description of the wastewater treatment system.

Discharge Description

OUTFALL NUMBER	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)

(1) List operations contributing to flow (2) List treatment units (3) Design flow

(The outfall description page from the permit application may be substituted if it contains the above information.)

10. Sewage Sludge Use or Disposal: *(Briefly describe the sewage sludge management process)*

11. Discharge Location Description*: (Attach USGS topo map which shows the discharge location, significant dischargers to the receiving stream, water intakes, and other items of interest. Write name of Topo and Quadrangle Number on the map)*

Name_____ Number _____

12. Material Storage: *(List type and quantity of wastes, fluids, or pollutants stored at this facility. Briefly describe storage facilities and list any measures taken to prevent stored materials from reaching state waters. See O & M Manual)*

13. Ambient Water Quality Information *[include more than just surface and ground water data: Attach any memoranda or other information which helped to develop permit conditions, i.e., PReP complaints, special water quality studies, STORET data, ground water data, 305(b) Report, and other biological and/or chemical data. Explain if NEW special standard does not apply, explain Board Policies (Total P)]*

14. Antidegradation Review & Comments: Tier 1 _____ Tier 2 _____ Tier 3 _____

The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by

regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with a Tier determination. [**Receiving stream**] is determined to be a Tier [**1, 2 or 3**] waterbody. This determination is based on [**give rationale for Tier determination**]. *(for example: For Tier 1 waters, antidegradation is addressed by ensuring that effluent limits comply with water quality criteria.)*

15. Site Inspection: Date_____Performed by_____

16. Effluent Screening & Limitation Development:
Include information supporting all interim and final limits or monitoring requirements here. Include all calculations and rationale for effluent limitations and at least the following information:
- *Evaluation of existing effluent data to determine the need for water quality-based limits or toxics monitoring*
- *Flow basis for wasteload allocations*
- *Calculations of wasteload allocations*
- *Provide rationale for limiting internal waste streams and indicator pollutants.*
- *Printout of the STATS.EXE and MIX.EXE computer programs.*

These printouts contain the analysis of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic, and human health); effluent limits determination; data source

Basis for Effluent Limitations

PARAMETER	BASIS

1. Technology –based limits (cite regulation)
2. Water Quality-based limits (show calculations or cite WQM plan reference)
3. Best Professional Judgement (BPJ)-based limits (provide narrative rationale)

17. Basis for Sludge Use & Disposal Requirements *(list limits & monitoring, cite the Regulation, guidance memo or site specific requirements)*

18. Antibacksliding Statement:
(*For reissuance, either state that all limits are at least as stringent as in the previous permit or give rationale for any relaxed limits.*)

19. Compliance Schedules:

(*Document any compliance schedules, include rationale used in developing the schedule 9VAC25-31-250*)

20. Special Conditions: *(Provide a rationale for all permit special conditions. See common special conditions below)*

a. **Additional Chlorine Limitations and Monitoring Requirements**
Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.

b. Chlorine Demonstration Requirements for Bacteria Limits
Rationale: This special condition specifies the requirements for chlorine demonstrations if the permittee intends to demonstrate that chlorine limitations are an appropriate surrogate parameter for indicating compliance with bacteria standards during the permit term, in accordance with 9VAC25-260.

c. 95% Capacity Reopener
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 B 4 for all POTW and PVOTW permits

d. **Indirect Dischargers**
Rationale Required by VPDES Permit Regulation, 9VAC25-31-200 B 1 and B 2 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

e. CTC, CTO Requirement
Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790.

f. O&M Manual Requirement
Rationale: Required by Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9VAC25-31-190 E.

g. Licensed Operator Requirement
Rationale: The VPDES Permit Regulation, 9VAC25-31-200 C and the Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18VAC160-20-10 et seq.), require licensure of operators.

h. Reliability Class
Rationale: Required by Sewage Collection and Treatment Regulations, 9VAC25-790 for all municipal facilities.

i. Financial Assurance and Disclosure to Purchasers
Rationale: Required by Code of Virginia § 62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9VAC25-650-10 et seq.

j. Nutrient Enriched Waters Reopener
Rationale: Policy for Nutrient Enriched Waters, 9VAC25-40 allows reopening of permits for discharges into waters designated as nutrient enriched if total phosphorus and total nitrogen in a discharge potentially

exceed specified concentrations. The policy anticipates that future total phosphorus and total nitrogen limits may be needed.
[NOTE: See also GM 07-2008 and it's associated amendments for additional Nutrient Waters fact sheet language for reopeners for facilities in the Chesapeake Bay Watershed.]

k. **Water Quality Criteria Reopener**
Rationale: VPDES Permit Regulation, 9VAC25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

l. **Sludge Reopener**
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-220 C for all permits issued to treatment works treating domestic sewage.

m. **Water Quality Criteria Monitoring**
Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. States are required to review data on discharges to identify actual or potential toxicity problems, or the attainment of water quality goals, according to 40 CFR Part 131, Water Quality Standards, subpart 131.11. To ensure that water quality criteria are maintained, the permittee is required to analyze the facility's effluent for the substances noted in Attachment A of this VPDES permit.

n. **Compliance Reporting**
Rationale: Authorized by VPDES Permit Regulation, 9VAC25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

o. **Instream Monitoring**
Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters.

p. **Sludge Use and Disposal**
Rationale: VPDES Permit Regulation, 9VAC25-31-100 P; 220 B 2; and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on sludge use and disposal practices and to meet specified standards for sludge use and disposal.

q. **Effluent Monitoring Frequencies**
Rationale: Permittees are granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations related to the effluent limits for which reduced frequencies were granted. If permittees fail to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated for those parameters that were previously granted a monitoring frequency reduction.

r. Pretreatment
Rationale: VPDES Permit Regulation, 9VAC25-31-730 through 900, and 40 CFR part 403 require certain existing and new sources of pollution to meet specified regulations.

s. Whole Effluent Toxicity Testing
Rationale: VPDES Permit Regulation, 9VAC25-31-210 and 220 I, requires monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act.

t. Storm Water Management
Rationale: VPDES Permit Regulation, 9VAC25-31-10 defines discharges of storm water from municipal treatment plants with design flow of 1.0 MGD or more, or plants with approved pretreatment programs, as discharges of storm water associated with industrial activity. 9VAC25-31-120 requires a permit for these discharges. The Pollution Prevention Plan requirements are derived from the VPDES general permit for discharges of storm water associated with industrial activity, 9VAC25-151-10 et seq.

u. Section 303(d) List (TMDL) Reopener
Rationale: Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

v. Compliance Schedules
Rationale: 9VAC25-31-250 allows for schedules of compliance, when appropriate, which will lead to compliance with the Clean Water Act, the State Water Control Law and regulations promulgated under them.

w. *[NOTE: Insert when DMR submittal not required until commencement of discharge or annually until commencement of discharge. See section III.A.10 b]*

Notification of Commencement of Discharge for New Facilities
Rationale: This condition is designed to clarify monitoring and reporting requirements before the commencement of discharge.]

x. Part II, Conditions Applicable to All Permits
Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

21. Changes to Permit: *(Identify any changes in the permit from the previously issued permit. Refer to communications with applicant, VDH, EPA, and any other agency where their comments resulted in changes to the permit. Include any changes associated with the special conditions or reporting requirements and the reasons for the changes).*

Outfall No.	Parameter Changed	Monitoring Requirement Changed		Effluent Limits Changed		Reason for Change	Date
		From	To	From	To		
Special Condition Changes:							

22. Variances/Alternate Limits or Conditions: *Provide justification or refutation rationale for modifications or alternatives to required permit conditions/limitations (9VAC25-31-280 B 4 and 9VAC25-31-100 J and P). This includes, but is not limited to:*

- *waivers from application testing requirements*
- *variances from technology guidelines(9VAC25-31-220 A 2) or water quality standards*
- *variances from VPDES permit manual guidance*

23. Regulation of Users: 9VAC25-31-280 B 9 *If the treatment works is not owned by a state or a municipality, the fact sheet must include a statement about how industrial, indirect dischargers (users) are being regulated. If there are no industrial users, include the following statement:*

There are no industrial users contributing to the treatment works.

If there are industrial users, describe how they are addressed in the permit (i.e. adequate control is provided by the treatment works).

24. Public Notice Information required by 9VAC25-31-280 B:

All pertinent information is on file and may be inspected, and copied by contacting [**Permit Writer** at:

Virginia DEQ Regional Office Address, Telephone No. (000) 000-0000, Email Address]

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to

terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ **[Insert Regional Office]** Regional Office by appointment.

25. Additional Comments:
Previous Board Action: *(Summarize all previous Board actions affecting this permit action. If none, state **none**. Include Consent Order, Consent Decree and Interim Limits, if applicable).*

Staff Comments: (*If applicable, explain compliance status and reasons for short-term permit).*

Public Notice Comments: *(State "No comments were received during the public notice" or "Comments received during the pubic notice are provided in the attached Response to Comments"*" **or include comments on the fact sheet if they are brief.**

Other Agency Comments: Include information from other agencies received outside of the public comment period (e.g. VDH, EPA, DGIF and DCR threatened and endangered species coordination (their comments and our response) either here or in the response to comments. Include dates of coordination comments.)

26. 303(d) Listed Segments (TMDL): (*Indicate if the facility discharges to a segment that has been or is listed in the current 303(d) list and the allocations are specified by an approved TMDL and, if so, provide all appropriate information/calculations. If the facility discharges to a stream segment that is on an impaired water, then the fact sheet must include some description of how the TMDL requirements are being met. Note that the discharge may be directly into an impaired segment or a downstream TMDL has been established for the discharge. Permit writers should consult with planning staff for recommendations and may choose from one of the following categories to fulfill this requirement.*)

Permits for discharges into Category 5 Impaired or Threatened Waters (TMDL Needed):

TMDL approved, permit has limits for the TMDL parameter:

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Identify by name the TMDL associated with this permit
- Identify the date of EPA approval
- Identify the wasteload allocation given to the discharge being permitted
- Identify the permit limits that are associated with the TMDL. Some permit limits may be WQS and TMDL based.

Example fact sheet language:

This facility discharges directly to **(name of receiving stream)**. The stream receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for **(list parameter)** on the current 303(d) list. EPA approved the **(name of the TMDL)** TMDL on **(date of approval**) for this segment. It contains a WLA for this discharge of (**provide WLA numbers**). This permit has limits of **(list numerical limits**) for (**list parameter**) that are in compliance with the TMDL.

Special Permit considerations:

None

<u>TMDL approved, permit does not have limits for the TMDL parameter:</u>

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Identify by name the TMDL associated with this permit
- Identify the date of EPA approval
- Point out that the effluent being permitted <u>does not contain</u> the parameter that the TMDL addresses.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for **(list parameter**) on the current 303(d) list. EPA approved the **(name of the TMDL**) TMDL on (**date of approval**) for this segment. It does not contain a WLA for this discharge. No limit for (**list parameter**) is included because the effluent does not contain (**list parameter**).

Special Permit considerations:

None

<u>TMDL not approved, permit has limits for the parameter that caused the segment to be listed:</u>

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- *Note that the permit limit is established to meet the standard at the end of the pipe, pending completion of the TMDL.*
- *Note that the permit limit may be relaxed (in accordance with CWA Section 303(d)(4)) after the TMDL is approved.*

Example fact sheet language:

This facility discharges directly to (name of receiving stream). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) on the current 303(d) list. A TMDL has not been prepared or approved for the segment. This permit has limits of **(list numerical limits**) for (**list parameter**) that require compliance with the standard prior to

discharge. Given these limits this facility can neither cause nor contribute to the observed violation of the standards. The permit contains a re-opener condition that may allow these limits to be modified, in compliance with section 303(d)(4) of the Act once a TMDL is approved.

Special Permit considerations:
Include the TMDL re-opener special condition.

TMDL not approved, permit does not have limits for the parameter that caused the segment to be listed:

Fact Sheet Information:
- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for
- Note, with appropriate documentation, that the effluent being permitted does not contain the parameter that caused the segment to be listed.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) on the current 303(d) list. The TMDL that will be prepared for this segment will not have a WLA for this discharge for (**list parameter**). No limit for (**list parameter**) is included in this permit because the effluent does not contain (**list parameter**).

Special Permit considerations:
None

Permits for discharges into segments listed in Categories 4B or 5C:

Categories 4B and 5C of the list is based on the fact that a permit contains a water quality limit that has not been complied with due to a compliance schedule. Once the schedule runs its course and the facility attains the limit, the segment will be removed from the list. No TMDL will normally be prepared.

Reissuance, Compliance attained, segment delisted:

Since compliance schedules cannot run beyond the end of a permit, the facility should have attained compliance and the segment should have been removed from the list prior to the need to reissue the permit. Providing this occurs there will be no need to send the permit to EPA for review and neither the fact sheet nor the permit requires any special language.

Fact Sheet Information:
None

Special Permit considerations:
None

Modification - Compliance not attained:

There is, of course, a chance that the permit will have to be modified prior to the completion of the compliance schedule and delisting. In this case, the TMDL discussion in the fact sheet should contain the following:

Fact Sheet Information:
- Identify the segment
- The reason the segment was listed (as noted above)
- The parameter and/or designated use the segment was listed for
- The current limit that will result in attainment
- The time line of the compliance schedule.
- The current status of facility relative to the schedule

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired for (**list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit that has not been achieved. The limits for **(list parameter)** in this permit will result in attainment of the standards upon completion of the compliance schedule. The scheduled date is (**give compliance schedule completion date**). No TMDL will be prepared for this segment since it will be delisted when the facility achieves compliance with the limits.

Special Permit considerations:
None

<u>Compliance attained but segment not delisted</u>:

Fact Sheet Information:
- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- Information to demonstrate that the facility is in compliance and the standard is being attained.
- A statement that the segment will be removed from the list as soon as possible and that a TMDL is not necessary.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired for (**list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit. The limits for (**list parameter**) in this permit have resulted in attainment of the standards. No TMDL will be prepared for this segment since it will not appear in the next 303(d) list..

Special Permit considerations:
None

<u>Compliance schedule complete but facility still is not in compliance.</u>

Fact Sheet Information:

- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- A description of enforcement action being taken to bring the facility into compliance.
- A statement that the segment will be removed from the list as soon as compliance is reached and that a TMDL is not necessary.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed as impaired for (**list parameter**) in the current 303(d) list. The listing is based solely on a water quality limit in this permit. The limits for (**list parameter**) in this permit will result in attainment of the standards once compliance is achieved. The facility is currently in non-compliance with the requirements of the permit. No additional permit limits are necessary and enforcement action is underway to obtain compliance. No TMDL will be prepared for this segment since it is not a water quality issue but rather an enforcement issue. The segment will be removed from the 303(d) list when compliance with permit limits is obtained.

Special Permit considerations:

None

Permits for discharges into Category 2B or 3C waters of concern or waters with observed effects:

Categories 2B and 3C is a listing of waters of concern or waters with observed effects. Generally, a TMDL will not be prepared for these waters. However, the fact sheet for permits issued for a discharge to these segments should contain a demonstration that the limits will not increase the threat.

Facility discharges parameter that resulted in the listing:

Fact Sheet Information:

- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter and/or designated use the segment was listed for.
- A description of how this permit will not increase the threat.

Example fact sheet language:

This facility discharges directly to (name of receiving stream). The stream segment receiving the effluent is listed as of concern or with observed effects for (**list parameter**) in the current 303(d) list. The limits for **(list parameter**) in this permit will result in attainment of the applicable standards.

Special Permit considerations:

Include the TMDL re-opener special condition.

Permits for discharges into Categories 4C or 5C naturally impaired waters:

Category 4C is a listing of segments that do not meet the standard due to natural conditions but does not need a TMDL. Section 5C is a listing of segments that do not meet the standard due to 'suspected' natural conditions and may require a TMDL.

Permit has limits for the parameter that caused the segment to be listed:

Fact Sheet Information:

- Identify the segment as listed in the current 303(d) list
- Identify the parameter and/or designated use the segment was listed for

Example fact sheet language:

This facility discharges directly to (name of receiving stream). The stream segment receiving the effluent is listed as impaired *(Note: the discharge may be directly into impaired segment or a downstream TMDL has been established for the discharge)* for (**list parameter**) in the current 303(d) list. The impairment is the result of natural conditions. The standards for this segment are being reevaluated to determine if they are correct or if they require modification. The limits of (**list numerical limits**) in this permit for (**list parameter**) have been designed to provide that this facility will neither cause nor contribute to the impairment.

Special Permit considerations:
Include the TMDL re-opener special condition.

B. Permit Format

1. Cover Page

DEQ Letterhead (*No Board Members, No Regional Letterhead)*

Permit No. VA00**00000**
Effective Date:
Expiration Date:

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE VIRGINIA STATE WATER CONTROL LAW

In compliance with the provisions of the Clean Water Act as amended and pursuant to the State Water Control Law and regulations adopted pursuant thereto, the following owner is authorized to discharge in accordance with the information submitted with the permit application, and with this permit cover page, and Parts I and II of this permit [*list other permit parts if applicable*], as set forth herein.

Owner: **(Permit Applicant)**
Facility Name: **(Facility)**
City [County]: (**Either City or County as appropriate)**
Facility Location: (**Location**)

The owner is authorized to discharge to the following receiving stream:

Stream: **(Receiving Waters name)**
River Basin:
River Subbasin:
Section:
Class:
Special Standards:
(**fill in above information)**

_____
[*Indicate position of person delegated to sign permit here*]
Department of Environmental Quality

_____
Date

2. Part I A, Effluent Limits Page

A. 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 number 001. This discharge shall be limited and monitored as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	Monthly Average		Weekly Average		Minimum	Maximum	Frequency	Sample Type
Flow (MGD)[a]	NL		NA		NA	NL	Continuous	Grab
pH (standard units)	NA		NA		NL	NL	1/Day	Grab
BOD_5	mg/l	kg/d	mg/l	kg/d	NA	NA	1/Month	Grab
Total Suspended Solids	mg/l	kg/d	mg/l	kg/d	NA	NA	1/Month	Grab
$CBOD_5$ (June - December)	mg/l		mg/l		NA	NA	1/Month	Grab
Dissolved Oxygen	NA		NA		mg/l	NA	1/Day	Grab
Total Residual Chlorine	mg/l		mg/l		NA	NA	1/Day	Grab

* INCLUDE ADDITIONAL MONITORING PARAMETERS AS NEEDED *

NL = No Limitation; monitoring required
NA = Not Applicable

a. The design flow of this treatment facility is ___ MGD.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

c. At least 85% removal for BOD_5 and TSS must be attained for this effluent (*use if necessary*)

Any other footnotes should be listed alphabetically.

3. Part II, Permit Boilerplate

CONDITIONS APPLICABLE TO ALL VPDES PERMITS

A. Monitoring.

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.

2. Monitoring shall be conducted according to procedures approved under Title 40 Code of Federal Regulations Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.

3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will insure accuracy of measurements.

B. Records.

1. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) and time(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Board.

C. Reporting Monitoring Results.

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place, unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to:

Regional office address

2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the Department.

3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under Title 40 of the Code of Federal Regulations Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this

monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to Provide Information.

The permittee shall furnish to the Department, within a reasonable time, any information which the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

E. Compliance Schedule Reports.

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

F. Unauthorized Discharges.

Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other 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 to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses.

G. Reports of Unauthorized Discharges.

Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F; or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F, shall notify the Department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after said discovery. A written report of the unauthorized discharge shall be submitted to the Department, within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the Department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of Unusual or Extraordinary Discharges.

If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the Department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit it to the Department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of Noncompliance

The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health.

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this paragraph:
   a. Any unanticipated bypass; and
   b. Any upset which causes a discharge to surface waters.
2. A written report shall be submitted within 5 days and shall contain:
   a. A description of the noncompliance and its cause;
   b. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
   c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The Board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Parts II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Parts II G, H and I may be made to the Department's Regional Office at (XXX) XXX-XXXX (voice) or (XXX) XXX-XXXX (fax). For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of Planned Changes.

1. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The permittee plans alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under Section 306 of Clean Water Act which are applicable to such source; or

(2) After proposal of standards of performance in accordance with Section 306 of Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

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

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

K. Signatory Requirements.

1. Applications. All permit applications shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and 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 partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports, etc. All reports required by permits, and other information requested by the Board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent

responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

c. The written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the Department prior to or together with any reports, or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

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

L. Duty to Comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to Reapply.

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. All permittees with a currently effective permit shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Board. The Board shall not grant permission for applications to be submitted later than the expiration date of the existing permit.

N. Effect of a Permit.

This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State Law.

Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by Section 510 of the

Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U), and "upset" (Part II V) nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and Hazardous Substance Liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Sections 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

Q. Proper Operation and Maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges.

Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to Mitigate.

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

T. Need to Halt or Reduce Activity not a Defense.

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

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts II U 2 and U 3.

2. Notice

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible at least ten days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the Board may take enforcement action against a permittee for bypass, unless:

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

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

(3) The permittee submitted notices as required under Part II U 2.

b. The Board may approve an anticipated bypass, after considering its adverse effects, if the Board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required in Part II I; and

d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and Entry.

The permittee shall allow the Director, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

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

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

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

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law, any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit Actions.

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

Y. Transfer of permits.

1. Permits are not transferable to any person except after notice to the Department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

a. The current permittee notifies the Department at least 30 days in advance of the proposed transfer of the title to the facility or property;

b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The Board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability.

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

SECTION MN-2
MUNICIPAL VPDES DRAFTING

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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 Board 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 Board 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 chlorine residual, 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 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	Totalizing, Indicating & Recording	Totalizing, Indicating & Recording	Totalizing, Indicating & Recording	Estimate
BOD_5, TSS(1), TKN, NH3	24- HC 5-7 Days/ Week	24- HC 5 Days/ Wk	8-HC 3 Days/ Wk	4-HC 1/ Wk	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 ½ Hr	4/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	3/Day at 4 Hr.Intervals	Grab 1/Day
Chlorine Effluent	Grab ½ Hr	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)	1/8,24 HC or 1/Month	1/8H, 24 HC or Grab 1/Month	1/8H, 8HC or Grab 1/Month	1/8H, 4HC or Grab 1/Month	Grab 1/Month

(1) Applicable when TSS limits required for water quality related reasons (e.g. TMDL,special standards or other regulations). Otherwise 1/month is acceptable.
(2) Applicable for the parameter that is limited in the individual VPDES permit. Annual average TN and TP limitations issued in the Chesapeake Bay watershed should include sample types and frequencies consistent with those included in the watershed general permit.
(3) BOD sampling frequency 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.

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

Based on facility performance, only facilities having exemplary operations that consistently meet permit requirements should be considered for reduced monitoring. No facilities are specifically excluded from the evaluation. However, to ensure protection of aquatic life and human health, disinfection and dechlorination parameters are not eligible for reduced monitoring.

To qualify for consideration of reduced monitoring requirements, the facility should not have been issued any Warning Letters, NOVs, or NULEs, or be under any Consent Orders, Consent Decrees, Executive Compliance Agreements, or related enforcement documents during the past three years. If the facility has had problems such as exceeding the 95% flow level, but has not yet been issued an enforcement action, it can still qualify for monitoring reduction. The ban on monitoring reductions applies if any part of the sewerage system, including another outfall at the treatment plant or collection lines owned by another person, have been subject to enforcement action in the past 3 years. If an upgraded facility replaces one that was under an enforcement action, the new facility can be considered for monitoring reduction after it produces 3 years of effluent data.

b. Monitoring Reductions

(1) For each eligible parameter, calculate the three-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 divided by the permit limit (X100), and the resulting percentage provides the potential monitoring frequency reduction.

(2) The baseline monitoring frequencies in the table will normally be considered the level of monitoring in the existing effective VPDES permit. 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. Data collected on a quarterly basis is not included in the baseline frequencies because it is not frequent enough to develop valid reduced monitoring statistics.

Allowable 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	1/2mos
2/month	2/mo	2/mo	2/mo	1/quarter
1/month	1/mo	1/mo	1/quarter	1/6mos

(3) New permittees and upgraded treatment facilities should generate three years of data before being eligible for consideration for reduced monitoring.

(4) 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.

(5) 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.

(6) 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.

(7) Temperature: Reduction of monitoring frequency can be considered on a case-by-case basis.

(8) Bacteria: Reduction of monitoring frequency when using TRC disinfection can be considered on a case-by-case basis 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 for minors. TRC contact tank monitoring cannot be reduced. Monitoring reductions for bacteria are not appropriate when using alternate disinfection. The 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			4 weekly samples			4 weekly samples			4 weekly samples
Minor					4 Weekly Samples							

c. Reinstating Higher Monitoring:

Permittees are expected to maintain the performance levels that were used as the basis for granting monitoring reductions. To remain eligible for these reductions, the permittee should not have any VPDES violations related to any of the effluent limitations for which reduced monitoring was granted. For facilities that do not maintain performance levels, reinstate the baseline frequencies for all parameters that previously had reduced monitoring.

d. Permit recommendations:

(1) List only the reduced monitoring requirements in the Part I.A. page of the permit, adding a footnote reference number following the Frequency column heading.

(2) Add the following footnote to the Part I.A. page: "See Part I._._ for additional instructions regarding effluent monitoring frequencies."

(3) Add the Effluent Monitoring Frequencies special condition at Part I._._:

e. 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 this guidance.

(2) 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 guidance 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.

(3) 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 well decide not to reduce monitoring of critical point sources in these instances. The permit writer should always apply Best Professional Judgement in setting monitoring frequencies.

(4) 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 guidance recommending reductions from established monitoring frequencies for these types of limits.

(5) Use of Daily Maximum Values: This guidance does 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. Reporting

The results of Part I A monitoring are reported on the DMR. DMRs are generally sent to the RO 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, but they should accompany the DMR. 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 monthly operational report with the DMR that details the results of the additional monitoring. In addition to the DMR, a monthly report covering the plant's general operational data may be requested by the RO.

B. Secondary and Equivalent to Secondary Treatment Limits

The flow chart is to be used to determine permit limits for existing facilities under the revised 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).** The flow chart is broken into three organizational structures:

- Can the facility meet conventional secondary treatment limits?

- Are there any special considerations to be addressed in order to set treatment limits?

- 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.

1. 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 9 of MN-2, 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.

2. Example 2

A .060 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 the next question asks "**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.

3. 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.

