M E M O R A N D U M

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

P.O. Box 10009 Richmond, VA 23240-0009

SUBJECT: **Guidance Memo No. 04-2013**
June 2004 VPDES Manual Revisions

TO: Regional Directors

FROM: Larry G. Lawson, P.E., Director

DATE: June 14, 2004

COPIES: Regional Water Permit Managers, Jon Van Soestbergen, OWPS Staff and Cindy Berndt

Summary:

The purpose of this guidance is to notify the water permitting staff of a VPDES Permit Manual revision. The manual, revised as of June 2004, is now available on DEQNet. It replaces all previous editions and drafts of this manual. A list of the changes made since the December 2001 edition is attached.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET and for the general public on DEQ's website at: http://www.deq.state.va.us/water/.

Contact information:

Please contact Mike Gregory, Office of Water Permit Support, (804) 698-4065 or mbgregory@deq.state.va.us if you have any questions about this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

VPDES MANUAL UPDATE
June 8, 2004
List of Edits

SECTION	CHANGE
I.C.	Updated list of Guidance Memos
I.E.	Bacteria standard minor edit
I.E.	Added 30Q10 definition
I.E.	Edited tracking sheet
II.A.5	Edits re. submittal of applications to VDH
II.B.1	Added LLC status as acceptable in lieu of incorporation to validate PVOTWs
II.B.3	Deleted reference to non-2A Municipal forms no longer used
II.B.3.a	Reference added to expanded testing requirements
II.B.4	Referenced need to copy OWE with SMPs
II.B.5	Deleted reference to ISTEA municipal SW exemptions that are no longer valid
II.B.7	Added WQ Criteria Monitoring as potential application submittal
II.B.8	Added chlorine demonstration language for applications
II.C.3	Removed reference to fish farm general permit
II.C.6	Minor edit
II.C.8	Added Chlorine Demonstration language for application submittals
II.D.1.b	Added note on intra-government transfers
II.E.2	Deleted section on receiving stream flow data
II.F.1	Edited section on VDH review of applications
II.F.4.b	Added note clarifying meaning of riparian
III.A	Listed available general permits
III.A.6	Various minor edits to water quality sections from OWQS
III.A.6.b.(1)	Added reference to determination of critical stream flows
III.A.6.c.	Clarify 85% removal requirement
III.A.8.b	Added TMP Guidance reference
III.A.8.g	Edited water quality criteria monitoring special condition
III.A.8.h.(4)(b)	Updated MS4 language
III.A.9.b	Added reference to two significant figures for limits
III.A.10.a	Added reference to two significant figures for limits
III.A.11	Bacteria standard minor edit, TMDL language edit
III.A.6.f.(4)	Edited Disinfection waiver section so as not to require EPA review
III.A.6.f.(4)	Bacteria standard minor edit
III.A.10.g.	CEDS/PCS information (to be added later)
III.B.1.c	Deleted reference to RPM
III.B.3	Edited section on VDH review of draft permits