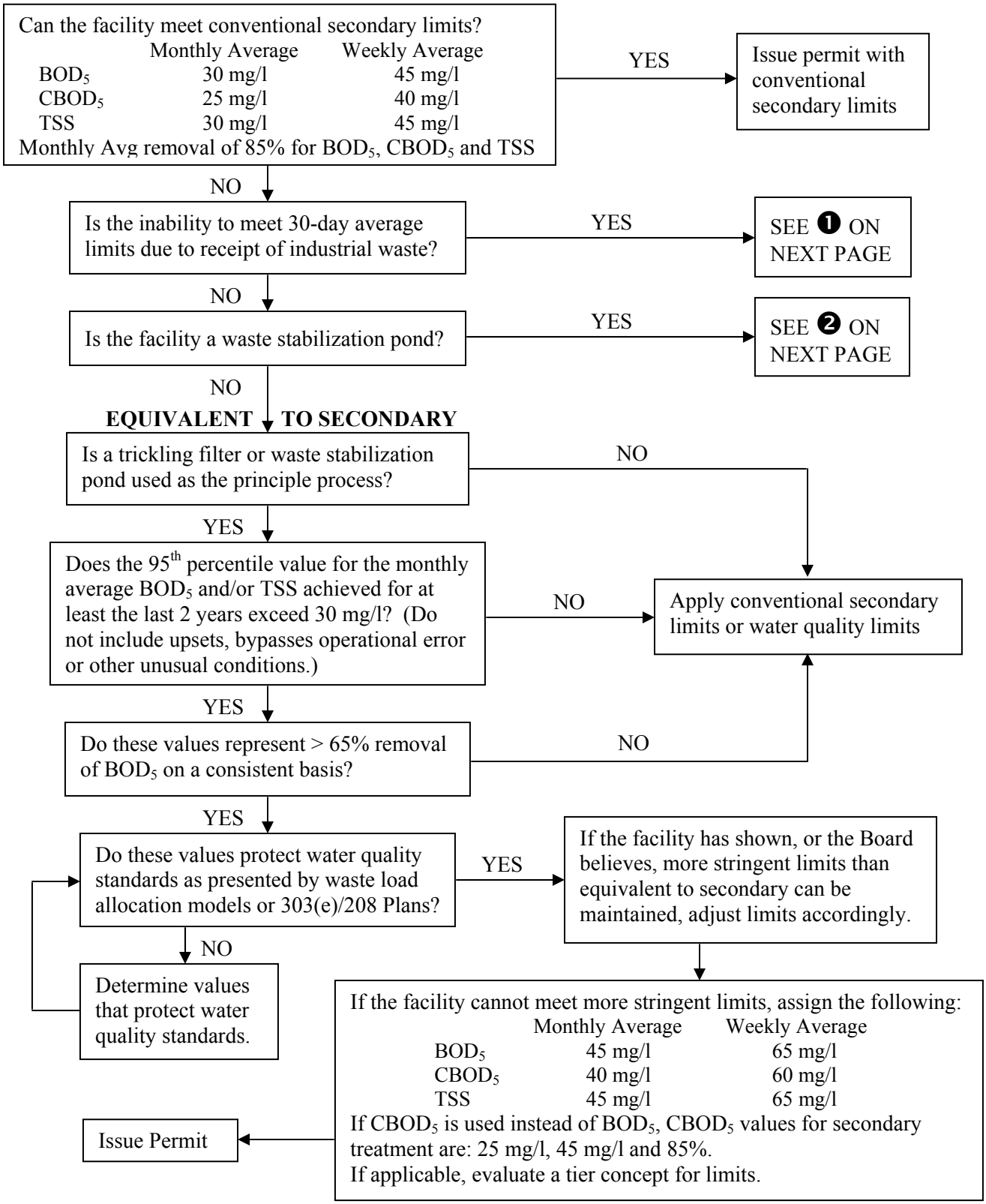
f. In the "no" direction the next question asks, "Is BOD > 30 mg/l?" The stated BOD of 40 mg/l is greater than 30 mg/l and the answer is "yes". Continuing in the "yes" direction the next box states, "**go to equivalent to secondary limitations**".

g. As in Example 2, move to the first box located under the heading "EQUIV. 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.

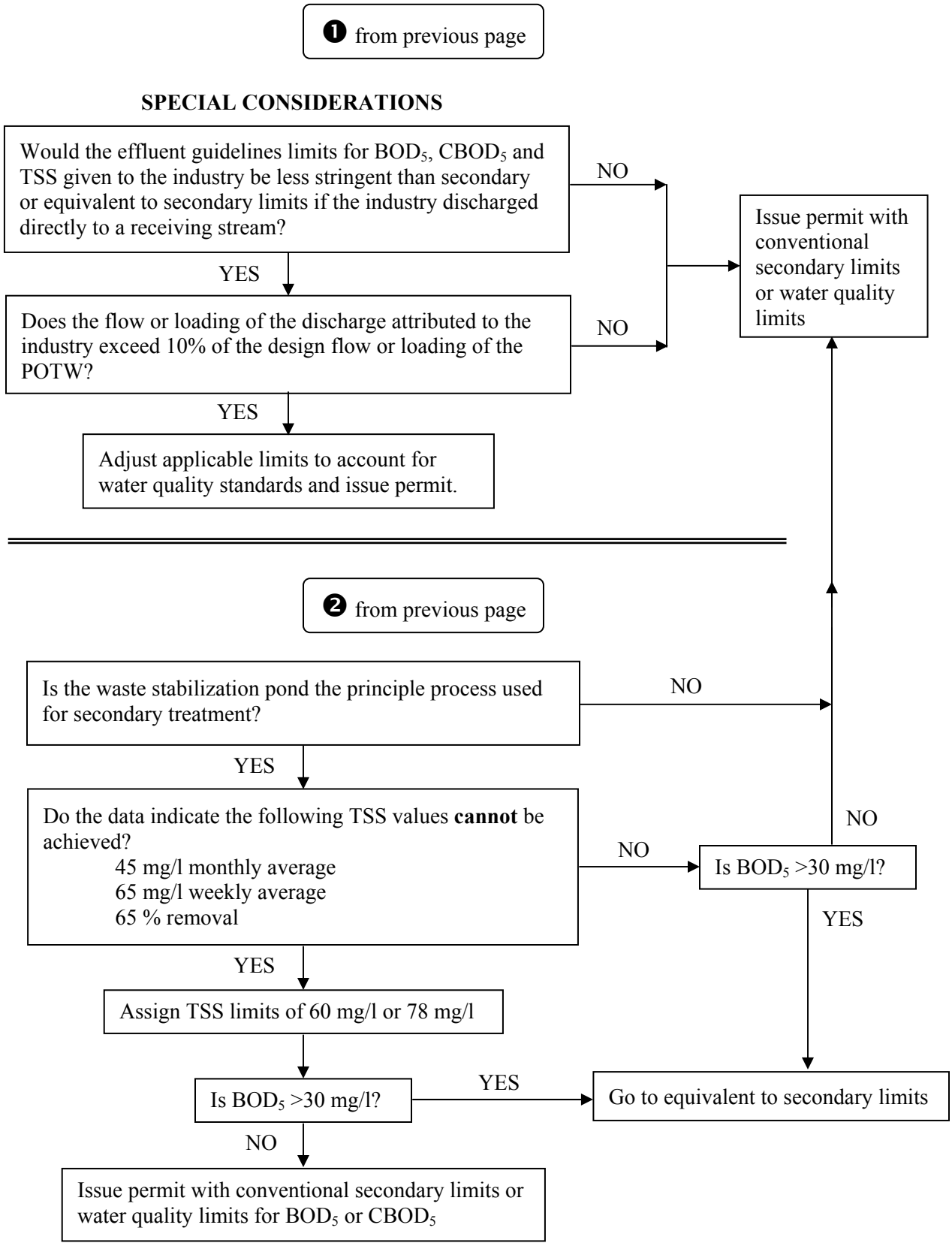
h. As before, once appropriate limits are determined, continue to process the permit.

4. Flow Chart: Equivalent to Secondary Treatment Regulation

PERMIT FOR REISSUANCE OR MODIFICATION FOR EXISTING FACILITY



4. Flow Chart: Equivalent to Secondary Treatment Regulation (cont'd)



C. Total Suspended Solids Limits for Waste Stabilization Pond Facilities

To comply with the Revised Secondary Treatment Regulation for Equivalent to Secondary Treatment and the flow chart on page 9 of MN-2, 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 or 78 limits

D. 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:

a. 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:

b. 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 construction of the ____ MGD treatment facilities and **[commencement of discharge or issuance of a Certificate to Operate]**, 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

a. 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.

b. 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

a. 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.

b. 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
2. 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

C. Schedule of Compliance
The permittee shall achieve compliance with the final limits for (insert applicable parameter) specified in Part I A., Page ___ **[or Page *]** in accordance with the following schedule:

1. Progress Reports Annually, after [t**he effective date of the permit.**]

2. Achieve compliance with final limits Within 4 years** of [**the effective date of the permit**].

No later than 14 calendar days following the dates identified in the above schedule, the permittee shall submit to the DEQ Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

** Where permittee has requested an expansion and the expansion limitations page is written to meet upgraded limits.*
*** Set deadline less than 4 years if reasonable.*
Note: Remember to require plans and specifications, revisions to an O & M Manual and Sludge Management Plan if they are affected by an expansion/upgrade.

5. Plant Expansion -- Chlorine Pages

Chlorine permit pages may need 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 OWPP 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. [DMR Code #157] The permittee shall monitor the TRC at the outlet of the chlorine contact tank prior to dechlorination [**1/___**] by grab sample.

(2) 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. [DMR Code #157] The permittee shall monitor the TRC at the outlet of the chlorine contact tank prior to dechlorination [**1/___**] by grab sample.

(3) No TRC sample collected prior to dechlorination shall be less than 0.6 mg/l. [DMR Code #213]

(4) 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)* bacteria per 100 ml of water shall not exceed the following:

DISCHARGE LIMITATIONS	MONITORING FREQUENCY	SAMPLE TYPE
MONTHLY GEOMETRIC MEAN		
E.coli (126N/100 ml) *(For discharges to freshwater)*	(Choose frequency from Table in A.4 above)	Grab (between 10am & 4pm)
enterococci (35N/100 ml) *(for Discharges to Saltwater and Transition Zone)*		

(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 LIMITATIONS	MONITORING FREQUENCY	SAMPLE TYPE
MONTHLY GEOMETRIC MEAN		
E.coli (126N/100 ml) *(For discharges to freshwater)*	(Choose frequency from Table in A.4 above)	Grab (between 10am & 4pm)
enterococci (35N/100 ml) *(for Discharges to Saltwater and Transition Zone)*		

d. Use an appropriately labeled separate and complete chlorine special condition for each flow tier.

E. 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 this guidance will be applied, it is necessary that these "self sustaining" effluent limits be utilized. Treat TRC and other toxics as “end of pipe” limits.

In keeping with the preceding discussion, OWPP has recommended the following effluent limits for discharges from municipal treatment facilities into swamp and marsh waters where the discharge cannot be easily modeled. 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)	

A TKN limit of 3.0 mg/l is stringent enough to protect any receiving waters from ammonia toxicity, hence an NH_3-N limit is unnecessary.

This guidance was condensed from a March 9, 1987 SWCB memo entitled "Advisory Notification of Effluent Limits for Swamp and Marsh Waters". Contact OWPP for additional information concerning these limits if you have questions or concerns.

F. Coordination with the Office of Wastewater Engineering

WQIF funded projects will be subject to full engineering review of the preliminary engineering report; plans, specifications, and design documents; and inspections of final projects by DEQ. WQIF funded projects will be reviewed by Gary Phillips, PE (gary.phillips@deq.virginia.gov).

For non-WQIF funded projects, the application forms for either a Certificate to Construct or Certificate to Operate must be completed by the owner and the design engineer. The forms are on the DEQ web site (http://www.deq.virginia.gov/wastewater). These forms are then submitted to the Water Permit Manager in the appropriate DEQ region who will assign them to permit staff for processing.

SECTION MN-3
MUNICIPAL VPDES SPECIAL CONDITIONS

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A. Municipal Special Conditions

The following pages contain text of common special conditions found in municipal permits. Some are to be included in all municipal permits while others may be used on a case-by-case basis. Rationales for these special conditions are found in the Fact Sheet. Permit writers should delete *italics notes and instructions* and resolve **bold items** before printing the special conditions.

Refer to Section III for recommendations on arrangement of the sections of Part I.

Reminder*:* Each permit page after the cover page has the following header in the upper right corner. Permit writers should ensure that the header is present and that the appropriate permit number and Part and Page numbers are printed.

Permit No. VA00**XXXXX**
Part X
Page X of X

1. Additional TRC Limitations and Monitoring Requirements

(*Use for all permits where chlorine is used for disinfection, Include the following sentence when chlorine is used as a backup to alternative disinfection; otherwise start with paragraphs a - d*):
If chlorine is chosen as a disinfection method **[instead of ultraviolet, etc...],** TRC shall be limited and monitored by the permittee as specified below:

a. The permittee shall monitor the TRC at the outlet of each operating chlorine contact tank [**frequency from sampling table in MN-2 A**] by grab sample.

b. No more than [**10% of total no. of monthly samples**] of all samples taken at the outlet of each chlorine contact tank shall be less than **X.X** mg/l for any one calendar month.

(*Note: for **X.X** in the above, use 1.5 mg/l for waters designated as public water supplies or shellfish waters and 1.0 mg/l for other waters (DMR # 157).)*

c. No TRC sample collected at each outlet of the chlorine contact tank shall be less than 0.60 mg/l *(DMR # 213)*.

d. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

(Insert the following item e (toxicity based effluent limits) in this special condition if chlorine is used as a backup to alternative disinfection or include as a limit on Part I A with a footnote that it applies when chlorine is used for disinfection. If chlorine is used as a backup the preceding paragraphs a. – d. must also be included in the special condition with the opening statement following 1. above to ensure adequate disinfection. More information on chlorine effluent limits may be found in Bacteria and Chlorine Limitations/Procedures MN-3 B).

e. If chlorination is chosen as a disinfection method, effluent TRC shall be limited and monitored, following dechlorination, by the permittee as specified below:

	Monthly Average	Weekly Average	Frequency	Sample Type
TRC (mg/l*) (DMR #005)*	**[Use values derived from waste load allocations]**	**[Use values derived from waste load allocations]**	**[Insert Frequency from Sampling Schedule Table in MN-2 A]**	Grab

(*Insert the following item f in this special condition if alternate disinfection may substitute for chlorine disinfection at the facility and the permit has no bacteria limits or less frequent bacteria monitoring in Part I A than the recommended bacteria monitoring frequency in MN-2 for alternate disinfection.)*

f. If chlorine disinfection is not used, *E. coli*/enterococci (*choose one*) shall be limited and monitored by the permittee as specified below and this requirement, if applicable, shall substitute for the TRC and *E. coli*/enterococci (*choose one*) requirements delineated elsewhere in Part I of this permit.

	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E. coli (N/100 ml) *(For Freshwater)*	126*	**[Insert Frequency from Sampling Schedule Table in MN-2 A]**	Grab
Enterococci *(For Saltwater and Transition Zones)*	35*	**[Insert Frequency from Sampling Schedule Table in MN-2 A]**	Grab
Fecal coliform *(For Shellfish Waters)*	200*	**[Insert Frequency from Sampling Schedule Table in MN-2 A]**	Grab

* Monthly Geometric Mean

2. *(Use this optional special condition only when chlorine demonstrations are used to verify that chlorine limits may be used in lieu of bacteria limits. The agency has already analyzed sufficient data to determine that chlorine limitations maintain E. coli criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation. See Bacteria and Chlorine Limitations/Procedures that follows for more information. The agency may not use this item 2 special condition and use chlorine as a surrogate for bacteria limits for majors or minors with an EPA approved TMDL that has a waste load allocation for bacteria for that facility – these TMDL facilities must have bacteria limits at all times. It is inappropriate to use this special condition to remove fecal coliform bacteria limits required for shellfish waters (see MN-3, Section B.2.c) or if a current or prior demonstration study failed to conclude that chlorine is an appropriate surrogate for bacteria.)*

Chlorine Demonstration Requirements for Bacteria Limits

a. Beginning no later than **[insert date no later than six months of the permit effective date]**, *E. coli,* enterococci *(choose one)* monitoring shall be performed at a minimum as prescribed below: Monitoring Frequency: [**select appropriate from below based on flow**]

Q≥1.0 MGD
3 per week by grab sample at 48 hour intervals between 10 a.m. and 4 p.m. until a minimum of 12 data points are collected.

Q<1.0 MGD
Once per week by grab sample between 10 a.m. and 4 p.m. until a minimum of 12 data points are collected.

Effluent flow shall be measured and chlorine residual after contact but before dechlorination shall be sampled within 15 minutes of the time each *E. coli,* enterococci *(choose one)* sample is taken. The date and time the samples were collected shall also be recorded. All data for each calendar month shall be compared to the geometric mean of *(choose one)* 126 colonies/ 100 ml *E. coli* / 35 colonies/100 ml enterococci.

b. No later than **[insert date no later than one year after the permit effective date]**, a demonstration of adequate disinfection as described in item c below shall be completed, or the limitations and monitoring requirements in item d shall become effective. No later than **[insert date no later than 14 days prior to one year after the permit effective date]** the permittee shall submit to the DEQ [**insert region**] regional office a written notice, including all data collected during the demonstration period. The written notice shall include the following:

(1) The original data set including the following information and data:

- date and time sample collected
- *E. coli,* enterococci *(choose one)* (colonies/100 ml)
- chlorine residual after contact but before dechlorination (mg/l)
- chlorine contact time (minutes)
- flow (mgd)

(2) The geometric mean calculations and results; and

(3) A summary of results in tabular format and a statement of successful or unsuccessful demonstration of the requirements of item c.

In the case of unsuccessful demonstration, the permittee shall comply with item d.

c. If there are no exceedences of the applicable *E. coli,* enterococci *(choose one)* criterion in a minimum of 12 consecutive samples collected under item a while chlorine limitations *are* being complied with, then upon written notification from DEQ, enterococci monitoring shall no longer be required.

d. If there are any exceedences of the applicable *E. coli,* enterococci *(choose one)* criterion in the data set collected under item a while chlorine limitations are being complied with, then:

The following limitations and monitoring requirements shall become effective for *E. coli,* enterococci *(choose one)* in accordance with the schedule of compliance in item (2) below:

EFFLUENT CHARACTERISTICS	MONITORING REQUIREMENTS		
	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E. coli (N/100 ml) *(For Freshwater)*	126*	[4/Month** **or See Bacteria Sampling Schedule Table in MN-2]**	Grab
Enterococci (N/100 ml) *(For Saltwater and Transition Zones)*	35*	[4/Month** **or See Bacteria Sampling Schedule Table in MN-2]**	Grab

* Monthly Geometric Mean

** Four samples taken during the calendar month weekly between 10a.m. and 4 p.m..(*NOTE: The sample frequency will be increased if the facility has alternate disinfection).* See MN-2 'Bacteria Sampling Schedule Table'

3. **95% Capacity Reopener** *(use in all POTW and PVOTW permits)* A written notice and a plan of action for ensuring continued compliance with the terms of this permit shall be submitted to [**insert RO**] when the monthly average flow influent to the sewage treatment plant reaches 95 percent of the design capacity authorized in this permit for each month of any three consecutive month period. The written notice shall be submitted within 30 days and the plan of action shall be received at the [**insert RO**] no

later than 90 days from the third consecutive month for which the flow reached 95 percent of the design capacity. The plan shall include the necessary steps and a prompt schedule of implementation for controlling any current or reasonably anticipated problem resulting from high influent flows. Failure to submit an adequate plan in a timely manner shall be deemed a violation of this permit.

4. **Indirect Dischargers** *(for all POTWs and for PVOTWs that treat waste from nondomestic dischargers that are not the owner of the treatment works)* The permittee shall provide adequate notice to the Department of the following:

a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of the Clean Water Act and the State Water Control Law if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of this permit.

Adequate notice shall include information on (i) the quality and quantity of effluent introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

5. **CTC, CTO Requirement** *(use in all municipal permits)* The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ Office of Wastewater Engineering (for Water Quality Improvement Funded (WQIF) projects) or submitted by the design engineer and owner to the DEQ regional water permit manager (for non WQIF projects) prior to constructing wastewater treatment works and operating the treatment works, respectively. Non-compliance with the CTC or CTO shall be deemed a violation of the permit.

6. **Operation and Maintenance Manual Requirement** *(use in all municipal permits)* The permittee shall develop an Operations and Maintenance (O & M) Manual for the treatment works. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of this permit. The manual shall be submitted to the DEQ Regional Office for approval within 90 days of [**the effective date of this permit OR issuance of Certificate to Operate OR commencement of discharge** *(if DMRs not required until commencement of discharge see Part III.10.b)*]. The permittee shall operate the treatment works in accordance with the approved O & M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent samples (and sludge samples if sludge analyses are required);

b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;

c. Discussion of Best Management Practices, if applicable;

d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.

e. Treatment works design, treatment works operation, routine preventive maintenance of units within the treatment works, critical spare parts inventory and record keeping; and,

f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

OR (*if approved O & M Manual already on file*) The permittee shall review the existing Operations and Maintenance (O & M) Manual and notify the DEQ Regional Office in writing within 90 days of [**the effective date of this permit]** whether it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office within 90 days of [**the effective date of this permit]**. The permittee will maintain an accurate, approved operation and maintenance manual for the treatment works. This manual shall detail the practices and procedures which will be followed to ensure compliance with the requirements of the permit. The permittee shall operate the treatment works accordance with the approved O&M Manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

a. Techniques to be employed in the collection, preservation, and analysis of effluent and sludge samples;
b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
c. Discussion of Best Management Practices, if applicable;
d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.
e. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping; and,
f. A plan for the management and/or disposal of waste solids and residues.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for DEQ Regional staff approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

7. **Licensed Operator Requirement** (*use when a licensed operator is required)* The permittee shall employ or contract at least one Class [**from law**] licensed wastewater works operator for this facility. The license shall be issued in accordance with Title 54.1 of the Code of Virginia and the regulations of the Board for Waterworks and Wastewater Works Operators. The permittee shall notify the Department in writing whenever he is not complying, or has grounds for anticipating he will not comply with this requirement. The notification shall include a statement of reasons and a prompt schedule for achieving compliance.

8. **Reliability Class** *(use in all municipal permits following the requirements in 9VAC25-790-70. VDH Office of Drinking Water should provide a recommendation for the reliability class upon review of the application.)* The permitted treatment works shall meet Reliability Class [**from VDH and 9 VAC 25-790-70**].

9. **Financial Assurance, Disclosure to Purchasers and/or Closure Plans** (*use the following condition for all privately owned sewerage systems that treat domestic wastewater generated by private residences and that discharge more than 1,000 gpd and less than 40,000 gpd*) The permittee shall provide continuous coverage to implement the approved closure plan until released from financial assurance requirements by the State Water Control Board. If a transfer of ownership or operational control of this facility occurs, the permittee shall comply with the requirements of 9VAC25-650 until the new owner or operator has demonstrated compliance with the requirements of 9VAC25-650. Failure to maintain adequate financial assurance in accordance with 9VAC25-650 shall be a basis for termination of this VDPES permit.
During the term of this VPDES permit, the permittee shall revise the closure plan implementation cost estimate concurrently with any revision made to the closure plan which increases the closure plan cost. At a minimum, the permittee shall annually adjust the closure plan implementation cost estimate in accordance with 9VAC25-650 within 60 days prior to the anniversary date of the establishment of the approved financial assurance mechanism.

The permittee shall disclose the provisions of this permit to all purchasers of property served by this permitted facility in accordance with Section 55-519 of the Code of Virginia.

(*insert the following for new or expanding privately owned sewerage systems that treat domestic wastewater generated by private residences and that discharge more than 1,000 gpd and less than 40,000 gpd discharges only*) The approved financial assurance mechanism shall be filed with the State Water Control Board no less than 90 days prior to [**discharge**][**the permitted increase in discharge**] to State waters. [**Discharge**][**An increase in discharge**] to State waters shall not be permitted unless and until an approved financial assurance mechanism is in place.

(use the following for all other sewerage systems not subject to Financial Assurance requirements or where a facility requests its exclusion due to a closure plan having been previously prepared under the SCAT regulations 9VAC25- 790-120.E.3(projects involving new construction or substantial modifications)) If the permittee plans an expansion or upgrade to replace the existing treatment works, or if the facility is permanently closed, the permittee shall submit to the DEQ Regional Office a closure plan for the existing treatment works. The plan shall address the following information as a minimum: Verification of elimination of sources and/or alternate treatment scheme; treatment, removal and final disposition of residual wastewater and solids; removal/demolition/disposal of structures, equipment, piping and appurtenances; site grading, and erosion and sediment control; restoration of site vegetation; access control; fill materials; and proposed land use (post-closure) of the site. The plan should contain proposed dates for beginning and completion of the work. The plan must be approved by the DEQ prior to implementation.

10. **Nutrient Enriched Waters Reopener** *(use for all discharges into Nutrient Enriched Waters)* This permit may be modified or alternatively revoked and reissued to include new or alternative nutrient limitations and/or monitoring requirements should the Board adopt nutrient standards for the waterbody receiving the discharge or if a future water quality regulation or statute requires new or alternative nutrient control.

11. **Water Quality Criteria Reopener** *(use when a water quality criteria parameter is monitored with no limit on the Part I A page).* Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

12. **Sludge Reopener** *(use in all TWTDS permits)* The Board may promptly modify or revoke and reissue this permit if any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the Clean Water Act is more stringent than any requirements for sludge use or disposal in this permit, or controls a pollutant or practice not limited in this permit.

13. **Total Maximum Daily Load (TMDL) Reopener** *(for all permits.)*
This permit shall be modified or alternatively revoked and reissued if any approved wasteload allocation procedure, pursuant to Section 303(d) of the Clean Water Act, imposes wasteload allocations, limits or conditions on the facility that are not consistent with the permit requirements.

14. **Water Quality Criteria Monitoring** (*See Section III.A.8. Use when water quality criteria monitoring is required and has not been obtained with the application.*) The permittee shall monitor the effluent at outfall _____ for the substances noted in Attachment A, "Water Quality Criteria Monitoring" according to the indicated analysis number, quantification level, sample type and frequency. Monitoring shall be initiated after the start of the third year from the permit's effective date. Using Attachment A as the reporting form, the data shall be submitted with the next application for reissuance which is due at least 180 days prior to the expiration date of this permit [*OR for facilities not built:* **Using Attachment A as the reporting form, the data shall be submitted no later than two years following the**

commencement of discharge or with the permit reissuance application if that application due date is less than two years after the commencement of discharge]. Monitoring and analysis shall be conducted in accordance with 40 CFR Part 136 or alternative EPA approved methods. It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sample gathering and analytical procedures. The DEQ will use these data for making specific permit decisions in the future. This permit may be modified or, alternatively, revoked and reissued to incorporate limits for any of the substances listed in Attachment A.

(The following pages are Attachment A. These pages will also serve as the reporting form for the monitoring results. They are placed in the permit at the end of Part I. Delete the parameters on the list that do not apply. Dioxin monitoring is only required for pulp and paper mills and oil refineries. Hardness monitoring is not necessary where salt water standards apply.

QLs for metals will equal the lesser of 0.4 WLAa or 0.6 WLAc, but not less than the lowest DEQ-certified metal specific method QL [which are Ag = 0.20; Al = 2.0; As = 1.0; Cd = 0.30; Cr = 0.50; Cu = 0.50; Fe = 1.0; Hg = 1.0; Mn = 0.20; Ni = 0.50; Pb = 0.50; Sb = 0.20; Se = 2.0; Zn = 2.0 (all in ug/l); all other QLs are to be taken directly from GM00-2011, as amended/updated.

The regional office may elect to allow the permittee to analyze for total recoverable metals. However, the regional office and the permittee must be aware that dissolved and/or clean metals analyses may be necessary at a later time.)

ATTACHMENT A

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

NOTE TO PERMIT WRITERS: Unnecessary parameters and this note should be deleted from the Attachment A table. The (PWS) note is there to advise us which chemicals apply only to PWS segments - include those chemicals only for PWS segments, but do not include the PWS symbol in the permit.

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-38-2	Arsenic, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-39-3	Barium, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7440-43-9	Cadmium, dissolved	(3)	(Insert target value)		G or C	1/5 YR
16065-83-1	Chromium III, dissolved [8]	(3)	(Insert target value)		G or C	1/5 YR
18540-29-9	Chromium VI, dissolved [8]	(3)	(Insert target value)		G or C	1/5 YR
7440-50-8	Copper, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7439-89-6	Iron, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7439-92-1	Lead, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7439-96-5	Manganese, dissolved	(3)	(Insert target value)		G or C	1/5 YR (PWS)
7439-97-6	Mercury, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-02-0	Nickel, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7782-49-2	Selenium, dissolved	(3)	(Insert target value)		G or C	1/5 YR (SW)
7782-49-2	Selenium, Total Recoverable	(3)	(Insert target value)		G or C	1/5 YR (FW)
7440-22-4	Silver, dissolved	(3)	(Insert target value)		G or C	1/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	1/5 YR
7440-66-6	Zinc, dissolved	(3)	(Insert target value)		G or C	1/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or C	1/5 YR
57-74-9	Chlordane	608	0.2		G or C	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	(4)	(5)		G or C	1/5 YR
72-54-8	DDD	608	0.1		G or C	1/5 YR
72-55-9	DDE	608	0.1		G or C	1/5 YR
50-29-3	DDT	608	0.1		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
8065-48-3	Demeton	(4)	(5)		G or C	1/5 YR
333-41-5	Diazinon	(4)	(5)		G or C	1/5 YR
60-57-1	Dieldrin	608	0.1		G or C	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or C	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or C	1/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or C	1/5 YR
72-20-8	Endrin	608	0.1		G or C	1/5 YR
7421-93-4	Endrin Aldehyde	(4)	(5)		G or C	1/5 YR
86-50-0	Guthion	(4)	(5)		G or C	1/5 YR
76-44-8	Heptachlor	608	0.05		G or C	1/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)		G or C	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)		G or C	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)		G or C	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)		G or C	1/5 YR
143-50-0	Kepone	(9)	(5)		G or C	1/5 YR
121-75-5	Malathion	(4)	(5)		G or C	1/5 YR
72-43-5	Methoxychlor	(4)	(5)		G or C	1/5 YR
2385-85-5	Mirex	(4)	(5)		G or C	1/5 YR
56-38-2	Parathion	(4)	(5)		G or C	1/5 YR
11096-82-5	PCB 1260	608	1.0		G or C	1/5 YR
11097-69-1	PCB 1254	608	1.0		G or C	1/5 YR
12672-29-6	PCB 1248	608	1.0		G or C	1/5 YR
53469-21-9	PCB 1242	608	1.0		G or C	1/5 YR
11141-16-5	PCB 1232	608	1.0		G or C	1/5 YR
11104-28-2	PCB 1221	608	1.0		G or C	1/5 YR
12674-11-2	PCB 1016	608	1.0		G or C	1/5 YR
1336-36-3	PCB Total	608	7.0		G or C	1/5 YR
8001-35-2	Toxaphene	608	5.0		G or C	1/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
120-12-7	Anthracene	625	10.0		G or C	1/5 YR
92-87-5	Benzidine	(4)	(5)		G or C	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0		G or C	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or C	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0		G or C	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0		G or C	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or C	1/5 YR
108-60-1	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or C	1/5 YR
117-81-7	Bis-2-ethylhexyl phthalate	625	10.0		G or C	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or C	1/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or C	1/5 YR
218-01-9	Chrysene	625	10.0		G or C	1/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or C	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or C	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or C	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or C	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or C	1/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or C	1/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or C	1/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or C	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or C	1/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or C	1/5 YR
206-44-0	Fluoranthene	625	10.0		G or C	1/5 YR
86-73-7	Fluorene	625	10.0		G or C	1/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or C	1/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or C	1/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or C	1/5 YR
67-72-1	Hexachloroethane	(4)	(5)		G or C	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or C	1/5 YR
78-59-1	Isophorone	625	10.0		G or C	1/5 YR
98-95-3	Nitrobenzene	625	10.0		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or C	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or C	1/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or C	1/5 YR
129-00-0	Pyrene	625	10.0		G or C	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or C	1/5 YR
VOLATILES						
107-02-8	Acrolein	(4)	(5)		G	1/5 YR
107-13-1	Acrylonitrile	(4)	(5)		G	1/5 YR
71-43-2	Benzene	624	10.0		G	1/5 YR
75-25-2	Bromoform	624	10.0		G	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0		G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0		G	1/5 YR
67-66-3	Chloroform	624	10.0		G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0		G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0		G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)		G	1/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)		G	1/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)		G	1/5 YR
100-41-4	Ethylbenzene	624	10.0		G	1/5 YR
74-83-9	Methyl Bromide	(4)	(5)		G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)		G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0		G	1/5 YR
10-88-3	Toluene	624	10.0		G	1/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)		G	1/5 YR
79-01-6	Trichloroethylene	624	10.0		G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0		G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
RADIONUCLIDES						
	Beta Particle & Photon Activity (mrem/yr)	(4)	(5)		G or C	1/5 YR (PWS)
	Gross Alpha Particle Activity (pCi/L)	(4)	(5)		G or C	1/5 YR (PWS)
	Combined Radium 226 and 228	(4)	(5)		G or C	1/5 YR (PWS)
	Uranium	(4)	(5)		G or C	1/5 YR (PWS)
ACID EXTRACTABLES [6]						
95-57-8	2-Chlorophenol	625	10.0		G or C	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or C	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0		G or C	1/5 YR
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or C	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or C	1/5 YR
25154-52-3	Nonylphenol	(4)	(5)		G or C	1/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or C	1/5 YR
108-95-2	Phenol	625	10.0		G or C	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or C	1/5 YR
MISCELLANEOUS						
776-41-7	Ammonia as NH3-N	350.1	200		C	1/5 YR
16887-00-6	Chlorides	(4)	(5)		C	1/5 YR (FW and PWS)
7782-50-5	Chlorine Produced Oxidant	(4)	(5)		G	1/5 YR (SW)
7782-50-5	Chlorine, Total Residual	(4)	100		G	1/5 YR
57-12-5	Cyanide, Free	(4)	10.0		G	1/5 YR
94-75-7	2,4 Dichlorophenoxy acetic acid (synonym = 2,4-D)	(4)	(5)		G or C	1/5 YR (PWS)
1746-01-6	Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin) (ppq)	1613	0.00001		G or C	1/5 YR [Paper Mills & Oil Refineries]
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)		G	1/5 YR
N/A	Foaming Agents (as MBAS)	(4)	(5)		G	1/5 YR (PWS)
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or C	1/5 YR
14797-55-8	Nitrate as N (mg/L)	(4)	(5)		C	1/5 YR (PWS)
N/A	Sulfate (mg/L)	(4)	(5)		C	1/5 YR (PWS)
N/A	Total Dissolved Solids (mg/L)	(4)	(5)		C	1/5 YR (PWS)
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)		G or C	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL(1)	REPORTING RESULTS	SAMPLE TYPE(2)	SAMPLE FREQUENCY
93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	(4)	(5)		G or C	1/5 YR (PWS)
471-34-1	Hardness (mg/L as $CaCO_3$)	(4)	(5)		G or C	1/5 YR

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

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. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as 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.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour **(PW - Revise as required to require same composite duration as BOD_5)** composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	1632
Chromium(8)	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	1639
Copper	1638; 1640

Lead	1637; 1638; 1640
Mercury	1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenols requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

15. **Compliance Reporting** *[Use for permit with water quality-based limits in Part I A and B.]*

a. The quantification levels (QL) shall be less than or equal to the following concentrations: *[add or delete parameters as applicable]*

Effluent Parameter	Quantification Level
BOD5	5.0 mg/l
TSS	1.0 mg/l
Chlorine	0.10 mg/l
Ammonia-N	0.20 mg/l
Oil&Grease	5.0 mg/l
COD	10 mg/l
TKN	0.50 mg/l
Color	1.0 pcu
Total Recoverable *[Metal]*	x.x ug/l *[See Note]*

[NOTE: QLs for metals equal the lesser of 0.4 WLAa OR 0.6 WLAc, but not less than the lowest DEQ-certified metal specific method QL which are: Ag = 0.20; Al = 2.0; *As = 1.0; Cd = 0.30; Cr = 0.50; Cu = 0.50; Fe = 1.0; Hg = 1.0; Mn = 0.20; Ni = 0.50; Pb = 0.50; Sb = 0.20; Se = 2.0; Zn = 2.0 (all in ug/l)]; all other QLs are taken directly from GM00-2011, as amended/updated.]*

The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method. It is the responsibility of the permittee to ensure that proper quality assurance/quality control (QA/QC) protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained. The permittee shall use any method in accordance with Part II A of this permit.

b. **Monthly Average** -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the

QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as it is reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the Discharge Monitoring Report (DMR) as calculated. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported monthly average concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the monthly average of the calculated daily quantities

Weekly Average -- Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each complete calendar week and entirely contained within the reporting month. The maximum value of the weekly averages thus determined shall be reported on the DMR. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the weekly average shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported weekly average concentration is <QL, then report "<QL" for the quantity. . Otherwise use the reported concentration data (including the defined zeros) and flow data for each sample day to determine the daily quantity and report the maximum weekly average of the calculated daily quantities.

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Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in subsection a. of this permit condition shall be determined as follows: All concentration data below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as zero. All concentration data equal to or above the QL used for the analysis (QL must be less than or equal to the QL listed in a. above) shall be treated as reported. An arithmetic average shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data are below the QL used for the analysis (QL must be less than or equal to the QL listed in a. above), then the maximum value of the daily averages shall be reported as "<QL". If reporting for quantity is required on the DMR and the reported daily maximum concentration is <QL, then report "<QL" for the quantity. Otherwise use the reported daily average concentrations (including the defined zeros) and corresponding daily flows to determine daily average quantities and report the maximum of the daily average quantities during the reporting month.

Single Datum - Any single datum required shall be reported as "<QL" if it is less than the QL used for the analysis (QL must be less than or equal to the QL listed in a. above). Otherwise the numerical value shall be reported.

c. **Significant Digits** -- The permittee shall report at least the same number of significant digits as the permit limit for a given parameter. Regardless of the rounding convention used by the permittee (i.e., 5 always rounding up or to the nearest even number), the permittee shall use the convention consistently, and shall ensure that consulting laboratories employed by the permittee use the same convention.

16. **Instream Monitoring** *(use where applicable).* The permittee shall submit a plan for monitoring of the receiving stream which shall include the following components, at a minimum:

a. Sampling/monitoring station locations, including a map with the locations noted. *[The permit writer may designate specific locations upstream and/or downstream of the discharge point. If a plan has been previously approved, cite the plan and date of approval.]*

b. [Specify monitoring parameters, frequency and sample types. Specify analytical methods and quantification levels.]

c. [Specify implementation criteria (when sampling should begin) and reporting mechanism (attached to DMR, submitted by the 10th day of the following month).]

d. If the results of this monitoring indicate actual or potential water quality standard violations, the permit may be modified, or alternately, revoked and reissued, in order to incorporate more stringent permit requirements.

17. **Sludge Use and Disposal** *(The following special conditions are for specific permits for TWTDS. Use as appropriate.)*
(For all POTWs and any other treatment works treating domestic sewage, except for conditional approval given under the next special condition.) The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices.

(*For new or proposed POTWs and any other treatment works treating domestic sewage only when a complete SMP cannot be formulated prior to plans and specs approval.)* The Sludge Management Plan (SMP) is conditionally approved with the issuance of this permit, provided that a complete SMP is submitted and approved prior to implementation of the specific sludge use or disposal practices. ***(OR the complete SMP shall be submitted for DEQ approval at least 180 days prior to commencing operation)*** Upon approval, the SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by the chosen sewage sludge use or disposal practices.

(For POTWs and any other treatment works treating domestic sewage where there is not an approved SMP on file or the SMP needs to be revised after permit issuance.) The permittee shall, within 120 days of the ***(effective date of the permit OR completion of construction)***, submit for DEQ approval a ***(revised)*** Sludge Management Plan (SMP). The SMP shall include information on sewage sludge and biosolids sampling and testing, operational testing and control and recordkeeping necessary to document the quality and proper use and disposal of sewage sludge and biosolids. The permittee shall conduct all biosolids use and disposal activities in accordance with the approved SMP, which becomes an enforceable part of the permit upon approval.

******See Sludge guidance in Section MN for more Special Conditions, use as needed***

18. **Effluent Monitoring Frequencies** *(For permits that are being reissued with reduced monitoring frequency)*
If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then all of the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration.

(List all of the parameters that previously had reduced monitoring frequencies here and add the monitoring frequencies that would routinely be assigned for those parameters.)

No other effluent limitations or monitoring requirements are affected by this special condition.

19. **Pretreatment Program**
(For POTWs with flows ≥40,000 GPD and no approved/CONDITIONAL PROGRAM)

a. Within 180 days of the effective or modification date of this permit, the permittee shall submit to the DEQ Regional Office a survey of all Industrial Users discharging to the POTW. The information shall be submitted on the DEQ Discharger Survey Form, or an equivalent form that includes the quantity and quality of the wastewater. Survey results shall include the identification of significant industrial users of the POTW.

b. Should evaluation by the DEQ of results of the Industrial User survey conducted in accordance with item a above indicate that the permittee is not required to implement a pretreatment program, the requirements for program development described in item d below may be suspended by the DEQ.

c. If Categorical Industrial User(s) are identified, or if the permittee or DEQ determines that the industrial user(s) have potential to adversely affect the operation of the POTW or cause violation(s) of federal, state or local standards or requirements, the permittee shall develop and submit to the DEQ Regional Office within one year of written notification by DEQ a pretreatment program for approval. The program shall enable the permittee to control by permit the Significant Industrial Users* discharging wastewater to the treatment works.

d. The approvable pretreatment program submission shall at a minimum contain the following parts:

    (1) Legal authority,
    (2) Program procedures,
    (3) Funding and resources,
    (4) Local limits evaluation, and local limits if needed,
    (5) Enforcement response plan, and
    (6) List of Significant Industrial Users *.

e. Where the permittee is required to develop a pretreatment program, they shall submit to the DEQ Regional Office an annual report no later than January 31 of each year and must include:

    (1) An updated list of the Significant Industrial Users* noting all of the following:
        (A) facility address, phone and contact name
        (B) explanation of SIUs deleted from the previous years list
        (C) identify which IUs are subject to Categorical Standards and note which Standard (ie. metal finishing)
        (D) specify which 40 CFR part(s) is/are applicable
        (E) indicate which IUs are subject to local standards that are more stringent than Categorical Pretreatment Standards
        (F) indicate which IUs are subject only to local requirements
        (G) identify which IUs are subject to Categorical Pretreatment Standards that are subject to reduced reporting requirements under 9VAC25-31-840 E.3.
        (H) identify which IUs are non-significant Categorical Industrial Users

    (2) A summary of the compliance status of each Significant Industrial User with pretreatment standards and permit requirements.

    (3) A summary of the number and types of Significant Industrial User sampling and inspections performed by the POTW.

    (4) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to Significant Industrial Users and enforcement actions taken to alleviate said events.

(5) A description of all enforcement actions taken against Significant Industrial Users over the previous 12 months.

(6) A summary of any changes to the submitted pretreatment program that have not been previously reported to the DEQ Regional Office.

(7) A summary of the permits issued to Significant Industrial Users since the last annual report.

(8) POTW and self-monitoring results for Significant Industrial Users determined to be in significant non-compliance during the reporting period.

(9) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.

(10) Copies of newspaper publications of all Significant Industrial Users in significant non-compliance during the reporting period. This is due no later than March 31 of each year.

(11) Signature of an authorized representative.

f. The DEQ may require the POTW to institute changes to the legal authority regarding Significant Industrial User permit(s):

(1) If the legal authority does not meet the requirements of the Clean Water Act, Water Control Law or State regulations;

(2) If problems such as interferences, pass-through, violations of water quality standards or sludge contamination develop or continue; and

(3) If federal, state or local requirements change.

***A significant industrial user is one that:**

- Has an average flow of 25,000 gallons or more per workday of process** wastewater;
- Contributes a process wastestream which makes up 5.0-percent or more of the average dry weather hydraulic or organic capacity of the POTW;
- Is subject to the categorical pretreatment standards; or
- Has significant impact, either singularly or in combination with other Significant Dischargers, on the treatment works or the quality of its effluent.

**Excludes sanitary, non-contact cooling water and boiler blowdown.

(*FOR POTWS WITH APPROVED/CONDITIONAL PROGRAMS***)**

a. The permittee's pretreatment program has been approved. The program is an enforceable part of this permit. The permittee shall:

(1) Implement a pretreatment program that complies with the Clean Water Act, Water Control Law, State regulations and the approved program.

(2) Submit to the DEQ Regional Office an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31 of each year and shall include:

(A) An updated list of the Significant Industrial Users* noting all of the following:

1. facility address, phone and contact name
2. explanation of SIUs deleted from the previous years list
3. identify which IUs are subject to Categorical Standards and note which Standard (ie. metal finishing)
4. specify which 40 CFR part(s) is/are applicable
5. indicate which IUs are subject to local standards that are more stringent than Categorical Pretreatment Standards
6. indicate which IUs are subject only to local requirements
7. identify which IUs are subject to Categorical Pretreatment Standards that are subject to reduced reporting requirements under 9 VAC 25-31-840 E.3.
8. identify which IUs are non-significant Categorical Industrial Users

(B) A summary of the compliance status of each Significant Industrial User with pretreatment standards and permit requirements.

(C) A summary of the number and types of Significant Industrial User sampling and inspections performed by the POTW.

(D) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to Significant Industrial Users and enforcement actions taken to alleviate said events.

(E) A description of all enforcement actions taken against Significant Industrial Users over the previous 12 months.

(F) A summary of any changes to the submitted pretreatment program that have not been previously reported to the DEQ Regional Office.

(G) A summary of the permits issued to Significant Industrial Users since the last annual report.

(H) POTW and self-monitoring results for Significant Industrial Users determined to be in significant non-compliance during the reporting period.

(I) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.

(J) Copies of newspaper publications of all Significant Industrial Users in significant non-compliance during the reporting period. This is due no later than March 31 of each year.

(K) Signature of an authorized representative.

(3) Submit any changes to the approved pretreatment program to the DEQ Regional Office and obtain approval before implementation of the changes.

(4) Ensure all Significant Industrial Users' permits are issued and reissued in a timely manner and that the Significant Industrial User permits issued by the POTW are effective and enforceable.

(5) Inspect and sample all Significant Industrial Users at a minimum of once a year.

(A) Sampling shall include all regulated parameters, and shall be representative of the wastewater discharged.

(B) Inspection of the Significant Industrial Users shall cover all areas which could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and Significant Industrial User's self-monitoring and records.

(6) Implement the reporting requirements of Part VII of the VPDES Permit Regulation.

(7) Review the Enforcement Response Plan (ERP) and ensure it meets state and federal regulatory requirements. The approved ERP is an enforceable part of this permit and shall be implemented.

(8) Develop local limits or reevaluate local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to the DEQ Regional Office within one year of the effective or modification date. All Significant Industrial Users shall be sampled at the end of any categorical process and at the entrance to the treatment works.

(9) Ensure that adequate resources are available to implement the approved program.

(10) Meet all public participation requirements and annually public notice Significant Industrial Users in significant non-compliance with pretreatment standards and requirements for the previous 12 months.

(11) Within 180 days of the effective or modification date of this permit, submit to the DEQ Regional Office a survey of all Industrial Users discharging to the POTW. The information shall be submitted to the POTW on the DEQ's Discharger Survey Form or an equivalent form that includes the quantity and quality of the wastewater. Survey results shall include the identification of significant industrial users of the POTW.

(12) In lieu of the survey, the permittee may elect to develop, submit for approval and implement the plan to continuously survey the industrial community in their jurisdiction.

b. The DEQ may require the POTW to institute changes to its pretreatment program:

(1) If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;

(2) If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; and

(3) If federal, state or local requirements change.

*A significant industrial user is one that:

- Has an average flow of 25,000 gallons or more per average workday of process** wastewater;
- Contributes a process wastestream which makes up 5.0-percent or more of the average dry weather hydraulic or organic capacity of the POTW;
- Is subject to the categorical pretreatment standards; or
- Has significant impact, either singularly or in combination with other Significant Dischargers, on the treatment works or the quality of its effluent.

**Excludes sanitary, non-contact cooling water and boiler blowdown.

(*FOR POTWS WITH APPROVED PRETREATMENT PROGRAMS AND NO IDENTIFIED SIUs)*

a. The permittees pretreatment program has been approved. The program is an enforceable part of this permit. The permittee shall:

   (1) Within 180 days of the effective or modification date of this permit, submit to the DEQ Regional Office a survey of all Industrial Users discharging to the POTW. The information shall be submitted to the POTW on the DEQ's Discharger Survey Form or an equivalent form that includes the quantity and quality of the wastewater. Survey results shall include the identification of significant industrial users of the POTW.

   (2) In lieu of the survey, the permittee may elect to develop, submit for approval and implement the plan to continuously survey the industrial community in their jurisdiction.

b. Upon determination of receiving process wastewater from a Significant Industrial User* to this treatment works, the permittee shall:

   (1) Notify the DEQ, in writing within five (5) days;

   (2) Implement the approved pretreatment program that complies with the Clean Water Act, Water Control Law and State regulations;

   (3) Submit to the DEQ Regional Office, an annual report that describes the permittee's program activities over the previous year. The annual report shall be submitted no later than January 31 of each year and shall include:

      (A) An updated list of the Significant Industrial Users* noting all of the following:
         1. facility address, phone and contact name
         2. explanation of SIUs deleted from the previous years list
         3. identify which IUs are subject to Categorical Standards and note which Standard (ie. metal finishing)
         4. specify which 40 CFR part(s) is/are applicable
         5. indicate which IUs are subject to local standards that are more stringent than Categorical Pretreatment Standards
         6. indicate which IUs are subject only to local requirements

7. identify which IUs are subject to Categorical Pretreatment Standards that are subject to reduced reporting requirements under 9 VAC 25-31-840 E.3.
8. identify which IUs are non-significant Categorical Industrial Users

(B) A summary of the compliance status of each Significant Industrial User with pretreatment standards and permit requirements.

(C) A summary of the number and types of Significant Industrial User sampling and inspections performed by the POTW.

(D) All information concerning any interference, upset, VPDES permit or Water Quality Standards violations directly attributable to Significant Industrial Users and enforcement actions taken to alleviate said events.

(E) A description of all enforcement actions taken against Significant Industrial Users over the previous 12 months.

(F) A summary of any changes to the submitted pretreatment program that have not been previously reported to the DEQ Regional Office.

(G) A summary of the permits issued to Significant Industrial Users since the last annual report.

(H) POTW and self-monitoring results for Significant Industrial Users determined to be in significant non-compliance during the reporting period.

(I) Results of the POTW's influent/effluent/sludge sampling, not previously submitted to DEQ.

(J) Copies of newspaper publications of all Significant Industrial Users in significant non-compliance during the reporting period. This is due no later than March 31 of each year.

(K) Signature of an authorized representative.

(4) Submit any changes to the approved pretreatment program to the DEQ Regional Office and obtain approval before implementation of the changes.

(5) Ensure all Significant Industrial User's permits are issued and reissued in a timely manner and that the Significant Industrial User permits issued or reissued by the POTW are effective and enforceable.

(6) Inspect and sample all Significant Industrial Users at a minimum of once a year.

(A) Sampling shall include all regulated parameters, and shall be representative of the wastewater discharged.

(B) Inspection of the Significant Industrial Users shall cover all areas which could result in wastewater discharge to the treatment works including manufacturing, chemical storage, pretreatment facilities, spill prevention and control procedures, hazardous waste generation and Significant Industrial User's self-monitoring and records.

(7) Implement the reporting requirements of Part VII of the VPDES Permit Regulation.

(8) Review the Enforcement Response Plan (ERP) and ensure it meets state and federal regulatory requirements. The approved ERP is an enforceable part of this permit and shall be implemented.

(9) Develop local limits or reevaluate local limits using current influent, effluent and sludge monitoring data and submit the data and results of the evaluation to the DEQ Regional Office within one year of the effective or modification date. All Significant Industrial Users shall be sampled at the end of any categorical process and at the entrance to the treatment works.

(10) Ensure that adequate resources are available to implement the approved program.

(11) Meet all public participation requirements and annually public notice Significant Industrial Users in significant non-compliance with pretreatment standards and requirements for the previous 12 months.

c. The DEQ may require the POTW to institute changes to its pretreatment program:

(1) If the approved program is not implemented in a way satisfying the requirements of the Clean Water Act, Water Control Law or State regulations;

(2) If problems such as pass-through, interference, water quality standards violations or sludge contamination develop or continue; and

(3) If federal, state or local requirements change.

*A significant industrial user is one that:

- Has an average flow of 25,000 gallons or more per workday of process** wastewater;
- Contributes a process wastestream which makes up 5.0 percent or more of the average dry weather hydraulic or organic capacity of the POTW;
- Is subject to the categorical pretreatment standards; or
- Has significant impact, either singularly or in combination with other Significant Dischargers, on the treatment works or the quality of its effluent.