III.B.4	Added language re. use of EPA checklists and abbreviated EPA reviews
III.B.4.a	Deleted requirement for region to send OWPP copy of EPA draft package
III.C.1.e	Edited public notice verification requirement
III.C.3.a	Clarified PN website procedure
III.D.1.d	Deleted reference to RPM
III.D.2	Edited how to determine effective date of permit
III.D.3	Minor edit to VDH final package submission
III.D.3	Edited final package distribution to OWPP
IV.C.3	Edited VDH review of draft modifications
IV.C.4	Added language re. checklists and abbreviated EPA reviews to MOD. section
IV.C.4.a	Deleted requirement for region to send OWPP copy of EPA draft package
IV.E.1.d	Deleted refence to RPM
IV.E.3	Minor edit to VDH final package distribution
L.B,C	Edited VDH letter addressee
L.A.	Added list of area engineers
L.B	Edited reiss reminder letter
L.B	Deleted Flow Frequency Request Form
L.C	Added EPA Transmittal Checklist to forms
L.D	Added significant digits sentence to example permit transmittal letter
L.D	Added 2A testing reminder
IN.C.5	Removed reference to FFRF
IN.C.19.a	Bacteria standard minor edit
IN.C.19.i	edited water quality criteria monitoring special condition requirement
IN.C.19.o	reworded reduced monitoring rationale in fact sheet
IN.C.19.p	reworded rationale for oil storage groundwater monitoring reopener
IN.C.19.w.	added fact sheet rationale for chlorine demonstration special condition
IN.E.1.g	Added section on new bacteria standards
IN.E.2, IN.E.2.a	Edited to reference new bacteria standards
IN.E.3	Added section on discharges to shellfish waters
IN.F.1	Edited special condition to reference new bacteria standards
IN.F.3	Edited O&M special condition (combination of recommendations)
IN.F.4	Edited operator requirement special condition
IN.F.9	Changed QLs to two significant digits
IN.F.9	Noted QLs are to two significant digits

IN.F.9	Added clarifying note to water quality monitoring special condition
IN.F.9	Edited fecal coliform in Attachment A to include E.coli and enterococci
IN.F.9	Edited water quality criteria monitoring special condition
IN.F.10	Changed QLs to two significant digits
IN.F.15	Reworded Effluent Monitoring Frequencies condition re. reduced monitoring
IN.F.19	Clarified TMDL reopener
IN.F.21	Added special condition for chlorine demonstrations
IN.H.2.d	Changed storm event monitoring requirement to be consistent with SW pages
IN.H.2.e	Edited Oil Storage Groundwater Monitoring Reopener
IN.H.4	Edited shipyard section as per TRO suggestions
IN.I.3(d)	Edited grab sample explanation
IN.I.5.c	Reworded some of reduced monitoring section
IN.I.6	Edited to change fecals to bacteria
IN.J	Changed Phosphorus limit to two significant figures
IN.J.5	Added section on CBP significant dischargers
IN.K	Edited bypass language
MN.A.5	Removed reference to FFRF
MN.A.20.a	Bacteria standard minor edit
MN.A.20.d	Edited rationale for CTC, CTO
MN.A.20.f	Edited Reliability class rationale
MN.A.20.k	Edited water quality criteria monitoring special condition requirement
MN.A.20.n	Deleted 2E form reference
MN.A.20.w	added fact sheet rationale for chlorine demonstration special condition
MN.A.20.x	added separate rationale for O&M special condition
MN.C and MN.C.1.a	Bacteria standard minor edits
MN.C.1.f	Added section on new bacteria standards
MN.C.1.g.	Added section on discharges to shellfish waters
MN.C.1.h	Added section on chlorine demonstration requirements
MN.C.2, MN.C.2.a	Edited to reference new bacteria standards
MN.C.4.g, h, o, and p.VIII	Edited disinfection waiver process
MN.C.4.p.	Edits to UAAF form to reflect new bacteria standards
MN.C.5	Edits to reflect new bacteria standards
MN.D.1	Edited to reflect new bacteria standards
MN.D.4	Edited CTC,CTO special condition
MN.D.5	Added separate O&M special condition
MN.D.6	Edited Licensed Operator special condition
MN.D.7	Edit to Reliability Class source