**Excludes sanitary, non-contact cooling water and boiler blowdown.

20. **Ground Water Monitoring Plan** *(use this condition when requesting a new ground water monitoring plan)* Within 90 days of the effective date of this permit, the permittee shall submit to the Board's Regional Office an approvable ground water monitoring plan. The purpose of this plan will be to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. This plan must be approved by the _____ Regional Office. As a minimum, the plan shall contain the following sections:

A. Introduction

B. Geologic Information

C. Monitoring Well Design and Installation (Borehole and monitoring well records shall be submitted after well installation)

D. Parameters To Be Monitored and Sampling Frequency (As a minimum, all parameters will be monitored quarterly for a period of two years)

E. Sampling Protocol

All monitoring wells shall be installed and monitoring initiated within 180 days of plan approval. Once approved, the plan shall be incorporated into the permit by reference with the next modification or reissuance and become an enforceable part of this permit.

If monitoring results indicate that any unit has contaminated the ground water, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. In addition, based on the extent of contamination, a risk analysis may be required. Once approved, this plan and/or analysis shall become an enforceable part of this permit.

NOTE TO PERMIT WRITER: Any additional schedules needed for the submittal of borehole logs and monitoring well construction logs, as well as potentiometric surface maps can also be included in the condition. In addition, the permit writer may add certain minimum requirements (eg. minimum number of wells, parameters to be monitored, monitoring frequency, etc.). Finally, for large facilities, the condition could require the permittee to perform the statistics on the ground water data (at a 5% level of significance).

OR

(*Use this condition when a monitoring plan has been approved and monitoring is to continue under that approved plan*) The permittee shall continue sampling and reporting in accordance with the ground water monitoring plan approved on [**DATE**]. The purpose of this plan is to determine if the system integrity is being maintained and to indicate if activities at the site are resulting in violations of the Board's Ground Water Standards. The approved plan is an enforceable part of the permit. Any changes to the plan must be submitted for approval to the _____ Regional Office.

If monitoring results indicate that any unit has contaminated the ground water, the permittee shall submit a corrective action plan within 60 days of being notified by the regional office. The plan shall set forth the steps to be taken by the permittee to ensure that the contamination source is eliminated or that the contaminant plume is contained on the permittee's property. In addition, based on the extent of contamination, a risk analysis may be required. Once approved, this plan and/or analysis shall be incorporated into the permit by reference and become an enforceable part of this permit.

(Use the following special condition to demonstrate the integrity of a lagoon liner; suspect leaking lagoon)

1. Within 60 days after the **[effective/modification]** date of this permit, the permittee shall submit to the DEQ [**Regional Office**] for approval:
   a. a protocol for establishing a valid water balance for the earthen lagoon, or
   b. a protocol for monitoring ground water quality impacts due to lagoon leakage, or
   c. documentation that the lagoon's permeability is not greater than 10^{-6} cm/sec.
2. If the water balance option is selected, then the following requirements shall apply:
   a. Within 60 days after the approval of the protocol, the permittee, utilizing the approved protocol, shall submit a valid monthly water balance for this facility. Thereafter, the permittee shall submit a valid water balance monthly for 12 consecutive months, due by the tenth of each month for the previous month's performance.
   b. Should any monthly water balance indicate lagoon liner permeability in excess of 10^{-6} cm/sec, the permittee, upon written notification by the Regional Director, shall within 60 days of such notification submit for approval a plan and schedule for corrective action. If the corrective action plan

specifies installation of a liner, the liner must exhibit a coefficient of permeability of no more than 10^{-6} cm/sec.

3. If the ground water monitoring program option is selected, then the following requirements shall apply:

a. Within 60 days of approval of the protocol, the permittee, utilizing the approved protocol, shall submit valid ground water monitoring data. Thereafter, the permittee shall submit ground water monitoring data in accordance with the protocol schedule.

b. Should this ground water monitoring data indicate contamination to ground water, the permittee, upon written notification by the Regional Director, shall within 60 days of such notification submit for approval a plan and schedule for corrective action. If the corrective action plan specifies installation of a liner, the liner must exhibit a coefficient of permeability of no more than 10^{-6} cm/sec.

21. **Whole Effluent Toxicity Testing**

Refer to the TMP implementation guidance for special condition text and rationale regarding TMP implementation.

22. **Storm Water Management**: *The following sections should be placed in every municipal permit where the facility qualifies under Category (9) of the definition of "storm water discharge associated with industrial activity". (All other sources of industrial storm water, even if municipally owned, should use the conditions described in* ***Section IN – Industrial****. See* ***Section III*** *for guidance). The storm water management permit sections include: Part I B 1, the general storm water special conditions; Part I B 2, the generic storm water pollution prevention plan requirements; and Part I B 3, the sector-specific pollution prevention plan requirements for municipal treatment works. The designation of Parts I B 1, I B 2 and I B 3 will have to be changed to match the appropriate designation in the permit being drafted.* ***Note: there are several cross-references within the body of the conditions that must be changed to match the new Part designations. These are shown in*** **Boldface** ***in the conditions.***

Section 1.01 <u>General Storm Water Special Conditions.</u>

1. General Storm Water Special Conditions.

a. <u>Quarterly Visual Examination of Storm Water Quality.</u>

(1) The permittee must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination(s) must be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination must be made during daylight hours (e.g., normal working hours). If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation must be signed and certified in accordance with **Part II K** ***(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)*** of this permit.

(2) Visual examinations must be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed one hour) of when the runoff or snowmelt begins discharging from the facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snowmelt samples) must be collected from the discharge resulting from a storm event results in an actual discharge from the site (defined as a "measurable storm event"), and that occurs at least 72 hours from the previously measurable storm event. The 72-hour storm interval is waived if the permittee is able to document that less than a 72-hour interval is representative

for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, the permittee is excused from visual monitoring for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred during daylight hours that resulted in storm water runoff during that quarter. The documentation must be signed and certified in accordance with **Part II K** ***(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)***.

(3) The visual examination reports must be maintained on-site with the Storm Water Pollution Prevention Plan (SWPPP). The report must include the outfall location, the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) If the facility has two or more outfalls that discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, the permittee may conduct visual monitoring on the effluent of just one of ~~-~~the outfalls and report that the observations also apply to the substantially identical outfall(s), provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area (i.e., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)) shall be provided in the plan.

(5) When the permittee is unable to conduct the visual examination due to adverse climatic conditions, the permittee must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

b. Allowable Non-Storm Water Discharges.

(1) The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with subpart b(2) below~~.~~:

(a) Discharges from fire fighting activities;

(b) Fire hydrant flushings;

(c) Potable water including water line flushings;

(d) Uncontaminated air conditioning or compressor condensate;

(e) Irrigation drainage;

(f) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;

(g) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);

(h) Routine external building wash down which does not use detergents;

(i) Uncontaminated ground water or spring water;

(j) Foundation or footing drains where flows are not contaminated with process materials; and

(k) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but NOT intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

(2) Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

(a) Identification of each allowable non-storm water source;

(b) The location where the non-storm water is likely to be discharged; and

(c) Descriptions of appropriate BMPs for each source.

(3) If mist blown from cooling towers is included as one of the allowable non-storm water discharges from the facility, the permittee must specifically evaluate the discharge for the presence of chemicals used in the cooling tower. The evaluation shall be included in the SWPPP.

c. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities.

The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

(1) The permittee is required to notify the Department in accordance with the requirements of **Part II G** ***(change this to the correct "Reports of Unauthorized Discharges" section of the "Conditions Applicable to All VPDES Permits" Part)*** as soon as he or she has knowledge of the discharge;

(2) Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner or the MS4; and

(3) The storm water pollution prevention plan required by this permit must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

d. Additional Requirements for Salt Storage.

Storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes shall be enclosed or covered to prevent exposure to precipitation. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. All salt storage piles shall be located on an impervious surface. All runoff from the pile, and/or runoff that comes in contact with salt, including under drain systems, shall be collected and contained within a bermed basin lined with concrete or other impermeable materials., or within an underground storage tank(s), or within an above ground storage tank(s), or disposed of through a sanitary sewer (with the permission of the treatment facility). A combination of any or all of these methods may be used. In no case shall salt contaminated storm water be allowed to discharge directly to the ground or to state waters.

Section 1.02 General Storm Water Pollution Prevention Plan Requirements.

2. Storm Water Pollution Prevention Plan.

Refer to **Part I B 3** for sector-specific storm water management requirements.

[*For reissuances with existing SWPPPs:* A storm water pollution prevention plan (SWPPP) for the facility was required to be developed and implemented under the previous permit. The existing storm water pollution prevention plan shall be reviewed and modified, as appropriate, to conform to the requirements of this section.**]**

[*For new SWPPP requirements:* A storm water pollution prevention plan (SWPPP) is required to be developed and implemented for the facility. The plan shall include Best Management Practices (BMPs) that are reasonable, economically practicable, and appropriate in light of current industry practices. The BMPs shall be selected, designed, installed, implemented and maintained in accordance with good engineering practices to eliminate or reduce the pollutants in all storm water discharges from the facility. The plan shall also include any control measures necessary for the storm water discharges to meet applicable water quality standards.**]**

Permittees shall implement the provisions of the storm water pollution prevention plan as a condition of this permit.

The storm water pollution prevention plan requirements of this permit may be fulfilled, in part, by incorporating by reference other plans or documents such as a spill prevention control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act, or best management practices (BMP) programs otherwise required for the facility, provided that the incorporated plan meets or exceeds the plan requirements of **Part I B 2 b** (Contents of the Plan). All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit. If a plan incorporated by reference does not contain all of the required elements of the SWPPP of **Part I B 2 b** the permittee shall develop the missing SWPPP elements and include them in the required plan.

a. Deadlines for Plan Preparation and Compliance.

(1) The facility shall prepare and implement the plan as expeditiously as practicable, but not later than 270 days from the effective date of the permit. [***Optional wording:*** Verification of compliance with the above deadline shall be provided, in writing, within 10 days of either the deadline or the actual completion date, if completed earlier.]

(2) Measures That Require Construction. In cases where construction is necessary to implement measures required by the plan, the plan shall contain a schedule that provides compliance with the plan as expeditiously as practicable, but no later than 3 years after the effective date of this permit. Where a construction compliance schedule is included in the plan, the schedule shall include appropriate nonstructural and/or temporary controls to be implemented in the affected portion(s) of the facility prior to completion of the permanent control measure.

b. Contents of the Plan.

The contents of the SWPPP shall comply with the requirements listed below and those in **Part I B 3 [4, 5, 6, etc.]**. The plan shall include, at a minimum, the following items:

(1) Pollution Prevention Team. The plan shall identify the staff individuals by name or title that comprise the facility's storm water pollution prevention team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining, revising, and ensuring compliance with the facility's SWPPP. Specific responsibilities of each staff individual on the team shall be identified and listed.

(2) Site Description. The plan shall include the following:

(a) Activities at the Facility. A description of the nature of the industrial activities at the facility.

(b) General Location Map. A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility.

(c) Site Map. A site map identifying the following:

(i) The size of the property (in acres);

(ii) The location and extent of significant structures and impervious surfaces (roofs, paved areas and other impervious areas);

(iii) Locations of all storm water conveyances including ditches, pipes, swales, and inlets, and the directions of storm water flow (use arrows to show which ways storm water will flow);

(iv) Locations of all existing structural and source control BMPs;

(v) Locations of all surface water bodies, including wetlands;

(vi) Locations of potential pollutant sources identified under **Part I B 2 b (3)**;

(vii) Locations where significant spills or leaks identified under **Part I B 2 b (4)** have occurred;

(viii) Locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes; liquid storage tanks; processing and storage areas; access roads, rail cars and tracks; transfer areas for substances in bulk; and machinery;

(ix) Locations of storm water outfalls and an approximate outline of the area draining to each outfall, and location of municipal storm sewer systems, if the storm water from the facility discharges to them;

(x) Location and description of all non-storm water discharges;

(xi) Location of any storage piles containing salt used for deicing or other commercial or industrial purposes; and

(xii) Locations and sources of runon to the site from adjacent property, where the runon contains significant quantities of pollutants. The permittee shall include an evaluation with the SWPPP of how the quality of the storm water running onto the facility impacts the facility's storm water discharges.

(d) Receiving Waters and Wetlands. The name of all surface waters receiving discharges from the site, including intermittent streams, dry sloughs, and arroyos. Provide a description of wetland sites that may receive discharges from the facility. If the facility discharges through a municipal separate storm sewer system (MS4), identify the MS4 operator, and the receiving water to which the MS4 discharges.

(3) Summary of Potential Pollutant Sources. The plan shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, industrial production and processes, intermediate products, byproducts, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description shall include:

(a) Activities in Area. A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and

(b) Pollutants. A list of the associated pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, cleaning solvents, etc.) for each activity. The pollutant list shall include all significant materials handled, treated, stored or disposed that have been exposed to storm water in the three years prior to the date this SWPPP was prepared or amended. The list shall include any hazardous substances or oil at the facility.

(4) Spills and Leaks. The SWPPP shall clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur and their corresponding outfalls. The plan shall include a list of significant spills and leaks of toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance during the three-year period prior to the date this SWPPP was prepared or amended. The list shall be updated if significant spills or leaks occur in exposed areas of the

facility during the term of the permit. Significant spills and leaks include releases of oil or hazardous substances in excess of reportable quantities, and may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(5) Storm Water Controls.

(a) BMPs shall be implemented for all the areas identified in **Part I B 2 b (3)** (Summary of Potential Pollutant Sources) to prevent or control pollutants in storm water discharges from the facility. All reasonable steps shall be taken to control or address the quality of discharges from the site that may not originate at the facility. The SWPPP shall describe the type, location and implementation of all BMPs for each area where industrial materials or activities are exposed to storm water. Selection of BMPs shall take into consideration:

(i) That preventing storm water from coming into contact with polluting materials is generally more effective, and less costly, than trying to remove pollutants from storm water;

(ii) BMPs generally shall be used in combination with each other for most effective water quality protection;

(iii) Assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures;

(iv) That minimizing impervious areas at the facility can reduce runoff and improve groundwater recharge and stream base flows in local streams (however, care must be taken to avoid ground water contamination);

(v) Flow attenuation by use of open vegetated swales and natural depressions can reduce in-stream impacts of erosive flows;

(vi) Conservation or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

(vii) Treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

(b) Control Measures. The permittee shall implement the following types of BMPs to prevent and control pollutants in the storm water discharges from the facility, unless it can be demonstrated and documented that such controls are not relevant to the discharges (e.g., there are no storage piles containing salt).

(i) Good Housekeeping. The permittee shall keep clean all exposed areas of the facility that are potential sources of pollutants to storm water discharges. Typical problem areas include areas around trash containers, storage areas loading docks, and vehicle fueling and maintenance areas. The plan shall include a schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers. The introduction of raw, final or waste materials to exposed areas of the facility shall be minimized to the maximum extent practicable. The generation of dust, along with off-site vehicle tracking of raw, final or waste materials, or sediments, shall be minimized to the maximum extent practicable..

(ii) Eliminating and Minimizing Exposure. To the extent practicable, industrial materials and activities shall be located inside, or protected by a storm-resistant covering to prevent exposure to rain, snow, snowmelt, and runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 E, thereby eliminating the need to have a permit.

(iii) Preventive Maintenance. The permittee shall have a preventive maintenance program that includes regular inspection, testing, maintenance and repairing of all industrial equipment and systems to avoid breakdowns or failures that could result in

leaks, spill and other releases. This program is in addition to the specific BMP maintenance required under **Part I B 2 c** (Maintenance of BMPs).

(iv) Spill Prevention and Response Procedures. The plan shall describe the procedures that will be followed for preventing and responding to spills and leaks.

(A) Preventive measures include barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.

(B) Response procedures shall include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing and cleaning up spills. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265. Employees who may cause, detect or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals shall be a member of the Pollution Prevention Team.

(C) Contact information for individuals and agencies that must be notified in the event of a spill shall be included in the SWPPP, and in other locations where it will be readily available.

(v) Routine Facility Inspections. Facility personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs shall regularly inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under **Part I B 2 d**. At least one member of the Pollution Prevention Team shall participate in the routine facility inspections.

The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit or written approval is received from the Department for less frequent intervals. At least once each calendar year, the routine facility inspection must be conducted during a period when a storm water discharge is occurring.

Any deficiencies in the implementation of the SWPPP that are found shall be corrected as soon as practicable, but not later than within 30 days of the inspection, unless permission for a later date is granted in writing by the Director. The results of the inspections shall be documented in the SWPPP, along with the date(s) and description(s) of any corrective actions that were taken in response to any deficiencies or opportunities for improvement that were identified.

(vi) Employee Training. The permittee shall implement a storm water employee training program for the facility. The SWPPP shall include a schedule for all types of necessary training, and shall document all training sessions and the employees who received the training. Training shall be provided for all employees who work in areas where industrial materials or activities are exposed to storm water, and for employees who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel, etc.). The training shall cover the components and goals of the SWPPP, and include such topics as spill response, good housekeeping, material management practices, BMP operation and maintenance, etc. The SWPPP shall include a summary of any training performed.

(vii) Sediment and Erosion Control. The plan shall identify areas at the facility that, due to topography, land disturbance (e.g., construction, landscaping, site grading), or other factors, have a potential for soil erosion. The permittee shall identify and implement structural, vegetative, and/or stabilization BMPs to prevent or control on-site and off-site erosion and sedimentation. Flow velocity dissipation devices shall be

placed at discharge locations and along the length of any outfall channel if the flows would otherwise create erosive conditions.

(viii) Management of Runoff. The plan shall describe the storm water runoff management practices (i.e., permanent structural BMPs) for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site.

Structural BMPs may require a separate permit under § 404 of the CWA and the Virginia Water Protection Permit Program Regulation (9 VAC 25-210) before installation begins.

c. Maintenance.

All BMPs identified in the SWPPP shall be maintained in effective operating condition. Storm water BMPs identified in the SWPPP shall be observed during active operation (i.e., during a storm water runoff event) to ensure that they are functioning correctly. Where discharge locations are inaccessible, nearby downstream locations shall be observed. The observations shall be documented in the SWPPP.

The SWPPP shall include a description of procedures and a regular schedule for preventive maintenance of all BMPs, and shall include a description of the back-up practices that are in place should a runoff event occur while a BMP is off-line. The effectiveness of nonstructural BMPs shall also be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

If site inspections required by **Part I B 2 b(6)(b)(v)** (Routine Facility Inspections) or **Part I B 2 d** (Comprehensive Site Compliance Evaluation) identify BMPs that are not operating effectively, repairs or maintenance shall be performed before the next anticipated storm event. If maintenance prior to the next anticipated storm event is not possible, maintenance shall be scheduled and accomplished as soon as practicable. In the interim, back-up measures shall be employed and documented in the SWPPP until repairs or maintenance is complete. Documentation shall be kept with the SWPPP of maintenance and repairs of BMPs, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair or replacement, and for repairs, date(s) that the BMP(s) returned to full function, and the justification for any extended maintenance or repair schedules.

d. Comprehensive Site Compliance Evaluation.

The permittee shall conduct comprehensive site compliance evaluations at least once a year. The evaluations shall be done by qualified personnel who possess the knowledge and skills to assess conditions and activities that could impact storm water quality at the facility, and who can also evaluate the effectiveness of BMPs. The personnel conducting the evaluations may be either facility employees or outside constituents hired by the facility.

(1) Scope of the Compliance Evaluation. Evaluations shall include all areas where industrial materials or activities are exposed to storm water, as identified in **Part I B 2 b(3)**. The personnel shall evaluate:

(a) Industrial materials, residue or trash that may have or could come into contact with storm water;

(b) Leaks or spills from industrial equipment, drums, barrels, tanks or other containers that have occurred within the past three years;

(c) Off-site tracking of industrial or waste materials or sediment where vehicles enter or exit the site;

(d) Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;

(e) Evidence of, or the potential for, pollutants entering the drainage system~~.~~;

(f) Evidence of pollutants discharging to surface waters at all facility outfalls, and the condition of and around the outfall, including flow dissipation measures to prevent scouring;

(g) Review of training performed, inspections completed, maintenance performed, quarterly visual examinations, and effective operation of BMPs;

(h) Results of both visual and any analytical monitoring done during the past year shall be taken into consideration during the evaluation.

(2) Based on the results of the evaluation, the SWPPP shall be modified as necessary (e.g., show additional controls on the map required by **Part I B 2 b(2)(c)**; revise the description of controls required by **Part I B 2 b(6)** to include additional or modified BMPs designed to correct problems identified). Revisions to the SWPPP shall be completed within 30 days following the evaluation, unless permission for a later date is granted in writing by the Director. If existing BMPs need to be modified or if additional BMPs are necessary, implementation shall be completed before the next anticipated storm event, if practicable, but not more than 60 days after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by the Department;

(3) Compliance Evaluation Report. A report shall be written summarizing the scope of the evaluation, name(s) of personnel making the evaluation, the date of the evaluation, and all observations relating to the implementation of the SWPPP, including elements stipulated in **Part I B 3 d(1) (a) through (f)** above. Observations shall include such things as: the location(s) of discharges of pollutants from the site; location(s) of previously unidentified sources of pollutants; location(s) of BMPs that need to be maintained or repaired; location(s) of failed BMPs that need replacement; and location(s) where additional BMPs are needed. The report shall identify any incidents of noncompliance that were observed. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with **Part II K** ***(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)*** and maintained with the SWPPP.

(4) Where compliance evaluation schedules overlap with routine inspections required under **Part I B 2 b(6)(b)(v)**, the annual compliance evaluation may be used as one of the routine inspections.

e. Signature and Plan Review.

(1) Signature/Location. The SWPPP shall be signed in accordance with **Part II K** ***(change this to the correct "Signatory Requirements" section of the "Conditions Applicable to All VPDES Permits" Part)***, dated, and retained on-site at the facility covered by this permit in accordance with **Part II B 2** ***(change this to the correct "Records" section of the "Conditions Applicable to All VPDES Permits" Part)***. All other changes to the SWPPP, and other permit compliance documentation, must be signed and dated by the person preparing the change or documentation.

(2) Availability. The permittee shall make the SWPPP, annual site compliance evaluation report, and other information available to the Department upon request.

(3) Required Modifications. The Director may notify the permittee at any time that the SWPPP, BMPs, or other components of the facility's storm water program do not meet one or more of the requirements of this permit. The notification shall identify specific provisions of the permit that are not being met, and may include required modifications to the storm water program, additional monitoring requirements, and special reporting requirements. The permittee shall make any required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by the Director, and shall submit a written certification to the Director that the requested changes have been made.

f. Maintaining an Updated SWPPP.

(1) The permittee shall review and amend the SWPPP as appropriate whenever:

(a) There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

(b) Routine inspections or compliance evaluations determine that there are deficiencies in the BMPs;

(c) Inspections by local, state, or federal officials determine that modifications to the SWPPP are necessary;

(d) There is a spill, leak or other release at the facility; or

(e) There is an unauthorized discharge from the facility.

(2) SWPPP modifications shall be made within 30 calendar days after discovery, observation or event requiring a SWPPP modification. Implementation of new or modified BMPs (distinct from regular preventive maintenance of existing BMPs described in **Part I B 3 b(6)(b)(iii)**) shall be initiated before the next storm event if possible, but no later than 60 days after discovery, or as otherwise provided or approved by the Director. The amount of time taken to modify a BMP or implement additional BMPs shall be documented in the SWPPP.

(3) If the SWPPP modification is based on a release or unauthorized discharge, include a description and date of the release, the circumstances leading to the release, actions taken in response to the release, and measures to prevent the recurrence of such releases. Unauthorized releases and discharges are subject to the reporting requirements of Part II G of this permit.

[***For expanding facilities that have filed a No Exposure Certification statement*:** Upon completion of construction and not later than issuance of the CTO for the new/ upgraded/ expanded facility, the permittee will either: (1) submit a NEC certifying a condition of no exposure exists; or (2) submit a Registration Statement and the appropriate fee for coverage under the General VPDES Permit for Discharges of Storm Water Associated with Industrial Activity; or (3) submit a request to modify the permit to incorporate the Storm Water Special Conditions.

Section 1.03 Sector-Specific SWPPP Requirements.

Sector T - Treatment Works.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from 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 lands dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of 1.0 MGD or more, or required to have a fully approved (not conditional) pretreatment program under 9 VAC 25-31-730. Farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and that are not physically located within the facility, or areas that are in compliance with § 405 of the CWA are not required to have permit coverage.

(1) Effluent Limitations. ..... NONE

(2) Analytical (Benchmark) Monitoring. ..... NONE

(3) Non-Storm Water Discharges. The following discharges are not "authorized" non-storm water discharges under this section, and if present, may require additional controls and/or limitations: sanitary and industrial wastewater; and equipment/vehicle washwaters.

(4) Part I B 3. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part I B 2**, the SWPPP shall include, at a minimum, the following items:

a. Site Description.

(1) Site Map. The site map shall identify where any of the following may be exposed to precipitation/surface runoff: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides.

(2) Summary of Potential Pollutant Sources. The plan shall include a description of the potential pollutant sources from the following activities, as applicable: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads/rail lines.

b. Storm Water Controls.

(1) Best Management Practices (BMPs). In addition to the other BMPs considered, the following BMPs shall be considered: routing storm water to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station).

(2) Inspections. The following areas shall be included in all inspections: access roads/rail lines, grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station areas.

(3) Employee Training. Employee training shall, at a minimum, address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and control; fueling procedures; general good housekeeping practices; proper procedures for using fertilizers, herbicides and pesticides.

23. ***[****Use this special condition when DMRs are not required until issuance of the CTO. See Section III.A.10.b. Also may be used in conjunction with a statement on effluent limits page (e.g."Monitoring and reporting are not required until issuance of the CTO see special condition [insert letter or number of special condition]. An alternative is to have all instructions regarding notification of commencement of discharge on effluent limits page.*

Notification of Commencement of Discharge

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 in Part I A x. The issuance of the CTO will be used as the trigger date for all other permit conditions which drive off the commencement of discharge.

Use this special condition as when DMRs are required annually until commencement of discharge. See Section III.A.10.b. Also may be used in conjunction with a statement on effluent limits page (e.g."Monitoring and reporting required annually until the issuance of the CTO see special condition [insert letter or number of special condition]. An alternative is to have all instructions regarding notification of commencement of discharge on effluent limits page.

Notification of Commencement of Discharge

The permittee shall submit DMRs annually until issuance of the CTO at which time DMR submittal shall be monthly in accordance with Part IIC. The annual DMR shall be no later than January 10 of the following year.***]***

B. Bacteria and Chlorine Limitations/Procedures

1. Chlorine Limit Development (Final Effluent)

a. The chlorine limit is determined as per existing guidance on the development of limits for toxic pollutants (Guidance Memo 00-2011 or its successor). Limits for final effluent are expressed as total residual chlorine (TRC). All chlorinated effluents must have a chlorine limit. (Chlorinated effluents discharged to salt water reacts to produce chlorine-produced oxidants (CPO) that have a toxic impact similar to TRC in freshwater. Permit writers should assume that CPO in salt water receiving streams are controlled by the effluent TRC limit.) The limit is placed onto the Part I.A. page [DMR parameter code # 005] and is expressed as a monthly average and weekly average for domestic dischargers. Domestic dischargers are POTWs, PVOTWs and other TWTDS.

b. The recommended monitoring frequency for TRC in the final effluent is should be consistent with the sampling schedule table in MN-2.

c. The current recommended quantification level for chlorine is 0.10 mg/l. Refer to the Special Conditions section for the appropriate quantification language. Note that the limits derived from the WLA model are included in the permit as actual numbers, even if they are less than the QL

d. A technology limit of 4.0 mg/l [DMR parameter code # 005] is recommended for domestic dischargers where the chlorine limit, based on STATS.EXE, would come out high (e.g. above 4.0 mg/l). Note that this limit is not water quality-based. The fact sheet should list the basis as BPJ. The following protocol is recommended in these cases.
Calculate the WLAa and WLAc
If the WLAa is greater than 4.0 mg/l, run STATS.EXE with the following inputs:
WLAa = 4.0 WLAc = 4.0
One datum of 20.0 is input to force the program to calculate a limit.

If the WLAa is less than 4.0 mg/l, run STATS.EXE with the following inputs:
WLAa = calculated values WLAc = calculated values
One datum of 20.0 is input to force the program to calculate a limit.

e. Examples of chlorine calculations/limits for TWTDS
MIX.EXE and the mixing equation yield a WLAa of 11 mg/l and a WLAc of 8.0 mg/l.
STATS.EXE is run with inputs of: WLAa = 4.0, WLAc = 4.0, one datum of 20.0, one sample/day
The resulting limits are a Daily maximum = 4.0 mg/l, monthly average of 2.0 mg/l and a weekly average of 2.4 mg/l. The frequency of final effluent sampling would be 1/day.

MIX.EXE and the mixing equation yield a WLAa of 2.0 mg/l and a WLAc of 1.0 mg/l.
STATS.EXE is run with inputs of: WLAa = 2.0, WLAc = 1, one datum of 20.0
The resulting limits are a daily maximum = 2.0, monthly average of 1.0 mg/l and a weekly average of 1.2 mg/l. The frequency of final effluent sampling would be 1/day. The fact sheet should list the basis for the limits as water quality.

Since this is a domestic facility, the monthly average and weekly average limits would be used.

2. Bacteria Limits

a. Bacteria limits are required for major permits, minor permits with an EPA approved TMDL and the TMDL contains a bacteria waste load allocation for that facility and for facilities that use alternate disinfection. They are not required for all other facilities where a successful chlorine demonstration has been conducted and TRC is the surrogate bacteria limit. (see item b below) E. coli applies in freshwater and enterococci in saltwater and transition zones (see 9VAC25-260-140 C for delineations). Fecal coliform limits will no longer be used, **except** for discharges into shellfish waters, where both fecal coliforms and the below bacterial parameters (enterococci) are to be limited. (See below regarding shellfish waters.). There is no compliance schedule associated with new bacteria limits. Monitoring frequency reductions are allowed in certain situations when chlorine is the method of disinfection see MN-2 **Monitoring Reductions for Reissuances.**

EFFLUENT CHARACTERISTICS	MONITORING REQUIREMENTS		
	MONTHLY AVERAGE	FREQUENCY	SAMPLE TYPE
E.coli (N/100 ml) *(freshwater)*	126*	**[4/Month** or see Sampling Schedule Table in MN-2 per NOTE below]**	Grab
Enterococci *(saltwater and transition zones)*	35*	**[4/Month** or see Sampling Schedule Table in MN-2 per NOTE below]**	Grab
Fecal coliform *(shellfish water)*	200*	**[4/Month** or see Sampling Schedule Table in MN-2 per NOTE below]**	Grab

* Monthly Geometric Mean
** Four samples taken during the calendar month weekly between 10a.m. and 4 p.m.*(NOTE: The sample frequency will increased if the facility has alternate disinfection.*

b. Chlorine Demonstration Requirements for Bacteria Limits

If chlorine limits are to be used instead of bacteria (E. coli and enterococci) limits, the permittee must demonstrate the ability of the chlorine limits to allow the bacteria criteria to be met. The agency has already analyzed sufficient data to demonstrate that chlorine limits maintain E. coli criteria where the chlorine contact tank is designed in accordance with the Sewage Collection and Treatment Regulation so chlorine demonstration studies for those discharges are no longer needed. However, for other *E. coli* discharges and discharges to transition zones and saltwater, chlorine demonstration studies are still needed. For new issuances, this demonstration must go into the permit and remain in force until it is demonstrated that chlorine limits are adequate. For reissuances, if the demonstration was made during the application process and the demonstration shows that bacteria standards are met while the discharge is in compliance with the proposed chlorine limits, bacteria limits and monitoring are not required and the permit should contain chlorine limits in accordance with the preceding section of this manual. If the

demonstration was not satisfied the permit should contain chlorine **and** bacteria limits. If a demonstration of ability to meet the bacteria standards with chlorine limits was **not** made during the reissuance application process the permit should contain chlorine limits and require bacteria monitoring sufficient to generate a data set adequate to perform an evaluation as specified in the special condition " **Chlorine Demonstration Requirements for Bacteria Limits** " which can be found as one of the special conditions in MN-3 above..

The results of all demonstrations should be submitted by the regions to the Office of Water Permit Programs to enable DEQ to review whether the need for a demonstration remains appropriate.

c. Shellfish Waters Bacteria Limits

For effluents that contain fecal coliforms discharging to shellfish waters, the above paragraphs regarding *E. coli* or enterococci limits and chlorine demonstrations will apply in order to protect recreational uses. In addition, the permits are to continue to limit fecal coliforms with an effluent limit of 200 per 100 milliliters, applied as a monthly geometric mean. Although the Water Quality Standards have been amended to remove the reference to this effluent limit in shellfish waters, the Virginia Department of Health, Bureau of Shellfish Sanitation still uses fecal coliform as an indicator for determining the quality of shellfish waters and it is necessary to ensure discharges meet this level. Since it has historically maintained the in-stream water quality criteria for fecal coliforms of 14/43 per 100 milliliters, the 200 per 100 milliliters effluent limit will be used in shellfish waters in order to continue meeting the in-stream criteria and for protection of shellfish under the general standard.

3. Halogen Ban Variance in Endangered/Threatened Species, Natural Trout Waters

This section contains procedures for implementing variances in the State Water Control Board Regulations with respect to chlorine disinfection of sewage treatment plant effluent.

a. **Policy:** For waters containing endangered/threatened species or DGIF Class i or ii natural trout: chlorine or other halogen compounds (bromine, bromine chloride, hypochlorite and chlorine dioxide) cannot be used for disinfection or other treatment purposes, including biocide applications, for any treatment facility with a permitted flow of 20,000 gallons per day or more discharging to waters containing endangered or threatened species (as identified in 9 VAC 25-260-110 C); or to natural trout waters listed as i or ii (identified in 9 VAC 25-260-390). Dischargers with a permitted flow of less than 20,000 gallons per day that discharge into endangered species waters or natural trout waters are to dechlorinate to meet the requirements of 9 VAC 25-260-140 B or to a non-detectable chlorine residual. Dischargers who intermittently chlorinate not more than two hours in any eight hour period may also dechlorinate if they provide a way to prevent chlorine entering the receiving waters during malfunctions in the dechlorination system.

b. No variance to the Halogen Ban is to be made unless it has been positively demonstrated:

- That a change is justifiable to provide necessary economic or social development;
- That the degree of waste treatment necessary to preserve existing quality cannot be economically or socially justified; and
- That present and anticipated uses of such water will be preserved and protected.

c. If any permittee wants a variance to the halogen ban in natural trout waters listed as i or ii, or waters containing endangered or threatened species, then they will follow certain procedural requirements to demonstrate a justifiable variance to the requirement for alternative disinfection. The burden of proof is placed on the discharger rather than agency staff to provide evidence that they meet **one** of the two conditions required for consideration of a variance to the chlorine ban **and** that allowing chlorination/dechlorination rather than alternative disinfection would still maintain beneficial uses of the water body.

In summary, permittees must demonstrate that existing uses of the water will be maintained and that a variance to the halogen ban is justifiable because:

- it will provide necessary economic or social development, **or**
- the degree of waste treatment necessary to preserve the existing quality cannot be economically or socially justified.

d. Responsibility for Workplan and Subsequent Analysis

The Regional Office (RO) will be the initial contact when a variance to the halogen ban is requested by a permittee. The RO will schedule and participate in a meeting (conference calls may be appropriate in some cases) with the permittee and OWQS to provide guidance for the variance study. A meeting is necessary because of the case specific nature of each variance request. For example, the economic measures that would be used differ for municipal and industrial facilities. In all cases, DEQ should be given an opportunity to review the proposed workplan before the permittee performs the study. The permittee should submit four copies of the proposed workplan to the RO for review. For both the workplan and final study report, the transmittal should be from the RO to OWQS for review, and OWQS will provide their comments back to the RO. Four copies of the final study report should be submitted.

e. Guidance for Economic and Social Impact Analysis

The guidance documents which the permittee should follow in conducting the economic impact analysis is the EPA's Interim Economic Guidance for Water Quality Standards Handbook, EPA-823-B-95-002), March 1995. This reference describes the appropriate measures used for municipal and industrial facilities. OWQS distributed one copy of each document to each RO. It is RO responsibility to make this information available to permittees seeking a variance prior to the joint headquarters/regional office meeting.

f. Guidance for Demonstration of Maintenance of Existing Uses

This demonstration will be site specific and may require a biological field survey and/or chronic bioassay work on species of concern (surrogate species in the case of endangered species) with continuous input of chlorine to approximate discharge conditions. This portion of the study should be developed in accordance with the EPA Water Quality Standards Handbook, and the EPA Guidelines for Deriving National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses ("Guidelines"). Copies of these documents were distributed to the ROs by OWQS. As with the economic and social impact analysis, any permittee seeking a variance should first meet with RO and OWQS staff to establish an acceptable protocol before undertaking a beneficial uses study.

g. Procedural Steps for the Halogen Ban Variance:

- Permittee requests variance by letter to Regional Office (RO).

- RO schedules meeting with permittee and OWQS to provide guidance on how to do study.
- Permittee submits 4 copies of proposed work plan to RO for Agency review.
- OWQS reviews and responds to RO. OWQS may on a case-by-case basis include EPA in the review.
- Upon completion of the work plan, permittee submits 4 copies of final study report to RO for Agency review.
- OWQS coordinates headquarters review and responds to RO.
- Upon completion of review of the final study, OWQS will treat the request for the halogen ban variance as an amendment to the Water Quality Standards. This requires that the request be adopted through the Administrative Process Act (APA) requirements.
- Upon completion of the APA process, OWQS will make a recommendation to deny or tentatively accept the halogen ban variance request subject to final action by the State Water Control Board.
- Upon final approval by the Board, follow normal procedures for issuance/reissuance or modification of the VPDES permit.

See Section III and the latest OWQS guidance for more information on variances to Water Quality Standards.

4. Chlorine Reduction Testing Program

a. Introduction

DEQ instituted the Chlorine Reduction Testing Program due to concerns over the potentially toxic effects of chlorine in wastewater discharges. The purpose of this program is to allow dischargers to voluntarily demonstrate they can maintain adequate levels of disinfection with lowered chlorine residuals. Participation in this program also benefits the permittee by helping reduce waste treatment costs.

b. Health Department Concurrence

This program is administered by the DEQ through VPDES permits, but all chlorine reduction requests are coordinated with the VDH. Upon receipt of a chlorine reduction request from a permittee, send a copy of the request to the VDH-RO. If the permittee has a good record of permit compliance, contact the VDH-RO by letter and inform them of the permittee's compliance record and recommend that the permittee be allowed to participate in the program. The VDH-RO will either agree or disagree with this recommendation in writing. Once agreement is reached between the RO and VDH, notify the permittee by letter that his participation in the program is allowed and of the conditions necessary for participation, as listed below. The permittee is also required to report the progress of the reduction testing program to the RO each month. Copy this progress report to VDH and OECA.

c. Implementation

This program is applied to a particular facility is through permit special conditions. These special conditions may be added at issuance/reissuance or modification. They are initiated by a request from the permittee and a letter of consent from the DEQ Regional Director. Example special conditions are presented below. They contain the basic elements of the program but, due to the number of possible modifications to specific language needed for each situation, no mandatory language is given. Consult OWP&CA for additional guidance if needed.

Modify the TRC limit on Part I.A. to refer to the special conditions so that they apply without further permit modification. Because of the number of possible applications of this procedure to the example chlorine limits pages, specific language is not provided for the TRC footnote.

A monthly average bacteria limit must also be added to the permit on the Part I.A. page, if it is not already in place.

The object of these conditions is to allow the permittee to lower the chlorine contact tank residual range in increments of 0.25 mg/l for 2 month intervals. Over each 2 month period the permittee must test both chlorine residual and bacteria at an increased frequency and report the results to the DEQ Regional Office.

If results of these tests indicate that adequate disinfection is maintained, the DEQ Regional Director, with the concurrence of the VDH Regional Director, may grant a further 0.25 mg/l reduction in the chlorine residual. The final values for the TRC range should not be set lower than 0.25 - 1.25 mg/l.

The 10% TRC exceptions language used in routine chlorine limits may be used during the testing program and with final limits, if appropriate. Keep bacteria limitations in the permit in order to assure disinfection during TRC excursions.

The lowest chlorine range at which the permittee can maintain adequate disinfection may be used to set a new Part I.A. TRC limitation in the permit, as long as VDH agrees. This change can be accomplished by permit modification or at reissuance. In the meantime, the permittee is authorized by special condition to continue the reduced TRC level, provided disinfection is maintained.

If at any time test results indicate that the effluent is not being adequately disinfected, the special conditions require the permittee to revert to the standard chlorine residuals.

d. DMR Revisions

Prepare a new DMR and send it to the permittee with each reduction in chlorine residual range approved by the DEQ and VDH. This can be done with the transmittal letter from the DEQ Regional Director.

e. Special Conditions

1. Chlorine residual values taken after the chlorine contact tank may be reduced provided that the following Chlorine Reduction Testing Program conditions are met and sufficient operational data justifying such a reduction have been generated. Chlorine Reduction Testing Program Conditions are:

a. Initial experiments in chlorine residual reduction shall be for a period of 2 months while effluent quality is monitored by the permittee. The first trial period shall be to maintain a total residual chlorine concentration within the range of * through * mg/l.

Following at least 2 months of acceptable performance at this level, further reduction to a range of ** through ** mg/l may be approved by the DEQ Regional Director with the concurrence of the VDH Regional Director. Following at least 2 months of acceptable

performance at this level, further reduction to a range of ** through ** mg/l may be approved by the DEQ Regional Director with the concurrence of the VDH Regional Director.

b. The permittee shall monitor chlorine residuals on a once per hour basis during all experimental periods and bacteria parameters at 2 per day at 6-hour intervals for at least the first two weeks of each experimental period. Bacteria testing may revert back to 1 per day during the remainder of the experimental period upon approval by the DEQ Regional Director with the concurrence of the VDH Regional Director.

c. The permittee shall revert to the chlorine residual range of *** through *** mg/l upon notice from the DEQ if the permit limits for bacteria, BOD_5 or suspended solids are violated.

d. The permittee shall continue with the chlorine residual range of *** through *** mg/l upon notice from the DEQ Regional Director or the VDH that the reduction in chlorine is having an adverse impact on effective disinfection.

e. The permittee shall submit reports of the results of this testing program monthly with the DMR.

* This initial reduced range is negotiable between the DEQ-RO, VDH, and the permittee. OWP&CA recommends that it be 0.25 mg/l less than the standard limits for this discharge.

** Subsequent ranges should be 0.25 mg/l lower than preceding range.

*** This should be the lowest limit imposed by the Chlorine Reduction Testing Program which did not have an adverse impact upon effective disinfection.

C. Nutrient Enriched Waters Procedures

All discharges (municipal and industrial) into nutrient enriched waters (designated in the Water Quality Standard for Nutrient Enriched Waters, 9 VAC 25-260-330 et seq.) which meet or exceed the design flow requirements designated in Regulation 9 VAC 25-40-10 et seq., Policy for Nutrient Enriched Waters, must meet a monthly average Total Phosphorus limitation of 2.0 mg/l. For industrial permits, use the maximum 30-day average flow value for the "design flow" referenced below.

1. New Sources, Design Flow > 0.050 MGD proposing to discharge into nutrient enriched waters must meet a monthly average Total Phosphorus effluent limitation of **2.0 mg/l** and monitor for monthly average Total Nitrogen concentration and quantity. Base the quantity limit for phosphorus on the design flow.

2. Existing Permits Requiring Modification to Include Total Phosphorus Effluent Limits, Design Flow > 1.0 MGD, will include a monthly average Total Phosphorus effluent limitation of **2.0 mg/l** and a monthly average Total Phosphorus quantity effluent limitation using the design flow on the Part I page. All modifications to install phosphorus sampling should also include nitrogen monitoring as monthly average Total Nitrogen concentration and monthly average Total Nitrogen quantity. Include the schedule of compliance found below.

3. Existing Permits Requiring Modification to Include Total Phosphorus and Total Nitrogen Effluent Limits, Design Flow > 1.0 MGD, will include a monthly average Total Phosphorus effluent limitation of **2.0 mg/l**, a monthly average Total Phosphorus quantity effluent limitation using the design flow, a monthly average Total Nitrogen effluent limitation of **10 mg/l** for the months of April through October and a monthly average Total Nitrogen quantity effluent limit using the design flow on the Part I page. Include the compliance schedule found below.

Note that the conditions in 1.(New Sources, Design Flow $\geq$ 0.050 mgd) also apply to facilities which undergo modifications to add 0.050 mgd or more capacity to their design flow. The 0.050 mgd design flow increase is considered new flow for purposes of the regulation. Multiple outfalls from the same facility to the same receiving stream should be screened against the flow criteria separately, rather than in aggregate.

4. Schedule of Compliance for Nutrient Limits

C. Schedule of Compliance

The permittee shall achieve compliance with the [**Total Phosphorus, Total Nitrogen**] limitation in Part I.A. in accordance with the following schedule:

1. Submit Progress Reports	Annually from the [**effective/modification**] date of the permit
2. Achieve Compliance with Final Effluent Limitation	Within **3 years** [**4 years if P**]after the [**effective/modification**] date of the permit

No later than 14 calendar days following the final compliance date identified in the above schedule of compliance, the permittee shall submit to the DEQ Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of

compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial action taken, and the probability of meeting the next scheduled requirement.

5. Nutrient monitoring for Chesapeake Bay Significant Dischargers

The Office of Water Quality - Chesapeake Bay Programs tracks a list of significant contributors of nutrients into the Chesapeake Bay watershed. This list should be on the agency website. Permits for facilities on this list may need to include additional requirements related to nutrients. Check the latest guidance or with the Regional Water Permit Manager or central office to determine what requirements are necessary.

D. Bypass Point Sources

Only bypass points at the headworks of the treatment plant or elsewhere in the treatment plant itself qualify as actual bypass points. Overflow point sources in the sewerage collection system (pump stations, manholes, etc.), regardless of ownership, are not bypass points . They are sanitary sewer overflows (SSOs) that are not authorized by the permit and are thereby prohibited (an enforcement matter). The only exception to this is for combined sewer overflows (CSOs). CSOs should continue to be handled according to current guidance (e.g. 9 minimum controls, etc.)

Bypasses of treatment units at the treatment facility are allowable provided they are in compliance with the bypass language that is included in the boilerplate of each permit (Part II.U). There is no need to list in the permit the potential points where bypasses may occur or to include any further special language addressing bypasses at the facility. Bypasses must be reported in accordance with Part II.U. If the permit limits are met there is no requirement to report a bypass.

If a treatment facility has an auxiliary outfall that is actually a separate pipe to a receiving stream it may either be treated as a bypass as discussed above, or if it meets effluent limits, it may be identified in the permit as a separate outfall and treated in the permit as any other outfall would be. (There may be restrictions on the conditions under which the outfall may discharge.)

E. Hydrogen Sulfide

The following provides a recommendation on how to manage hydrogen sulfide in permits.

PERMIT – Part I.A. page – Basis for limit – best *(choose: professional / engineering)* judgment.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		WEEKLY AVERAGE		MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
	mg/l*	kg/day*	mg/l*	kg/d*	mg/l*	mg/l*		
Dissolved Sulfide (mg/l)	NL	NA	NL	NA	NA	NA	1/6 Months [1]	Grab

1/6 Months = Once per six months, in accordance with the following schedule: 1st half (January 1 - June 30, to be reported on the DMR **due July 10** of each year); 2nd half (July 1 - December 31, to be reported on the DMR **due January 10** of each year).

[1] See Parts I.—a and b *(enter reference to applicable part of permit for compliance reporting)*, Compliance Reporting for quantification levels and reporting requirements, respectively.

(Insert the following effluent characteristic and quantification level within compliance reporting special condition)

Compliance Reporting

a. Quantification Levels

(1) Maximum quantification levels (QL) shall be as follows:

Effluent Characteristic	Quantification Level
Dissolved Sulfides	0.10 mg/l

FACT SHEET LANGUAGE

Dissolved Sulfide - Monitoring only is required for this parameter. During the (*choose: previous permit cycle / permit application process)* total sulfides were reported in the effluent. Through a conversion method, these data were initially used in an attempt to assess potential hydrogen sulfide (H_2S) levels. However, the accuracy and precision of using total sulfide results for developing limits for H_2S have recently come under question. According to Standard Methods, the unionized H_2S "can be calculated from the concentration of dissolved sulfide, the sample pH, and the conditional ionization constant of H_2S." Based on the above, it now appears to be more appropriate to specify that results be reported as dissolved sulfide. To provide data to evaluate the potential presence of H_2S and need for a limit, dissolved sulfide monitoring is required once per six months by grab sample for this permit re-issuance.

SECTION MN-4
MUNICIPAL VPDES SLUDGE REQUIREMENTS

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A. Sewage Sludge

The VPDES Permit Regulation (9 VAC 25-31-10 et seq.), adopted by the State Water Control Board May 22, 1996, became effective on July 24, 1996. Among other program changes, the newly adopted regulation incorporated technical standards for the use or disposal of sewage sludge, specifically land application and surface disposal, promulgated under 40 CFR Part 503. (Incineration was omitted from the adopted regulation because it is governed by regulations of the Air Pollution Control Board). In addition, Part II of the VPDES Permit Regulation (9 VAC 25-31-100) stipulates the specific VPDES permit application requirements regarding sludge management. This section provides guidance on sewage sludge management activities through the VPDES permits issued to POTWs or any other treatment works treating domestic sewage.

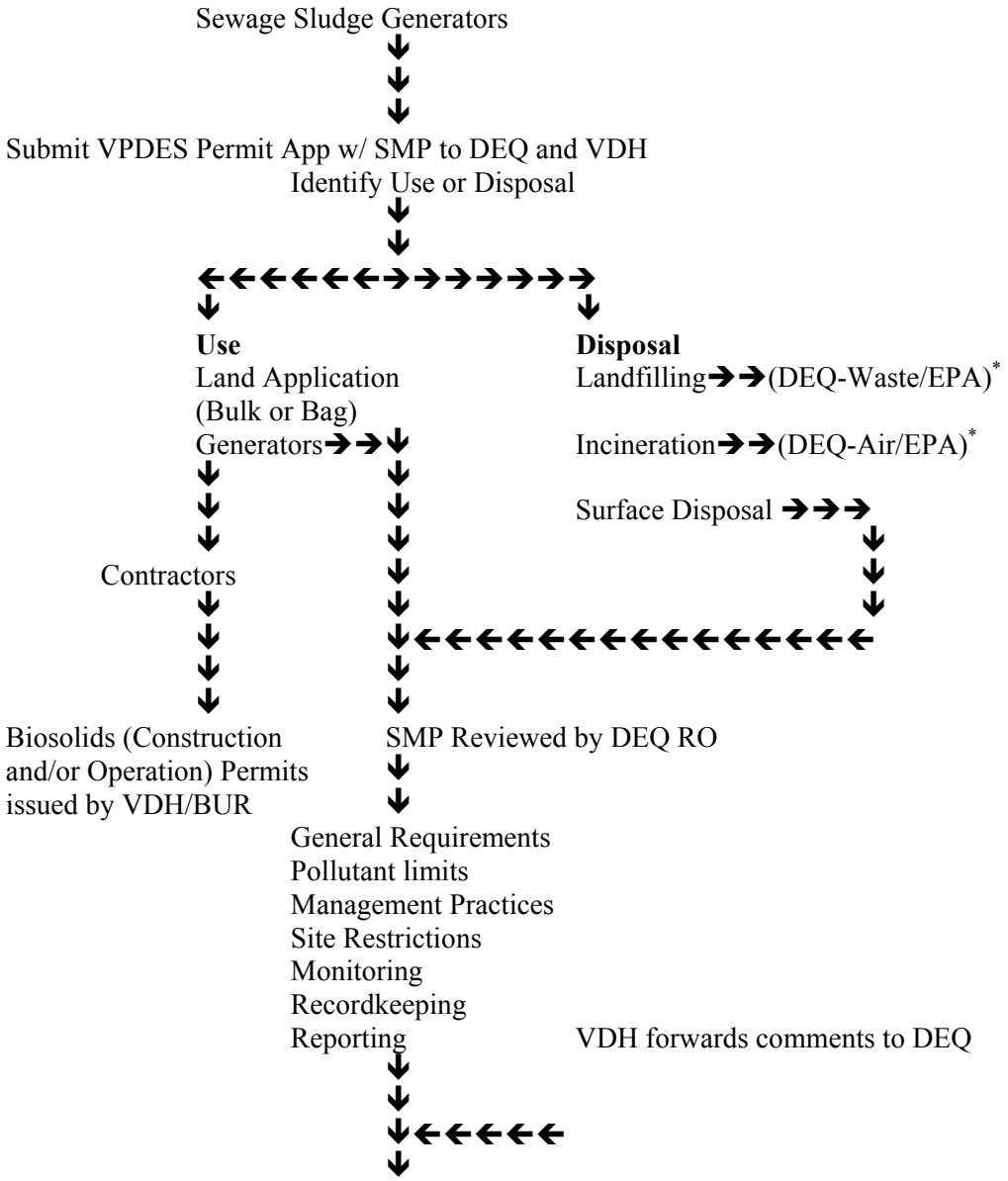
"Sludge Management Plan" (SMP) is defined as a form and its attachments (if required) that contain detailed information regarding use or disposal of sewage sludge, as required under 9 VAC 25-31-100 P.

"Generator" is defined as the POTW or any other treatment works treating domestic sewage.

"Contractor" is defined as the person other than the generator who uses or derives a material from sewage sludge.

The following flow chart provides an overview of this guidance. The VPDES permit application and the SMP are required to be submitted by the generator to the DEQ and, for SMPs related to the land application, Virginia Department of Health (VDH) OEHS Division of Wastewater Engineering Comments should also be solicited from the OWE area engineers. The approved SMP will then become an enforceable provision of the VPDES permit issued to the generator. If sewage sludge is land applied or surface disposed, specific requirements under Part VI of the VPDES Permit Regulation will apply.

Flow Chart: Sewage Sludge Permitting in Virginia



Issue VPDES Permit w/ SMP enforcement language (For land application and surface disposal, add sludge/soil monitoring pages, site specific special conditions, recordkeeping and reporting requirements, if applicable)

*** It is important to note that compliance with the Part VI requirements does not relieve the generator's responsibility to comply with the federal requirements set in 40 CFR Part 503 and other state or federal permit requirements. Until DEQ seeks and is granted authority to administer the Part 503 regulations by EPA, generators should continue working with EPA directly to comply with them.**

1. Implementation Strategy For VPDES Permit Regulation Part VI

a. VPDES Permit vs VDH Permit

The Part VI requirements are self-implementing in nature. In other words, these standards are directly enforceable against most users or disposers of sewage sludge. Our implementation strategy, however, should be driven from the VPDES permitting perspective. When a sludge generator is the entity that is responsible for the operation, the use or disposal of sewage sludge will be governed by a VPDES permit. If the generator contracts with someone else for the land application **and** that contractor assumes responsibility for the proper use of the sludge, then the contractor will need a VDH biosolids (construction and/or operation) permit. In the latter case, the generator will still be responsible for complying with the recordkeeping, concerning chemical pollutants, pathogen reduction, and vector attraction reduction (if applicable); and reporting (if applicable) requirements. The contractor, however, will be responsible for site management recordkeeping pursuant to a VDH biosolids permit. It should be noted that this guidance supersedes the earlier guidance (No. 95-004, June 20, 1995), entitled "Transition from VPA permits for Sewage Sludge to VDH Biosolids Use Permits", regarding timing of the SMP submittal and technical criteria used for review and approval of the SMPs.

b. Septage

"Septage" means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Do not cover land application of domestic septage through VPDES permits. Such activities have been and will continue to be permitted under the "Sewage Handling and Disposal Regulations" by VDH. Facility O & M Manuals should document septage handling procedures, where needed.

c. Industrial sludge

The VPDES Permit Regulation, 9 VAC 25-31-470 D, specifically excludes sludge from industrial wastewater that is combined with domestic sewage. If an industrial facility has a sanitary WWTP that has a separate outfall and separate use/disposal method for sewage sludge, Part VI requirements could be implemented through the SMP approval as required by the VPDES permit issued to the industrial facility.

2. Submittal of Sludge Management Plan

The SMP is part of the VPDES permit application. The VPDES Sewage Sludge Permit Application Form and its attachments (if required) will constitute the applicant's SMP. Any proposed sewage treatment works treating domestic sewage must submit a SMP with Form 2A at least 180 days prior to the date proposed for commencing operations. For new and proposed facilities, the applicants should be informed of the SMP requirement at the preliminary meeting. Any existing sewage sludge generator with a currently effective VPDES permit should submit a complete and updated SMP with its next application for renewal of the VPDES permit.

Depending upon the chosen sludge management practices, only applicable sections of the form need to be completed. When sewage sludge is landfilled, incinerated, or contracted out (and the contractor is responsible for use or disposal), a description of the service to be provided to the generator and the respective obligations of the generator and its contractor should be included in the SMP.

Regarding surface disposal, it should be noted that the generators required to obtain, or requesting site-specific pollutant limits for sewage sludge, must submit a complete SMP. The site-specific pollutant limits may only be allowed for an "active sewage sludge unit", which means a sewage sludge unit that has not closed. "Sewage sludge unit" means lands on which only sewage sludge is placed for final disposal; this includes monofills, surface impoundments, lagoons, and dedicated disposal sites. This, however, does not include land on which sewage sludge is either stored or treated. At the time of permit

application, the generators may request site-specific pollutant limits for an active sewage sludge unit without a liner and leachate collection system. Site-specific limits may be justified if the site conditions vary significantly from those assumed in the risk assessment used to derive the pollutant limits in 9 VPA 25-31-630. Since only a minimum amount of sewage sludge generated in Virginia is disposed in surface disposal sites, this guidance will not address the surface disposal requirements in Part VI specifically. When the regional permit staff encounters a SMP that employs surface disposal as the sludge management method, assistance will be available in the Central Office.

3. Coordination with VDH for SMP Review and Approval

Sludge management plans that involve land application of sewage sludge (or biosolids) should be sent to the VDH, Office of Environmental Health Services, Division of Wastewater Engineering (DWE). Sludge management plans (SMPs) that involve no biosolids land application should not be sent to VDH-DWE. VDH-DWE will provide comments on SMPs through the standard VPDES application review process with the following deviation. When generators land-apply sewage sludge themselves or are responsible for land application operations, VDH-DWE review and approval time for a SMP could be up to 45 days. This extra time is necessary for VDH-DWE to notify the local governments and conduct public information meetings, if needed, as part of their SMP review.

4. Technical Criteria Used for Review and Approval of SMP

When sewage sludge is land applied or surface disposed, the review and approval of the SMP will be primarily based on the technical standards established in Part VI of the VPDES Permit Regulation. As indicated in 9 VAC 25-31-460, additional or more stringent requirements may be required on a case-by-case basis. The Biosolids Use Regulations (BUR) adopted by VDH and Virginia Nutrient Management Standards and Criteria adopted by the Department of Conservation and Recreation (DCR) may be used as guidelines when site specific management practices are deemed necessary to protect public health and the environment.

5. Sludge Management Plan Review

In addition to the routine VPDES Permit Application review (discharge portion), the permit staff needs to review the SMP up front. **At this time, the SMP consists of the VPDES Sewage Sludge Permit Application Form and its attachments (if required).** In order to help the permit staff to determine the appropriate application requirements and the appropriate permit limitations/conditions under various sewage sludge use and disposal scenarios, the following examples are provided:

a. TWTDS (Treatment Works Treating Domestic Sewage) that land apply sludge under a SMP.

Application: Screening Information, Sections A, B.1, B.2 (if receive sludge from off site), B.3, B.4 (if EQ sludge), B.5 (if APLR sludge), B.7 (if PC or CPLR sludge), C (if complete B.7), and E.

Permit: Part I. A Monitoring pages (sludge and soil), the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

b. TWTDS that land apply under a SMP but use contractor to do it (i.e., generator is responsible for the operation).

Same as a above.

c. TWTDS that use a contractor with a VPA or BUR permit.

Application: Screening Information, Sections A, B.1, B.2 (if receive sludge from off site), B.3, B.4 (if EQ), B.5 (if APLR), B.7 (if PC or CPLR), C.1-C.7 (if complete B.7), and E.

Permit: Part I. A Monitoring page (sludge), the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

d. TWTDS that landfill.

Application: Screening Information, Sections A, B.1-3, B.10, and E.

Permit: the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

e. TWTDS that send their sludge to another POTW for treatment and use/disposal. **These facilities include any secondary treatment plants, including treatment plants >1,000 gpd, and any equivalent to secondary plants, such as lagoons. In the case of lagoons, solids dredging may only occur at the end of the lagoon lifetime, but the minimum information required does constitute a SMP. The lagoon owner or permittee should at least propose to monitor sludge level and submit a plan for removal when solids storage interferes with treatment.**

Application: Screening Information, Sections A, B.1, B.6, and E. When the receiving facility provides additional treatment for the sludge, the applicant is required to notify the receiving facility that they are required to comply with 9 VAC 25-31-510 et seq. re: land application. A copy of the letter sent by the applicant to the receiving facility will be adequate.

Permit: the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

f. TWTDS that incinerate and use land application contractor as a backup.

Application: same as c. above, and B.9.

Permit: Part I. A Monitoring page (sludge), the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

g. TWTDS that incinerate.

Application: Screening Information, Sections A, B.1, B.2 (if receive sludge from off site), B.9, and E.

Permit: the sludge reopener clause from Section MN.D. Municipal Special Conditions and the appropriate special conditions (as noted in italics) from the Sludge Special Conditions listed in this section under MN.L.13.

h. TWTDS with an out-of-state discharge permit but land apply in Virginia.

Permit by VDH-BUR.

The SMP is deemed approved when the VPDES permit is issued.

The approved SMP will become an enforceable provision of the VPDES Permit Part I issued to the sludge generator. Because of the time constraint in the permitting process, in cases where TWTDS land apply their own sludge, the SMP may be conditionally approved. That means when certain elements of the general requirements, management practices, and site restrictions (if applicable) are missing from the SMP, the appropriate requirements could be incorporated into Part I of the permit and the SMP is approved under such conditions. See example special conditions later in this section (MN.L.13).

In cases of new and proposed facilities, a detailed SMP may not be formulated prior to the plans and specs approval. In all cases however, the SMP needs to be approved prior to implementation of the specific sludge use or disposal practices. A conditional approval of this kind may be granted for new or proposed treatment works provided that a reopener clause is incorporated into the permit. An example reopener is provided in the municipal special conditions.

The information obtained in the SMP regarding incineration (Section B.9) and landfilling (Section B.10) should be shared with the Air Permit Manager or Solid Waste Compliance Manager in the

regional offices. The SMP should only be approved if the incinerator or landfill is approved for sludge disposal.

6. Land Application Plan

If the generators intend to apply sewage sludge (or biosolids) to sites that have not been identified at the time of permit application, they are required to include a land application plan in their SMP submittal. The land application plan should include a description of the general geographical area containing the sites they are intending to add later (name of county), the site selection criteria, and the site management practices. Once new sites are selected after permit issuance, site specific information including site plan, soil map, proposed cropping scheme, soil productivity classes, and landowners agreement form, etc., as outlined in the application form Section C.12, should be submitted to the regional office 90 days prior to the sludge application.

Information on new biosolids land application sites that are added during the permit term, as allowed by the land application plan, should be sent to the VDH-DWE. The VDH-DWE review and approval time for these sites will be 45 days.

Public notice of the draft permit must indicate that the permit includes a land application plan for selection of sites not specifically identified at the time of permit issuance. Once new sites are selected after the permit is issued, another public notice must be advertised once in the local newspaper, and all landowners or residents adjoining the new land application site must be notified by DEQ. The permittee should pay for the newspaper public notice and DEQ will notify adjoining landowners using the same procedures used for permit applications. A copy of the public notice verification should accompany the site specific information package (Application Form Section C.12) filed by the permittee. A record of the adjoining landowners notified by the regional office should be kept in the permit file. The public notice requirement must be conveyed to the permittee through a permit special condition (See example). The regional office may wish to prepare a model public notice for the permittee to send to the newspaper to be sure that it contains all the required information. Note that the purpose of this notice is not to solicit comments. It is to notify the public that new sites have been selected for land application of sewage sludge in accordance with the facility's approved Land Application Plan.

7. Amendments to the SMP

In Section MN-3 of this Manual, the Municipal Special Condition for "Sludge Use and Disposal" states "Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for DEQ and Department of Health approval 90 days prior to the effective date of the changes. Upon approval, the revised SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations or conditions necessitated by substantive changes in sewage sludge use or disposal practices." In Section MN-1 of this Manual, Paragraph J. Notice of Planned Changes under Part II of the permit boilerplate conditions also states "The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when: …c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan." After permit issuance or reissuance and during the permit term, the first condition above requires any changes to the SMP (or the VPDES Sewage Sludge Permit Application Form) submitted as part of the VPDES permit application, be reported to the DEQ Regional Office. Any change in a sludge use or disposal practice by the permittee that would not change information reported on the VPDES Sewage Sludge Permit Application Form would not need to be reported. The second condition provides greater clarification on reported changes to the SMP that will require permit modification and public notification (i.e., alteration or addition (that) results in a significant change in the permittee's sludge use or disposal

practices, and ... may justify the application of permit conditions that are different from or absent in the existing permit). These would include, but are not limited to, changes to the treatment process, changes to the sludge management options (e.g. from landfilling to land application), or changes to options of meeting sludge quality requirements for land application (e.g. PC to CPLR). An example of a change to the SMP not requiring permit modification and public notification would be a change in the hauler contracted to transport the permittee's sludge to a landfill.

For a major TWTDS that may receive sludge from a new off-site facility from time to time, if additional treatment will be provided by the receiving facility, then the new source information (as required by the Sludge Application Form, Question B 2) may be provided by an initial notification letter and subsequently through a quarterly report or other similar reporting mechanism. If no treatment is provided by the receiving facility, then sludge quality from the new source needs to be provided and approved prior to land application. Permit modification will only be required if changes to existing permit limitations/conditions are necessary as a result of the SMP amendment.

Permit modification will not be required for adding a new land application site in accordance with an approved land application plan. In the case of adding a whole new land application plan, or revising an existing land application plan, permit modification will be necessary.

8. Fact Sheet

A fact sheet must be prepared for each Class I sludge management facility and for each permit that includes a land application plan, not only for all major POTWs. Class I sludge management facility means any POTW required to have an approved pretreatment program and any treatment works treating domestic sewage classified as a Class I sludge management facility by the Board because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.

The fact sheet must include any calculations or other necessary explanation of the derivation of specific standards for sewage sludge use or disposal, including a citation to the standard for sewage sludge use or disposal and reasons why they are applicable. A brief description and a sketch or detailed description of the location of the regulated activity described in the SMP should also be included. If the sludge limits in the permit are those from Part VI, cite the VPDES Permit Regulation as the basis for the limits. When the draft permit contains sewage sludge disposal limitations set on a case-by-case basis, the fact sheet must provide an explanation of the reasons why such limitations are applicable. For permits that include a sewage sludge land application plan for adding land application sites after the permit is issued, the fact sheet must include a brief description of how each of the required elements of the land application plan are addressed in the permit.

9. Land Application Requirements

The key elements of the land application requirements in Part VI will be discussed below. A collection of tables/figures adapted from several EPA publications will be referenced in the discussions. Some recent changes to the technical criteria either established by the BUR or DCR's Virginia Nutrient Management Standards and Criteria will also be addressed. In addition, the following discussion will provide staff guidance on what kind of thought process should be involved in the SMP review and how to craft the core permit conditions on a case-by-case basis. Through reviewing of the SMP, in conjunction with the OWE's confirmation on the operational standards, the permit staff should first determine which option for meeting pollutant limits and pathogen and vector attraction reduction requirements the generator is eligible for. This will result in a determination of the sludge quality classification for land application: EQ, PC, CPLR or APLR. Based on this determination, proper monitoring requirements, management practices, site restrictions, recordkeeping, and reporting requirements should be included in the permit. Plants that can meet more than one option, based on previous data, need to declare their intention to meet one option consistently. If the choice is between PC and CPLR, and they can't be

certain of meeting PC all the time, they should choose CPLR. Plants that produce CPLR sludge have additional recordkeeping requirements for tracking cumulative metals loading.

OPTIONS FOR MEETING POLLUTANT LIMITS AND PATHOGEN AND VECTOR ATTRACTION REDUCTION REQUIREMENTS FOR LAND APPLICATION

Option*	Pollutant Limits	Pathogen Requirements	Vector Attraction Reduction Requirements
Exception Quality (EQ) Sewage Sludge	Bulk or bagged sewage sludge meet ceiling and pollutant concentration limits in Table 1	Any 1 of the Class A requirements in Table 2	Any 1 of the requirements in options 1 through 8 in Table 3
Pollutant Concentration (PC) Sewage Sludge	Bulk sewage sludge meet ceiling and PC limits in Table 1	Any 1 of the Class B requirements in Table 2 or Any 1 of the Class A requirements in Table 2	Any 1 of the 10 requirements in Table 3 Requirements 9 or 10 in Table 3
Cumulative Pollutant Loading Rate (CPLR) Sewage Sludge	Bulk sewage sludge applied subject to ceiling and CPLR limits in Table 1	Any 1 of the Class A or Class B requirements in Table 2	Any 1 of the 10 requirements in Table 3
Annual Pollutant Loading Rate (APLR) Sewage Sludge	Bagged sewage sludge applied subject to ceiling and APLR limits in Table 1	Any 1 of the Class A requirements in Table 2	Any 1 of the first 8 requirements in Table 3

*Each of these options also requires that sewage sludge meet the ceiling concentrations for pollutants and that the frequency of monitoring requirements and recordkeeping and reporting requirements be met. In addition, the general requirements in 9 VAC 25-31-530 and the management practices in 9 VAC 25-31-550 must be met when sewage sludge is land applied (except for EQ sewage sludge).

a. Pollutant Limits, Pathogen and Vector Attraction Reduction Requirements

All sewage sludge applied to the land must meet the ceiling concentrations for pollutants, listed in Table 1 (of this section). Sewage sludge applied to the land must also meet either pollutant concentration limits, cumulative pollutant loading rate limits, or annual pollutant loading rate limits, also listed in Table 1. Initial review of the sludge pollutant concentrations reported on the application will determine if the ceiling concentration limits and pollutant concentration limits are met. Cumulative pollutant loading limits or annual pollutant loading limits may be applied to sewage sludge exceeding pollutant concentration limits but meeting the ceiling concentrations, depending upon the levels of treatment achieved and the form (bulk or bag) of sludge applied. It should be noted that ceiling concentration limits are instantaneous values and pollutant concentration limits are monthly average values. Calculations of cumulative pollutant loading should be based on the monthly average values and the annual whole sludge application rate.

Either Class A or Class B pathogen requirements summarized in Table 2 (of this section) and applicable management practices and site restrictions must be met before the sewage sludge can be land applied. In addition, 1 of 10 options summarized in Table 3 (of this section) to achieve vector attraction reduction must be met when sewage sludge is applied to the land. Specific operational standards (pathogen and vector attraction reduction levels) should be identified in the SMP. Such information needs to be confirmed by DEQs Office of Wastewater Engineers.

The applicable monitoring and operational requirements of the selected pathogen reduction alternatives should be specified on the Part I A page. Note that flexibility must be considered in the selection of alternatives to allow the permittee to demonstrate compliance. For example, a small facility that employs aerobic digestion to meet Class B pathogen reduction may have difficulty meeting the time and temperature operational standards of Alternative 2, particularly in the winter. However, it may easily satisfy the fecal coliform requirement of Alternative 1 because of long detention time or extended storage period. Therefore, this additional option may be offered to the permittee and both Alternative 1 and Alternative 2 could be included on the Part I A page.

For options to meet the vector attraction reduction requirements, note that more than one option may be available to demonstrate compliance for a particular process. For example, for aerobic digestion, vector attraction reduction can be demonstrated through specific oxygen uptake rate (Alternative 4), volatile solids reduction (Alternative 1), or additional volatile solids reduction (Alternative 3). For this reason, permit writers may either specify one or more options on the Part I A page or make a reference to the vector attraction reduction requirements of the VPDES Permit Regulation and let the permittee decide which one to follow. The record keeping and reporting provisions of the permit require the selected option to be identified.

TABLE 1 SEWAGE SLUDGE POLLUTANT LIMITS

Pollutant	Ceiling Concentration Limits for All Sewage Sludge Applied to Land (milligrams per kilogram)[a]	Pollutant Concentration Limits for EQ and PC Sewage Sludge (milligrams per kilogram)[a]	Cumulative Pollutant Loading Rate Limits for CPLR Sewage Sludge (kilograms per hectare)	Annual Pollutant Loading Rate Limits for APLR Sewage Sludge (kilograms per hectare per 365 day period)
Arsenic	75	41	41	2.0
Cadmium	85	39	39	1.9
Copper	4,300	1,500	1,500	75
Lead	840	300	300	15
Mercury	57	17	17	0.85
Molybdenum	75	---	---	---
Nickel	420	420	420	21
Selenium	100	100	100	5.0
Zinc	7,500	2,800	2,800	140
Applies to:	All sewage sludge that is land applied	Bulk sewage sludge and bagged sewage sludge	Bulk sewage sludge	Bagged sewage sludge
From VPDES Permit Reg Part VI	Table 1, 9 VAC 25-31-540	Table 3, 9 VAC 25-31-540	Table 2, 9 VAC 25-31-540	Table 4, 9 VAC 25-31-540

[a]Dry-weight basis
[b]Bagged sewage sludge is sold or given away in a bag or other container.

TABLE 2 SUMMARY OF CLASS A AND CLASS B PATHOGEN REDUCTION REQUIREMENTS

Class A In addition to meeting the requirements in one of the six alternatives listed below, fecal coliform or *Salmonella* sp. bacteria levels must meet specific density requirements at the time of sewage sludge use or disposal or when prepared for sale or give away.
Alternative 1: Thermally Treated Sewage Sludge. Use one of four time- temperature regimens.
Alternative 2: Sewage Sludge Treated in a High pH-High Temperature Process. Specifies pH, temperature and all air-drying requirements.
Alternative 3: For Sewage Sludge Treated in Other Processes. Demonstrate that the process can reduce enteric viruses and viable helminth ova. Maintain operating conditions used in the demonstration.
Alternative 4: Sewage Sludge Treated in Unknown Processes. Demonstration of the process is unnecessary. Instead, test for pathogens, *Salmonella* sp. or fecal coliform bacteria, enteric viruses and viable helminth ova, at the time the sewage sludge are used or disposed of or are prepared for sale or give away.
Alternative 5: Use of PFRP. Sewage sludge is treated in one of the Processes to Further Reduce Pathogens (PFRP): 1) Composting, 2) Heat drying, 3) Heat treatment, 4) Thermophilic aerobic digestion, 5) Beta ray irradiation, 6) Gamma ray irradiation, and 7) Pasteurization.
Alternative 6: Use of a Process Equivalent to PFRP. Sewage sludge is treated in a process equivalent to one of the PFRPs, as determined by the permitting authority.

Class B The requirements in one of the three alternatives below must be met.
Alternative 1: Monitoring of Indicator Organisms. Test for fecal coliform density as an indicator for all pathogens **at any time** before sewage sludge use or disposal.
Alternative 2: Use of PSRP. Sewage sludge is treated in one of the Processes to Significantly Reduce Pathogens (PSRP): 1) Aerobic digestion, 2) Air drying, 3) Anaerobic digestion, 4) Composting, and 5) Lime stabilization.
Alternative 3: Use of Processes Equivalent to PSRP. Sewage sludge is treated in a process equivalent to one of the PSRPs, as determined by the permitting authority.

TABLE 3 SUMMARY OF VECTOR ATTRACTION REDUCTION OPTIONS

Requirements in one of the following options must be met:

Option 1: Reduce the mass of volatile solids by a minimum of 38 percent.
Option 2: Demonstrate vector attraction reduction with additional anaerobic digestion in a bench-scale unit.
Option 3: Demonstrate vector attraction reduction with additional aerobic digestion in a bench-scale unit.
Option 4: Meet a specific oxygen uptake rate for aerobically treated sewage sludge.
Option 5: Use aerobic processes at greater than 40°C (average temperatures 45°C) for 14 days or longer (e.g. during sewage sludge composting).
Option 6: Add alkaline material to raise the pH under specified conditions.
Option 7: Reduce moisture content of sewage sludge that do not contain unstabilized solids from other then primary treatment to at least 75 percent solids.
Option 8: Reduce moisture content of sewage sludge with unstabilized solids to at least 90 percent.
Option 9: Inject sewage sludge beneath the soil surface within a specified time, depending on the level of pathogen treatment.
Option 10: Incorporate sewage sludge applied to or placed on the land surface within specified time periods after application to or placement on the land surface.

b. Options for meeting land application requirements

There are four equally safe options for meeting land application requirements. The options include: the Exceptional Quality (EQ) option, the Pollutant Concentration (PC) option, the Cumulative Pollutant Loading Rate (CPLR) option, and the Annual Pollutant Loading Rate (APLR) option. The four options are summarized below.

(1) Option 1: EQ Sewage Sludge

EQ sewage sludge is considered a product that is virtually unregulated for use, whether used in bulk, or sold or given away in bags or other containers. Nothing in Part VI however precludes another state agency from imposing additional requirements for use or disposal of this product. The generators should consult with the Virginia Department of Agriculture and Consumer Services (VDACS) and VDH for other regulatory requirements when distributing or marketing this or similar materials.

(2) Option 2: PC Sewage Sludge

Unlike EQ sewage sludge, PC sewage sludge may only be applied in bulk and is subject to general requirements and management practices; however, tracking of pollutant loadings to the land is not required.

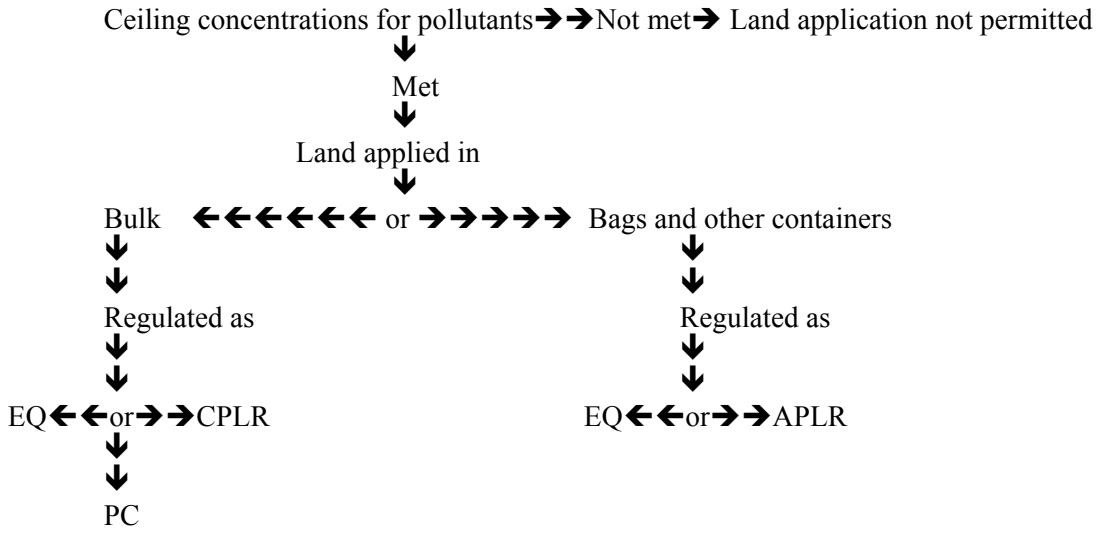
(3) Option 3: CPLR Sewage Sludge

CPLR sewage sludge typically exceeds at least one of the pollutant concentration limits for EQ and PC sewage sludge but meets the ceiling concentration limits. Such sewage sludge must be applied to land in bulk form. The cumulative levels of sewage sludge pollutants applied to each site must be tracked and cannot exceed the CPLR. Once a site receives CPLR sludge, tracking should continue and take into account all pollutant input from PC and CPLR sludges.

(4) Option 4: APLR Sewage Sludge

APLR sewage sludge is sewage sludge that is sold or given away in a bag or other container for application to the land. It exceeds the pollutant limits for EQ sewage sludge but meets the ceiling concentration limits. This sewage sludge must meet APLR requirements and must be accompanied by specific sewage sludge application rate information on a label or information sheet that includes instructions on the material's proper use.

OPTIONS FOR MEETING CERTAIN LAND APPLICATION REQUIREMENTS



c. General Requirements and Management Practices

(1) Bulk sludge: The general requirements in 9 VAC 25-31-530 and management practices in 9 VAC 25-31-550 must be met for all but EQ sewage sludge. Table 4 provides a summary of regulatory requirements for different types of sewage sludge. The specific general requirements and kinds of management practices (including site restrictions) that apply to each type of sewage sludge are

specified in special conditions. Example special conditions are given later in this section. These conditions could also serve as a guide for the SMP review. If any of the information required by the special conditions is missing from the SMP, then the special conditon should be incorporated into Part I of the permit. Several of the management practices will be discussed further as site specific conditions have been established based on our staff's past experiences with sludge management in VPA permits and on guidelines established in the BUR and the Virginia Nutrient Management Standards and Criteria published by DCR.

(2) Sludge sold or given away in a bag or other container: There is only one management practice that is applicable to APLR sewage sludge that is sold or given away in a bag or other container for application to the land. It is the requirement for a label or information sheet to accompany the sewage sludge (APLR). A copy of the label/information sheet should be provided with the SMP. This management practice does not apply to EQ sewage sludge. A permit special condition regarding this site management practice requirement should also be included.

TABLE 4 SUMMARY OF REGULATORY REQUIREMENTS FOR DIFFERENT TYPES OF SEWAGE SLUDGE

Type of Sewage Sludge and Class of Pathogens	Meet Ceiling Concentration Limits	Meet Pollutant Concentration Limits	Site Restrictions	General Requirements and Management Practices	Track Added Pollutants
EQ Bag or Bulk Class A	Yes	Yes	No	No	No
PC Bulk Only Class A[a]	Yes	Yes	No	Yes	No
PC Bulk Only Class B	Yes	Yes	Yes	Yes	No
CPLR Bulk Only Class A	Yes	No	No	Yes	Yes
CPLR Bulk Only Class B	Yes	No	Yes	Yes	Yes
APLR Bag Only Class A	Yes	No	No	Yes[b]	Yes[c]

[a]Sewage sludge meeting Class A pathogen reduction requirements but following options 9 or 10 vector attraction requirements are also considered PC sewage sludge.

[b]The only general and management practice requirements that must be met is a labeling requirement.

[c]The amount of sewage sludge that can be applied to a site during the year must be consistent with the annual whole sludge application rate (AWSAR) for the sewage sludge that does not cause any of the APLRs to be exceeded.

d. Endangered Species or Critical Habitat Protection

In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant is required to notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. A copy of the notification letter must be provided by the applicant as part of the SMP. The address and phone number of the Virginia Field Office are provided below.

U. S. Fish and Wildlife Service
Virginia Field Office
669 Short Lane
Gloucester, VA 23061
TEL: (804)693-6694

If it is determined that the proposed action may impact federally listed threatened or endangered species or federally designated critical habitat, the applicant should consult with the FWS to determine and develop necessary modifications to the SMP to ensure that the proposed activity will not adversely impact federally listed threatened or endangered species or federally designated critical habitat.

The permit staff should review the SMP to verify that the proposed activities will not adversely impact the waters containing endangered or threatened species listed under the Virginia Water Quality Standards Regulation (9 VAC 25-260-00 et seq.).

e. Application to Flooded, Frozen or Snow-Covered Land

It should be noted that this requirement is intended to restrict such application only if the sewage sludge could enter surface waters or wetlands. Special conditions previously developed in the VPA permit program will address these concerns.

f. Buffer Zones

The buffer zone requirement in 9 VAC 25-31-550 C. has been expanded based on our staff's past field experiences and the guidelines established in the BUR, 12 VAC 5-585-510 A 3 c (2). A standard list of buffer zones to various landscape features is included in the example permit special conditions. If these buffer zones are not expressly listed in the SMP, then this condition should be included in the permit. For surface application, distance to intermittent streams/drainage ditches will be 25 feet, and distance to all surface waters except intermittent streams/drainage ditches will be 50 feet. On a case-by-case basis, buffer zone requirements may be adjusted based on site specific features, such as site slopes, or on methods and timing of the application.

g. Agronomic Rate and Nutrient Management

In order to ensure that the sludge application will not exceed the agronomic loading rate for the crops grown on each site, the sludge application rate should be calculated based on the latest version of the Virginia Nutrient Management Standards and Criteria, published by DCR. In addition, we will continue using the guidelines established in the BUR regarding frequent and infrequent application rate calculations (See 12 VAC 5-585-510 A 3 and 12 VAC 5-585-580), pH management for lime conditioned or stabilized sludge application (See 12 VAC 5-585-600), maximum application rates for phosphorus (See 12 VAC 5-585-610), and circumstances requiring DCR approved nutrient management plans (See 12 VAC 5-585-630 A). The permit application form Sections C.9 and C.12 will require these issues to be addressed. Permit special conditions should also include these requirements if they are not specified in the SMP.

h. Storage

Storage facilities may be considered as part of the treatment works. However, storage is also an essential part of sludge management planning. The permit application form Section C.9 requires storage issues (capacity vs. production, siting and liner integrity, etc) to be addressed and the permit staff should use the guidelines established in the BUR (12 VAC 5-585-500) for review and approval of this part of the SMP.

10. Monitoring

a. Sludge Monitoring

In developing permit conditions for monitoring sewage sludge applied to the land, the permit staff should consider the following: parameters to be monitored, monitoring frequencies, monitoring locations, sampling types and preservation protocol, and analytical methods. Table 5 lists parameters to monitor in land applied sewage sludge. In addition to the routine monitoring to assure sludge quality and to ensure that proper nutrient management and pH management practices are employed, the following parameters are required: pH, Total Kjeldahl Nitrogen, Ammonia Nitrogen, Nitrate Nitrogen, Total Phosphorus, Total Potassium, and Alkalinity (lime treated sludge should be analyzed for percent calcium carbonate equivalence). These nutrient monitoring requirements apply only if the permittee land applies their own sludge.

Monitoring frequencies, summarized in Table 6, are based on the amount of sewage sludge applied in a given 365-day period. The frequency may be reduced after two years of sampling but should not be less than once per year.

Representative sampling is one of the most important aspects of monitoring. Because the pollutant limits pertain to the quality of the final sewage sludge applied to the land, samples must be collected after the last treatment process prior to land application. In most situations, composite samples should be required.

Once the option to meet pollutant limits and pathogen and vector attraction reduction requirements has been determined, proper monitoring parameters, frequency, sampling types and locations should be specified in the Part I. A. for sludge monitoring. Detailed sampling and preservation protocols, and proper QC/QA procedures should be addressed through the Operation & Maintenance Manual.

b. Soil Monitoring

In addition to sludge monitoring, soil monitoring should be required. Soil monitoring in conjunction with soil productivity information is critical, especially for frequent applications, to making sound sludge application decisions from both an environmental and an agronomic standpoint. Therefore, for frequent applications, soil should be sampled and analyzed up front in order to determine site suitability and to provide background data. Soil monitoring parameters are listed in the application. After the land application program gets underway, it is also necessary to continue monitoring possible changes in the soil characteristics of the application site. Routine soil monitoring will be required for both frequent and infrequent applications. Updated soil sampling and analysis needs to be performed before sludge is reapplied.

A Part I. A soil monitoring page should also be developed. Detailed sampling and analytical protocols should be addressed through the Operation and Maintenance Manual.

TABLE 5 PARAMETERS TO MONITOR IN LAND APPLIED SEWAGE SLUDGE

Pollutants[a]	Pathogens	Vector Attraction Reduction
Arsenic	Fecal Coliform or *Salmonella*	Percent Volatile Solids Reduction[c]
Cadmium		
Copper	Enteric Viruses[b]	Specific Oxygen Uptake Rate[d]
Lead		
Mercury	Helminth ova[b]	pH[e]
Molybdenum		
Nickel		Percent Solids[f]
Selenium		
Zinc		
PH		
Total Kjeldahl Nitrogen		
Ammonia Nitrogen		
Nitrate Nitrogen		
Total Phosphorus		
Total Potassium		
Alkalinity[g]		

[a]Percent solids of sewage sludge must be monitored to report pollutant concentrations on a dry weight basis.
[b]Class A Options 3 and 4
[c]Vector attraction reduction Options 1, 3 and 3
[d]Vector attraction reduction Option 4
[e]Vector attraction reduction Option 6
[f]Vector attraction reduction Options 7 and 8
[g]Lime treated sludge (>10% $CaCo_3$) should be analyzed for percent calcium carbonate equivalence.

TABLE 6 FREQUENCY OF MONITORING - LAND APPLICATION

Amount of Sewage Sludge[a] (metric tons per 365-day period)	Frequency[b]
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 2 months (six times per year)
Equal to or greater than 15,000	Once per month (12 times per year)

[a]Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares the sewage sludge that is sold or given away in a bag or other container for application to the land (on a dry weight basis).
[b]After sewage sludge is monitored for 2 years at the above frequency, the Board may reduce the frequency of monitoring for pollutant concentrations and for the pathogen density requirements. Monitoring frequency should not be less than 1/year (this is consistent with NMP).

11. Recordkeeping and Reporting

The recordkeeping and reporting requirements are summarized in Table 7 (of this section). As indicated earlier, Part VI of the VPDES Permit Regulation is self-implementing in nature. The recordkeeping and reporting requirements for the generators will be implemented through the VPDES permits issued to the generators. Specific permit special conditions regarding recordkeeping and reporting requirements are provided below.

a. Reporting to DEQ

Reporting responsibilities are only for POTWs with a design flow rate equal to or greater than 1 MGD (majors), POTWs that serve a population of 10,000 or greater, and Class I Sludge management facilities. A permit special condition which requires these generators to submit an annual report on February 19 of each year should be included. When 90 percent or more of any of the cumulative pollutant loading rates (CPLR sludge only) is reached at a site, the generator needs to submit an annual report on February 19 of each year which provides the detailed site information, sludge loading, and cumulative amount of each pollutant loading for the previous calendar year's activity. The generators should use the Discharge Monitoring Report (DMR) forms as part of the annual report. In addition to the DMR forms, the generators who land apply sewage sludge are responsible for submitting the additional information required by 9 VAC 25-31-590, i.e., appropriate certification statements, descriptions of how pathogen and vector attraction reduction requirements are met, descriptions of how the management practices (if applicable) are being met, and descriptions of how site restrictions (if applicable) are being met.

Even if the permittee is not required to report this information, the records should be kept for 5 years, or indefinitely for cumulative amounts of pollutants added to any site by CPLR sewage sludge.

b. Notice and Necessary Information for Sludge Users

The requirement for Notice and Necessary Information comes from the VPDES Permit Regulation at 9 VAC 25-31-530 F and H. Paragraph F requires the generator to provide information to the sludge contractor that the contractor will need to comply with the regulations. Paragraph H requires the land applier, either the generator or the contractor, to provide to the owner of the land where the sludge is being land applied information the land owner might need to comply with the regulations. The land owner needs to get both parts of the form for his records. The preparer should keep a record that the required information was provided.

Forms for both the generator and the land applier are included in the VPDES Permit Sludge Application Instructions. The forms are reproduced on the following pages

NOTICE AND NECESSARY INFORMATION

This form is to assist compliance with the bulk sewage sludge notification requirements (9 VAC 25-31-530 F and/or H). Please note, however, that if the sewage sludge meets the exceptional quality criteria, then the notification requirements do not apply. This form can be used by preparers of sewage sludge to transmit information to land appliers and also by land appliers to transmit information to land owners or lease holders.

Part I – To Be Completed by PREPARERS of Sewage Sludge

A. Please provide pollutant concentrations

Name	Concentration (mg/kg) Dry Weight	Pollutant Concentrations (Table 3, 9 VAC 25-31-540) (Monthly Average)	Ceiling Concentrations* (Table 1, 9 VAC 25-31-540) (Daily Maximum)
Arsenic		41 mg/kg	75 mg/kg
Cadmium		39 mg/kg	85 mg/kg
Copper		1500 mg/kg	4300 mg/kg
Lead		300 mg/kg	840 mg/kg
Mercury		17 mg/kg	57 mg/kg
Molybdenum		-	75 mg/kg
Nickel		420 mg/kg	420 mg/kg
Selenium		100 mg/kg	100 mg/kg
Zinc		2800 mg/kg	7500 mg/kg
Total Nitrogen		N/A	N/A

* Sludge may not be land applied if any pollutant exceeds these values.

B. Pathogen Reduction (9 VAC 25-31-710) __ Class A __ Class B

C. Vector Attraction Reduction (9 VAC 25-31-720)

__ Option 1 __ Option 2 __ Option 3 __ Option 4
__ Option 5 __ Option 6 __ Option 7 __ Option 8
__ No vector attraction reduction options were performed

D. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information 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.

Name and official title _____

Signature _____ Date Signed _____

Telephone number _____

Part II – To Be Completed by LAND APPLIER of Sewage Sludge

A. If the pollutant levels in the sewage sludge do not meet the pollutant concentration limits in Table 3, then the land applier must provide the land owner with the following information:

- Location of land application site
- Number of hectares where the sewage sludge was applied
- Date and time bulk sewage sludge was applied
- Amount of bulk sewage sludge applied
- Record the amount of each metal and nitrogen applied in pounds per acre or kilogram per hectare

B. If the preparer did not perform vector attraction reduction options (see Part I), then either option 9 or 10 must be performed by the land applier. Please indicate if option 9 or 10 was performed.

__ Option 9 – Subsurface Injection
__ Option 10 – Incorporated into the soil
__ N/A

C. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information 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.

Name and official title_____

Signature _____ Date Signed _____

Telephone number _____

TABLE 7 RECORDKEEPING AND REPORTING REQUIREMENTS

Sludge Type	Required Records	Person Responsible for Recordkeeping		Records That Must Be Reported[a]
		Sludge Preparer	Sludge Applier	
EQ	Pollutant concentrations	X		X
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X		X
PC	Pollutant concentrations	X		X
	Management practice certification and description		X	
	Site restriction certification and description, where Class B pathogen requirements are met		X	
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X	X[b]	X[c]
CPLR	Pollutant concentrations	X		X
	Management practice certification and description		X	
	Site restriction certification and description, where Class B pathogen requirements are met		X	
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X	X[b]	X[c]
	Other information: 1. Certification and description of information gathered from the previous applier, landowner or permitting authority regarding the existing cumulative pollutant load at the site from previous sewage sludge applications; 2. Site location; 3. Number of hectares; 4. Amount of sewage sludge applied; 5. Cumulative amount of pollutant applied, including previous amounts; 6. Date of application		X	X[d]
APLR	Pollutant concentrations	X		X
	Management practice certification and description	X		X
	Pathogen reduction certification and description	X		X
	Vector attraction reduction certification and description	X		X
	The AWSAR for the sewage sludge	X		X

[a]Reporting responsibilities are only for POTWs with a design flow rate equal to or greater than 1 mgd, POTWs that serve a population of 10,000 or greater and Class I sludge management facilities.
[b]The preparer certifies and describes vector attraction reduction methods other than injection and incorporation of sewage sludge into the soil. The applier certifies and describes injection or incorporation of sewage sludge into the soil.
[c]Records that certify and describe injection or incorporation of sewage sludge into the soil do not have to be reported.
[d]Some of this information has to be reported only when 90 percent or more of any of the CPLR is reached at a site. See the reporting special condition for CPLR sludge.

12. a. Example Part I A page when sludge is land applied by generator or contractor

A. 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 manage sewage sludge according to the approved Sludge Management Plan. The pollutants in sewage sludge shall be limited and monitored by the permittee as specified below:

a. Annual Sludge Production Data
Report annual total amount of sludge produced, in dry metric tons, including units and annual amount of sludge used or disposed in various methods (if applicable).

b. Chemical Pollutant Limitations

SLUDGE CHARACTERISTICS	LIMITATIONS				MONITORING REQUIREMENTS	
(1)	(A) Cumulative Loading (kg/ha)*	(B) Monthly Average (mg/kg)*	(C) Annual Loading** (kg/ha/365 days)	(D) Ceiling Concentration Maximum (mg/kg)*	Frequency	Sample Type
Percent Solids	NA	NL	NA	NA		Composite
Total Arsenic	41	41	2.0	75		Composite
Total Cadmium	39	39	1.9	85		Composite
Total Copper	1,500	1,500	75	4,300		Composite
Total Lead	300	300		840		Composite
Total Mercury	17	17	0.85	57		Composite
Total Molybdenum	NA	NA	NA	75		Composite
Total Nickel	420	420	21	420		Composite
Total Selenium	100	100	5.0	100		Composite
Total Zinc	2,800	2,800	140	7,500		Composite

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Part I
Page of

A. LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

1. b. Chemical Pollutant Limitations

SLUDGE CHARACTERISTICS	LIMITATIONS	MONITORING REQUIREMENTS	
(2)		Frequency	Sample Type
TKN (mg/kg)	NL		Composite
Ammonia Nitrogen (mg/kg)	NL		Composite
Nitrate Nitrogen (mg/kg)	NL		Composite
Total P (mg/kg)	NL		Composite
Total K (mg/kg)	NL		Composite
pH (Std units at 25° C)	NL		Composite
Alkalinity as $CaCO_3$, (%)***	NL		Composite
PAN (lbs/DT)	NL		Calculated

NL = No limitation, monitoring required. NA = Not Applicable
* Dry weight basis, unless otherwise stated.
** Annual whole sludge application rate that does not cause the specified annual pollutant loading rates to be exceeded, must be reported.
*** Lime treated sludge (10% or more $CaCO_3$ by dry weight) should be analyzed for percent Calcium Carbonate Equivalence (CCE).

c. Pathogen Reduction Limitations **(Identify the chosen class/alternative(s) in accordance with the approved SMP (may be more than one), specify the applicable monitoring/ operation parameters.)**

***For example**: Class B, Alternative 1, fecal coliform less than either 2,000,000 MPN/g or 2,000,000 CFU/g; or Class B, Alternative 2, anaerobic digestion - Sewage sludge shall be treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature shall be between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.*

d. Vector Attraction Reduction Limitations: The permittee shall comply with one of the applicable vector attraction reduction alternatives specified in 9 VAC 25-31-720 B.

e. All samples shall be collected and analyzed in accordance with the approved O & M Manual.

Note to Permit Writers:

1)Select the appropriate chemical parameters group(s) for generators.
For generators who contract out and the contractors are responsible for the operation - select group (1)
For generators who are responsible for the operation, select groups (1) and (2).
2)Select the appropriate group (1) limitation columns for each permitted sewage sludge.
For EQ and PC sewage sludge - select columns (B) and (D)
For CPLR sewage sludge - select columns (A) and (D), and require column (B) (average) be reported, but not limited.
For APLR sewage sludge - select columns (C) and (D)
3)Select the appropriate frequency based on the amount of sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis). - See 9 VAC 25-31-570 Table 1.

12. b. Example Part I A page when sludge is land applied by generator

A. LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning with the permit's effective date and lasting until the permit's expiration date, the permittee is authorized to manage sewage sludge according to the approved Sludge Management Plan. The pollutants in soil shall be monitored by the permittee as specified below:

	PARAMETERS	FREQUENCY	SAMPLE TYPE
(1)	Soil pH (Std units)	1/Application	Composite
	Cation Exchange Capacity (meq/100g)	1/Application	Composite
	Available Phosphorus (mg/kg)	1/Application	Composite
	Exchangeable Potassium (mg/kg)	1/Application	Composite
	Exchangeable Magnesium (mg/kg)	1/Application	Composite
(2)	Soil Organic Matter (%)	1/Application	Composite
	Total Nitrogen (mg/kg)	1/Application	Composite
	Organic Nitrogen (mg/kg)	1/Application	Composite
	Ammonia Nitrogen (mg/kg)	1/Application	Composite
	Exchangeable Sodium (mg/kg)	1/Application	Composite
	Exchangeable Calcium (mg/kg)	1/Application	Composite
	Copper (mg/kg)	1/Application	Composite
	Nickel (mg/kg)	1/Application	Composite
	Zinc (mg/kg)	1/Application	Composite
	Cadmium (mg/kg)	1/Application	Composite
	Arsenic (mg/kg)	1/Application	Composite
	Lead (mg/kg)	1/Application	Composite
	Mercury (mg/kg)	1/Application	Composite
	Manganese (mg/kg)	1/Application	Composite
	Molybdenum (mg/kg)	1/Application	Composite
	Selenium (mg/kg)	1/Application	Composite

a. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: All land application sites before sludge is reapplied.

b. Soil composite samples shall be representative of the soil types delineated by the SCS Soil Survey (or the equivalent). Samples shall be taken at 0-6 inches soil depth for each land application site. Sampling shall be performed as outlined in the approved O & M Manual.

c. Unless otherwise stated, all parameters are reported on a dry weight basis.

*** Note to Permit Writers: Select parameters listed in group (1) for infrequent sludge applications Select parameters listed in groups (1) and (2) for frequent sludge applications**

13. Sludge Special Conditions

a. Generic special conditions

(For all POTWs and any other treatment works treating domestic sewage – existing plant)

1. The permittee shall conduct all sewage sludge use or disposal activities in accordance with the Sludge Management Plan (SMP) approved with the issuance of this permit. Any proposed changes in the sewage sludge use or disposal practices or procedures followed by the permittee shall be documented and submitted for Department of Environmental Quality and Department of Health approval 90 days prior to the effective date of the changes. Upon approval, the SMP becomes an enforceable part of the permit. The permit may be modified or alternatively revoked and reissued to incorporate limitations/conditions necessitated by substantive changes in sewage sludge use or disposal practices.

(For new or proposed POTWs or any other TWTDS only when a complete SMP cannot be formulated prior to permit issuance)

1. The Sludge Management Plan (SMP) is conditionally approved with the issuance of this permit, provided that a complete SMP is submitted and approved at least 180 days prior to implementation of the specific sludge use or disposal practices. [**For proposed facilities: The complete SMP shall be submitted for DEQ and Department of Health approval at least 180 days prior to commencing operations.**] Upon approval, the SMP becomes an enforceable part of the permit. The permit may be modified or alternately revoked and reissued to incorporate limitations/conditions necessitated by the chosen sewage sludge use or disposal practices.

b. For generators who land apply sludge themselves or through a contractor. Special conditions #1-18 apply to all PC and CPLR sewage sludge.

1. Sewage sludge shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under Virginia Water Quality Standards Regulation (9 VAC 25-260-00 et seq.) or Section 4 of the Endangered Species Act or if the land application is likely to adversely affect its designated critical habitat.

2. *(For facility with an approved Land Application Plan in the SMP)*
For land application sites not identified in the approved Land Application Plan, the permittee shall submit the site specific information including site plan, soil map, proposed cropping scheme, and soil productivity classes, etc., as outlined in the VPDES Sewage Sludge Permit Application Form Section C.12, and the landowner agreement form(s), 90 days prior to commencing the sludge application, to the regional office of the Department of Environmental Quality. In addition, a public notice must be advertised by the permittee once in the local newspaper. A copy of the public notice verification must accompany the site specific information package required above.

Special conditions under #3-22 below may be incorporated into the permit when the SMP is incomplete as a result of missing these provisions

3. *(For Infrequent Application)* Application of sludge shall be on an infrequent (once per three year) basis. None of the sites listed in the Sludge Management Plan which previously received a complete application of sludge shall be used again until at least three years after the date of the last application. For the purposes of this special condition, a complete sludge application shall be defined as the sum of all sludge applications made within a 12 month period, regardless of whether or not the target level of nutrient addition was achieved.

4. *(For liquid spreader systems)* At no time shall liquid sludge be surface applied at a hydraulic loading rate greater than 14,000 gal/ac in a single application procedure. Sufficient drying time shall be allowed between subsequent applications.

5. Operational limitations during periods of inclement weather.

a. Sludge shall not be applied during times when the ground is saturated.

b. Surface application of sludge shall not be made to cultivated or bare ground covered with ice. However, sludge may be applied to snow covered ground if snow cover does not exceed an average depth of one inch and the snow and sludge are incorporated within 24 hours of application.

c. Sludge may be applied to frozen ground only under the following conditions:

(1) solids content of the sludge is greater than 15%,

(2) slopes are not greater than 5%,

(3) a minimum of a 200 foot vegetative (or at least 60% uniformly covered by stalks or other vegetation) buffer is maintained from all surface water courses,

(4) only those soils characterized by the USDA as "well drained" are utilized,

(5) stalks, vines, stubble or other vegetation or crop residue provides uniform soil coverage of at least 60% and is sufficient to prevent surface runoff.

6. Sludge shall be direct injected or incorporated (mixed within the normal plow layer) within 48 hours if applied on sites with less than 60% uniform soil coverage by crop residue, stalks, vines, stubble, or other vegetation within any portion of the permitted site or if applied to areas subject to frequent flooding as defined by soil survey information.

7. Sludge shall not be applied to sites where slopes exceed 15%. During the period of November 16 to March 15 of the following year, when sludge is applied to site slopes between 7% and 15%, one of the following best management practices shall be used to prevent runoff and soil loss:

a. Sludge is surfaced applied or subsurface injected beneath an established living crop such as hay, pasture, or timely planted small grain or cover crop;

b. Sludge is surfaced applied or subsurface injected so that immediately after application the crop residue still provides at least 60% soil surface coverage; or

c. Sludge is applied by surface application or subsurface injection and the site is operated in compliance with an existing soil conservation plan approved by the USDA Natural Resource Conservation Service and will remain in compliance after any subsequent tillage operation to incorporate the sludge.

During the period of November 16 to March 15 of the following year, if site slopes between 5% and 7%, sludge can be applied by surface application or subsurface injection followed by:

a. Incorporation within 48 hours of application if crop residue still provides at least 30% soil surface coverage immediately following incorporation; or

b. Ridge tilling or chisel plowing within 48 hours of application.

8. Land application of sewage sludge shall not occur within the following minimum buffer zones:

Adjacent Features	Minimum Distance (feet)to Land Application Area		
	Surface Application(1)	Incorporation	Winter(2)
Occupied dwellings *	200	200	200
Water supply wells and springs	100	100	100
Property lines *	100	50	100
Perennial streams and other surface waters except intermittent streams	50	35	100
Intermittent streams/drainage ditches	25	25	50
All improved roadways	10	5	10

Rock outcrops and sinkholes	25	25	25
Agricultural drainage ditches with slopes equal to or less than 2.0%	10	5	10

(1) Not plowed or disced to incorporate within 48 hours.

(2) If surface application occurs on average site slope greater than 7% during the time between November 16 of one year and March 15 of the following year

*These buffer zones may be reduced if adjoining property owner/resident agrees in writing.

9. All vehicles that transport sludge shall be sufficiently sealed to prevent leaking and spillage of sludge. Totally closed, water tight transport vehicles with rigid tops shall be provided for liquid sludge to prevent spillage.

10. Soil pH results at the time of application shall not be over 1 year old.

11. *(Use when Cadmium concentration is > 21 mg/kg)*

Post application soil pH shall be 6.0 or greater. If the pre-application soil pH is below 6.0, pH adjustment may be required. Lime application shall be calculated taking into account the Calcium Carbonate Equivalency (CCE) of the sludge at the proposed sludge application rate.

12. *(For coastal plain soils as defined by USDA- NRCS)* Sludge with a calcium carbonate ($CaCO_3$) equivalency of 20% or greater shall not be applied to fields which exhibit a soil pH of 6.5 or greater. The same sludge may be applied to fields which exhibit a soil pH less than 6.5 in accordance with the calculated rate derived from the following table:

Initial Soil pH	Soil Type	
	Coarse Texture	Fine Texture
	Lime ($CaCO_3$) Tons/Acre	
4.8	3.5	4.5
5.0	3.0	3.75
5.5	1.75	2.5
6.0	1.25	1.5
6.3	0.75	1.0

The calculated rate and the actual application rate shall be recorded and maintained on site. Coarse texture soils include those surface soils designated by USDA-NRCS as sandy loam or lighter in texture; Fine texture soils include those classified as having textures heavier than sandy loam.

13. *(For soils outside the coastal plain, as defined by USDA- NRCS)* Sludge with a calcium carbonate ($CaCO_3$) equivalency of 20% or greater shall not be applied to fields which exhibit a soil pH of 6.8 or greater. The same sludge may be applied to fields which exhibit a soil pH less than 6.8 in accordance with the calculated rate derived from the following table:

Initial Soil pH	Soil Type	
	Coarse Texture	Fine Texture
	Lime ($CaCO_3$) Tons/Acre	
4.8	4.25	5.75
5.0	4.0	5.25
5.5	3.0	4.0
6.0	2.0	2.75
6.5	1.25	1.5

The calculated rate and the actual application rate shall be recorded and maintained on site. Coarse texture soils include those surface soils designated by USDA-NRCS as sandy loam or lighter in texture; Fine texture soils include those classified as having textures heavier than sandy loam.

14. The application of sludge together with any other source of PAN shall not exceed the agronomic loading rate for the crops grown on each site. The sludge application rates shall be calculated for each field based upon the PAN and productivity class table provided in Table I and Table II. Legume nitrogen credits shall be made for sites where legumes have been grown the previous year in accordance with Table III. Records of the actual sludge application rates should be retained on site for inspection.

15. *(For Infrequent Applications)* The rate of application of sludge shall never exceed 15.0 dry tons per acre per three years.

(For All Frequent Applications, regardless of PAN) The rate of application of sludge shall never exceed 15.0 dry tons per acre per year.

16. The yield goals posted in Table II shall reasonably correspond to site specific yield goals. If the site specific yield goal is lower than the yield listed in Table II, the amount of sludge applied shall be reduced proportionately. In order to justify higher sludge application rates due to higher yield goals than those in Table II, the permittee shall first obtain written verification from the county Extension Agent that the higher yield goal is reasonable.

17. If agricultural practice involves double cropping, the sludge application must be split in accordance with the nitrogen (PAN) requirements of each respective crop.

18. Valid landowner consent forms shall be maintained for all sites not owned by the permittee, as specified in the Sludge Management Plan. The permittee shall immediately notify the regional office of any change in landowner agreement.

19. The permittee shall provide the owner or leaseholder of the land on which the sludge is applied notice and necessary information to comply with the requirements in this permit. Forms for providing this notice and information are included in the instructions for the sludge use and disposal application filed by the permittee.

20. *(For CPLR sludge only)* Sewage sludge subject to the cumulative loading rates, listed in Part I. A, shall not be applied to agricultural land, forest, a public contact site, or a reclamation site if any of the cumulative pollutant loading rates has been reached.

21. *(For CPLR sludge only)* Before sewage sludge subject to the cumulative pollutant loading rates listed in Part I. A is applied to the land, the permittee shall contact the regional office of the Department of Environmental Quality to determine whether sludge subject to the cumulative pollutant loading rates has been applied since July 20, 1993.

a) If sewage sludge subject to the cumulative amount for each pollutant listed in Part I. A has not been applied since July 20, 1993, the cumulative amount for each pollutant may be applied to the site in accordance with the cumulative loading limits listed in Part I. A.

b) If sewage sludge subject to the cumulative loading limits in Part I. A has been applied since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the sewage sludge since that date is known, the cumulative amount of each pollutant applied to the site shall be used to determine the additional amount of each pollutant that can be applied to the site in accordance with the cumulative loading limits listed in Part I. A.

c) If sewage sludge subject to the cumulative loading limits in Part I. A has been applied since July 20, 1993, and the cumulative amount of each pollutant applied to the site in the bulk sewage sludge since that date is not known, an additional amount of each pollutant shall not be applied to the site.

22. *(For CPLR sludge only)* Once a land application site has received sewage sludge subject to the cumulative pollutant loading rates listed in Part I A, tracking of the cumulative amount of each pollutant shall continue and take into account pollutant inputs from all sewage sludges, PC and CPLR, applied onto the site.

23. *(For APLR sludge only)* For sewage sludge that is sold or given away, either a label shall be affixed to the bag or similar enclosure or an information sheet shall be provided to the person who receives the sewage sludge. The label or information sheet shall contain:

a) The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land;

b) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet; and

c) The annual whole sludge application rate for the sewage sludge that does not cause any of the annual pollutant loading rates in Part I. A to be exceeded.

24. *(For PC and CPLR sludges that achieve pathogen reduction Class B)* **Site Restrictions for Land Application of Class B Sewage Sludge**

a) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;

b) Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;

c) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;

d) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;

e) Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge;

f) Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;

g) Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;

h) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

c. Recordkeeping Special Conditions for Land Application of Sewage Sludge

(**Select the appropriate conditions based on the sludge quality category. If the permittee prepared material derived from EQ sludge, the permittee is not required to retain records on that material.**)

1. *(For generators of EQ sludge and EQ material derived from non-EQ sludge)* The permittee is required to retain the following information for at least 5 years:

a) The concentrations of each pollutant listed in Part I. A., (**pages _ and _**);

b) A description of how the Class A pathogen reduction requirements in Part I.A. are met;

c) A description of how the vector attraction reduction requirements in Part I. A. are met;

d) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the Class A pathogen requirements in 9 VAC 25-31-710 A and the vector attraction reduction requirement in [**permittee shall insert one of the vector attraction reduction requirements in 9 VAC 25-31-720 B 1 through B 8**] was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

2. *(For generators of PC sludge meeting Class A pathogen reduction and vector attraction reduction alternative 9 or 10 only)* The permittee is required to retain the following information for at least 5 years:

a) The concentrations of each pollutant in Part I. A, (**pages _ and _**);

b) A description of how the pathogen reduction requirements in Part I.A. are met;

c) A description of how the vector attraction reduction requirements in Part I. A. are met;

d) A description of how the management practices specified in the approved Sludge Management Plan and/or this permit are met;

e) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in 9 VAC 25-31-710 A, vector attraction reduction requirements in [**permittee shall insert either 9 VAC 25-31-720 B 9 or B 10**], and the management practices in 9 VAC 25-31-550 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.".

3. *(For generators of PC sludge meeting Class B pathogen reduction and vector attraction reduction alternative 1 through 10 only)* The permittee is required to retain the following information for at least 5 years:

a) The concentrations of each pollutant in Part I. A, (**pages _ and _**);

b) A description of how the pathogen reduction requirements in Part I.A. are met;

c) A description of how the vector attraction reduction requirements in Part I. A. are met;

d) A description of how the management practices specified in the approved Sludge Management Plan and/or this permit are met;

e) A description of how the site restrictions specified in the approved Sludge Management Plan and/or this permit are met;

f) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in 9 VAC 25-31-710 B, vector attraction reduction requirements in [**permittee shall insert one of the vector attraction reduction requirements in 9 VAC 25-31-720 B 1 through B 10**], the management practices in 9 VAC 25-31-550, and the site restrictions in 9 VAC 25-31-710 B 5 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.".

4. *(For generators of CPLR sludge only)* The permittee is required to retain the following information a) through f) for at least 5 years; g) through m) indefinitely:

a) The concentrations of each pollutant in Part I.A, (**pages _ and _**);

b) A description of how the pathogen reduction requirements in Part I.A. are met;

c) A description of how the vector attraction reduction requirements in Part I. A. are met;

d) A description of how the management practices specified in the approved Sludge Management Plan and/or this permit are met;

e) A description of how the site restrictions specified in the approved Sludge Management Plan and/or this permit are met (if applicable);

f) The following certification statement:

"I certify under the penalty of law, that the information that will be used to determine compliance with the pathogen requirements in [**permittee shall insert either 9 VAC 25-31-710 A or B**], the vector attraction reduction requirements in [**permittee shall insert one of the vector attraction reduction requirements in 9 VAC 25-31-720 B 1 through B 10**], the management practices, and the site restrictions (if applicable) for each site on which bulk sewage sludge is applied was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

g) The location, by either street address or latitude and longitude, of each site on which sewage sludge is applied;

h) The number of hectares in each site on which sewage sludge is applied;

i) The date and time bulk sewage sludge is applied;

j) The cumulative amount of each pollutant (i.e. kilograms) listed is Part I. A in the bulk sewage sludge applied to each site, including the amount of each pollutant applied since July 20, 1993;

k) The amount of sewage sludge (i.e., metric tons) applied to each site;

l) A description of how the requirements to obtain information regarding the cumulative pollutant loading rates and the cumulative amount for each pollutant are met;

m) The following certification statement:

"I certify under the penalty of law, that the information that will be used to determine compliance with the requirements to obtain information in 9 VAC 25-31-530 E 2 for each site on which bulk sewage sludge is applied was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

5. *(For generators of APLR sludge)* The permittee is required to keep the following information for at least 5 years:

a) The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Part I. A to be exceeded;

b) The concentration in the sewage sludge of each pollutant listed in Part I. A, (**pages _ and _**);

c) A description of how the Class A pathogen requirements are met;

d) A description of how the vector attraction requirements in Part I. A are met;

e) The following certification statement:

"I certify under the penalty of law, that the information that will be used to determine compliance with the management practice in 9 VAC 25-31-550 E, the Class A pathogen requirements in 9 VAC 25-31-710 A, and the vector attraction reduction requirements in [**permittee shall insert one of the vector attraction reduction requirements in 9 VAC 25-31-720 B 1 through B 8**] was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.".

d. Reporting Land Application of Sewage Sludge

1. *(For permits for all Class I sludge management facilities, major POTWs, and POTWs that serve 10,000 people or more)* The permittee shall provide the results of all monitoring performed in accordance with Part I. A, and information on management practices, land application sites, site restrictions (if applicable), and appropriate certifications not later than February 19 of each year to the regional office of the Department of Environmental Quality. Each report is for the previous calendar year's activity. If no

sewage sludge was applied to the land during the reporting period, "no sewage sludge was applied" shall be reported.

2. *(Additional special condition for generators of CPLR sewage sludge only)* When 90 percent or more of any of the cumulative pollutant loading rates in Part I.A is reached at a site, the information in Part I. **[insert number for CPLR sludge recordkeeping special condition]** sections g) through m) above shall be reported to the regional office of the Department of Environmental Quality on February 19 of each year for the previous calendar year's activity.

e. Monitoring Frequency Reduction **(*For PC sludge only. Use if permittee requests reduced monitoring*)**

Sludge Monitoring Frequency -- After sewage sludge has been monitored for two years at the monitoring frequency specified in Part I.A.1, Page **[insert permit page number]** the required sewage sludge monitoring frequency shall be reduced to [**frequency, no less than 1/yr**] provided the results of sludge monitoring for all limited pollutants is less than 75% of the monthly average concentration limitation listed in Part I.A, Page **[insert permit page number]** in each monitoring event. Should the pollutant concentration in a sludge monitoring event exceed 75% of the monthly average concentration limitation specified for any pollutant in Part I.A , Page **[insert permit page number]**, the monitoring frequency of [**frequency**] shall become effective and remain in effect until the permit's expiration date. No other effluent limitations or monitoring requirements are affected by this special condition.

14. Table I, Recommended Plant Available Nitrogen (PAN) Application Rates
in pounds of Nitrogen (N) per acre for Various Non-Irrigated Crops(1)

Crop	Soil Productivity Group								
	I		II		III		IV		V
	A	B	A	B	A	B	A	B	
	Lbs N/acre								
Corn grain or silage	160 to 180	150 to 170	140 to 160	130 to 150	120 to 140	110 to 130	100 to 120	85 to 105	65 to 85
Grain sorghum	140	130	120	110	100	95	90		80
Full season Soybeans (2)	160 to 180	150 to 170	140 to 160	130 to 150	120 to 140	110 to 130	100 to 120	85 to 105	65 to 85
Canola (3)	100		90		80		60		60
Wheat	100		90		80		60		60
Barley	90		80		80		60		60
Rye	75		75		75		75		75
Oats	80		80		80		60		60
Tallgrass Hay (4)	250		250		200		160		160
Bermudagrass Hay	300		300		260		210		210
Pasture (5) Fescue/Orchardgrass	120		120		100		80		80
Bermudagrass Pasture	200		200		160		120		120
Alfalfa	300		300		210		150		150
Sudangrass, sudansorghum, millet (6)	70		70		70		70		70
Stockpiled tall fescue (summer application by August 31)	90		90		90		60		60

Notes:

(1) For proposed use of crops or PAN rates (lbs/ac) not included in the tables, adequate yield and PAN data are to be submitted for staff approval prior to land application.

(2) For double crop or late beans planted after 6/21, (of any year,) allowable PAN rates are the lowest of the listed values, as rounded to nearest factor of ten.

(3) For fall applications, may sidedress up to 60 lbs fertilizer N/ac in late February before spring growth begins.

(4) Apply listed PAN rate when application occurs between 3/1 and 9/30 in any year and apply only one-half of listed PAN rates if application will occur between 10/1 of any year and 2/28 of the following year, with remaining PAN applied after 3/1 of that following year.

(5) For frequent applications apply 60 lbs PAN/ac per year. Following infrequent application rate, subsequent frequent applications should be adjusted on a case-by-case basis, accounting for residual from other wastes and crops.

(6) Sudangrass, sudan-sorghrum and pearl millet may receive a PAN rate of 120 lbs/ac if the application occurs between 3/1 and 6/1 of any year and two cuttings are to be made, weather permitting. For Foxtail or German Millet, cut only once, application will be limited to a PAN rate of 70 LBS/ac.

15. Table II, Estimated Yields

in Bushels (bu) or Tons (T) per acre (ac) of Various Non-Irrigated Crops for identified Soil Productivity Groups

Crop	Soil Productivity Group								
	I		II		III		IV		V
	A	B	A	B	A	B	A	B	
Corn grain (bu/ac)	160	150	140	130	120	110	100	85	65
Silage (T/ac)	21	20	19	18	17	16	15	13	10
Grain sorghum (bu/ac)	140	130	120	110	100	90	90		80
Soybeans (bu/ac)									
Early Season	50	45	40	40	35		25		20
Late Season (1)	40	34	34	30	25		18		15
Canola (2)	UNDETERMINED AT THIS TIME								
Wheat (bu/ac)									
Standard	64		56		48		40		24
Intensive	80		70		60		50		30
Barley (bu/ac)									
Standard	100		70		60		50		30
Intensive	115		88		75		63		38
Oats	80		80		80		60		60
Tallgrass Hay (T/ac)	>4		3.5-4	3-3.5	<3		NA		NA
Bermudagrass Hay (T/ac)	>6		4-6		<4		NA		NA
Alfalfa (T/ac)	>6		4-6		<4		NA		NA

Notes:

(1) Late season beans would be planted on or after 6/21 of that year.

(2) Sufficient Yield Data not currently available.

16. Table III, Residual Plant Available Nitrogen (PAN)

remaining from growth of various Legumes during the previous year (1)

Crop	%Stand	Yield Description	Residual PAN (lb/ac)
Alfalfa	50-75	Good (>4T/ac)	90
	25-49	Fair (3-4T/ac)	70
	<25	Poor (<3T/ac)	50
Red Clover	>50	Good (>3T/ac)	80
	25-49	Fair (2-3T/ac)	60
	<25	Poor (<2T/ac)	40
Hairy Vetch	80-100	Good	100
	50-79	Fair	75
	<50	Poor	50
Peanuts			45
Soybeans			20 (2)

Notes:

(1) The Residual PAN values must be subtracted from the recommended PAN rates to determine sludge application rates following growth of Legume Crops the previous year.

(2) Where yield data is available, utilize 0.5 pounds per bushel.

17. Methods of Sewage Sludge Analysis

Pollutant	Analytical Method	Maximum Holding Time, Sample Preservation, Container, Preparation	Comments
Arsenic	AA Furnace SW-846 Method 7060	6 months Plastic or Glass Container Samples need to be digested prior to analysis	All samples must be digested using SW-846 Method 3050 or 3051 prior to analysis by any of the procedures indicated. The AA Direct Aspiration analyses are applicable at moderate concentration levels in clean complex matrix systems. AA Furnace methods can increase sensitivity if matrix effects are not severe. Inductively Coupled Plasma (ICP) methods are applicable over a broad linear range and are especially sensitive for refractory elements. Detection limits for ICP methods are generally higher than for AA Furnace methods
	AA Gaseous Hydride SW-846 Method 7061		
	ICP SW-846 Method 6010		
Cadmium	AA Direct Aspiration SW-846 Method 7130		
	AA Furnace SW-846 Method 7131		
	ICP SW-846 Method 6010		
Copper	AA Direct Aspiration SW-846 Method 7210		
	AA Furnace SW-846 Method 7211		
	ICP SW-846 Method 6010		
Lead	AA Direct Aspiration SW-846 Method 7420		
	AA Furnace SW-846 Method 7421		
	ICP SW-846 Method 6010		
Mercury	Cold Vapor (Manual) SW-846 Method 7470 SW-846 Method 7471	28 Days Cool to 4°C Plastic or Glass Container	SW-846 Method 7470 applies to liquid wastes. SW-846 Method 7471 applies to mercury in solid or semisolid wastes. The digestion procedure is contained in the analytical method
Molybdenum	AA Direct Aspiration SW-846 Method 7480	6 Months Plastic or Glass Container Samples need to be digested prior to analysis	All samples must be digested using SW-846 Method 3050 or 3051 prior to analysis by any of the procedures indicated. The AA Direct Aspiration analyses are applicable at moderate concentration levels in clean complex matrix systems. AA Furnace methods can increase sensitivity if matrix effects are not severe. Inductively Coupled Plasma (ICP) methods are applicable over a broad linear range and are especially sensitive for refractory elements. Detection limits for ICP methods are generally higher than for AA Furnace methods
	AA Furnace SW-846 Method 7481		
	ICP SW-846 Method 6010		
Nickel	AA Direct Aspiration SW-846 Method 7520		
	ICP SW-846 Method 6010		
Selenium	AA Furnace SW-846 Method 7740 or 7951		
	AA Gaseous Hydride SW-846 Method 7741		

Pollutant	Analytical Method	Maximum Holding Time, Sample Preservation, Container, Preparation	Comments
	ICP SW-846 Method 6010		
Zinc	AA Direct Aspiration SW-846 Method 7950		
	ICP SW-846 Method 6010		
Total Solids, Volatile Solids, Fixed Solids	Gravimetric SM-2540 G	7 Days Cool to 4° C Plastic or Glass Container	Recommended procedure for solid and semisolid samples
Fecal Coliform	SM-9221 E (MPN) SM-9222 D (Membrane Filter)	24 Hours Cool to 4° C Plastic or Glass Container	Both procedures are very temperature sensitive. Samples must be analyzed with holding times.
Salmonella	SM-9260 D 1 Kenner and Clark	24 Hours Plastic or Glass Container	Large sample volumes are needed due to the low concentration of Salmonella in wastewater. Also, due to the large number of Salmonella species, more than one procedure may be necessary to adequately determine the Salmonella's presence.
Enteric Viruses	ASTM Method D 4994-89	2 Hours at up to 25° C or 48 Hours at 2 to 10 ^{o} C	Concentration of the sample is necessary due to the presumably low numbers of viruses in the sample.
Helminth Ova	Yanko, W.A.		See Reference
Specific Oxygen Uptake Rate	SM-2710 B	Perform as soon as possible Plastic or Glass Container	Sensitive to sample temperature variation and lag time between sample collection and test initiation. Replicate samples are suggested.
Percent Volatile Solids	ERT		See Reference
Total Kjeldahl Nitrogen (TKN)	SM-4500 N_{org} EPA-351.3	28 Days Cool to 4° C Plastic or Glass Container	Total kjeldahl nitrogen is the sum of organic and ammonia nitrogen in a sample. Sample digestion and distillation are required and are included or referenced in the method.
Ammonia Nitrogen (NH_3-N)	SM-4500 NH_3	28 Days Cool to 4° C Plastic or Glass Container	All samples must be digested using procedure SM-4500-NH_3B prior to analysis by one of the specific analysis procedures listed.
Nitrate Nitrogen (NO_3-N)	SM-4500 NO_3 SW-846 Method 9200	28 Days Cool to 4° C Plastic or Glass Container	Nitrate nitrogen is the fully oxidized state of nitrogen. Organics may interfere with the method.

Pollutant	Analytical Method	Maximum Holding Time, Sample Preservation, Container, Preparation	Comments
Total Phosphorus	SM-4500 P	28 Days Cool to 4° C Plastic or Glass Container	
Total Potassium	SM-3500 K	28 Days Cool to 4° C Plastic or Glass Container	
Alkalinity	SM-2320 EPA 310.1	28 Days Cool to 4° C Plastic or Glass Container	
Calcium Carbonate Equivalence (CCE)	AOAC 955.01	28 Days Cool to 4° C Plastic or Glass Container	

18. Methods of Soil Analysis at Land Application Sites

Soil Property	Analytical Method	Extraction and/or Digestion Procedure	Comments
PH	EPA-9045	1:1 Soil/Water	A soil pH at or above 6.5 minimizes metal uptake by crops
Cation Exchange Capacity (CEC)	Sodium Acetate EPA-9080	Extract with 1N NAOAc	Needed to determine the soil's ability to attenuate heavy metal cations. The cation change capacity can be determined by summing the soil test results of the individual cations.
	Ammonium Acetate EPA-9080		
	ASA Exchangeable Cations		
Plant Available Nitrogen	N Ammonia,Distillation Nesslerization SM-43500 NH_3 A, B, C	Ammonia and Nitrate Extract with KCl	Inorganic nitrogen (NH_4+,NO_3-) is readily available for plant uptake.
	N Nitrate Electrode Method SM-4500 NO_3 A, D		
Plant Available Phosphorus	SM-4500 P A, B, C, D, E	Extract with 0.03 N NH_4F+HCl (Weak Bray) Extract with dilute HCl+H_2SO_4 (Mehlich I) Extract with 0.5M $NaHCO_3$ Extract with water	

Soil Property	Analytical Method	Extraction and/or Digestion Procedure	Comments
Background Metal Analysis	Metals should be analyzed by methods prescribed in Standards Methods, 17th Edition and SW-846	Metals samples must be digested prior to analysis.	

19. Analytical Methods References

EPA -Methods for Chemical Analysis of Water and Wastes, U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory-Cincinnati (EMSL-Cl), EPA-600/4-79-020, March 1983).

SM -Standard Methods for the Examination of Water and Wastewater, 18th Edition. American Public Health Association, Washington, D.C., 1992.

SW-846 -Test Methods for Evaluation Solid Waste: Physical/Chemical Methods, U.S. Environmental Protection Agency, November 1986.

ASTM -"Standard Practice for Recovery of Viruses from Wastewater Sludge," Annual Book of ASTM Standards, Section 11, Water and Environmental Technology, 1992.

USGS -Fishman, M.J., et al, "Methods for Analysis of Inorganic Substances in Water and Fluvial Sediments," U.S. Department of the Interior, Techniques of Water Resource Investigations of the U.S. Geological Survey, Denver, Colorado, 1989.

KC -Kenner, B.A. and H.A. Clark, "Determination and Enumeration of Salmonella and Pseudomonas Aeruginosa," J. Water Pollution Control Federation, 46(9):2163-2171, 1974.

Yanko -Yanko, W.A., Occurrence of Pathogens in Distribution and Marketing Municipal Sludges, EPA 600/1-87-014, 1987. NTIS PB 88-154273/AS, National Technical Information Service, Springfield, Virginia.

ERT -Environmental Regulations and Technology - Control of Pathogens and Vectors in Sewage Sludge, U.S. Environmental Protection Agency, Cincinnati, Ohio, EPA-625/R-92/013, 1992.

AOAC -Official Methods of Analysis, 15th Edition, Association of Official Analytical Chemists, 1990.

ASA -Methods of Soil Analysis, Agronomy Monograph Number 9, 2nd Edition, American Society of Agronomy, Madison, Wisconsin, 1992.