MN.D.11	Clarified TMDL reopener
MN.D.12	Added clarifying note to water quality monitoring special condition
MN.D.12	Edited fecal coliform in Attachment A to include E.coli and enterococci
MN.D.12	Changed QLs to two significant digits
MN.D.12	Noted QLs are to two significant digits
MN.D.12	Edited water quality criteria monitoring special condition
MN.D.13	Changed QLs to two significant digits
MN.D.15	Delete 2E reference
MN.D.17	Reworded Effluent Monitoring Frequencies condition re. reduced monitoring
MN.D.22	Added special condition for chlorine demonstrations
MN.E.2(c)	Changed fecal to bacteria, added 40CFR136 note
MN.E.4	Edited Sampling Schedule Table for new bacteria and 0.0011-.04MGD freq.
MN.E.5	Bacteria standard minor edit
MN.E.6.c	Reworded some of reduced monitoring section
MN.F.	Changed phosphorus limit to two significant figures
MN.F.5	Added section on CBP significant dischargers
MN.G	Edited bypass language
MN.J.5	Bacteria standard edits
MN.K	Removed sentence referencing winter NH3 limits as option open to permittee.
MN.K	Changed TKN limit to two significant figures
MN.L	Edited VDH review information
MN.L.3	Edited VDH review information
MN.L.5	Generalized or corrected internal manual references
MN.L.6	minor edits
MN.L.9.a	Clarified internal references, minor edit
MN.L.11	Clarified internal references
MN.L.12.b	Corrected asterisks to numbers on soil monitoring I.A. page
MN.L.13	Renumbered sludge special conditions (internal references generalized)
MN.L.13.b.12 and 13	Updated USDA-NRCS
MN.M	Added new section on coordination between VPDES and OWE

VPDES PERMIT MANUAL

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

June 2004

VPDES PERMIT MANUAL
TABLE OF CONTENTS

SECTION I - INTRODUCTION

A. VPDES PERMIT PROGRAM **1**

B. PURPOSE AND USE OF THE PERMIT MANUAL **2**

C. BASIS OF MANUAL **3**

D. ABBREVIATIONS **7**

E. DEFINITIONS **8**

PERMIT PROCESSING TRACKING SHEET **17**

VPDES PERMIT PROCESS FLOW CHART **18**

SECTION II - APPLICATION PROCEDURES

PERMIT APPLICATIONS FLOW SHEET **1**

A. APPLICATION PROCESSING **2**

1. REISSUANCE REMINDER LETTER 2
2. INITIATE TRACKING SHEET 2
3. VPDES PERMIT APPLICATION FORMS 2
4. APPLICATION PACKAGE ENCLOSURES 2
5. APPLICATION FILING REQUIREMENTS 3
6. TESTING WAIVER PROCEDURES 4

B. MUNICIPAL PERMIT APPLICATION FORMS **5**

1. PRIVATELY OWNED TREATMENT WORKS (PVOTW) REQUIREMENTS 5
2. FINANCIAL ASSURANCE/CLOSURE REQUIREMENTS 5
3. FORM 2A 6
4. VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM 7
5. FORM 2F 7
6. DOMESTIC SEWAGE DISCHARGES ≤ 1000 GPD GENERAL PERMIT REGISTRATION STATEMENT 8
7. WATER QUALITY CRITERIA MONITORING FORM 8
8. CHLORINE DEMONSTRATIONS 8

C. INDUSTRIAL APPLICATION FORMS **9**

1. FORM 1 9
2. FORM 2B 9
3. FISH FARM QUESTIONNAIRE 9
4. FORM 2C 9
5. FORM 2D 10
6. FORM 2E 11
7. FORM 2F 11
8. WATER QUALITY CRITERIA MONITORING FORM 12
9. CHLORINE DEMONSTRATIONS 12

D. ADMINISTRATIVE REVIEW OF APPLICATION **13**

1. RECEIPT OF APPLICATION AND FEE 13
2. APPLICATION REVIEW 13

3. APPLICATION SIGNATURES 13
4. LATE OR DEFICIENT APPLICATIONS 14

E. TECHNICAL REVIEW OF APPLICATION 15

1. TECHNICAL DETAILS 15
2. SITE INSPECTION 15
3. PERMIT NUMBERS 15
4. APPLICATION COMPLETE 15

F. APPLICATION REVIEW BY OTHER AGENCIES 16

1. VIRGINIA DEPARTMENT OF HEALTH (VDH) 16
2. VDH-DIVISION OF SHELLFISH SANITATION (DSS) 16
3. VIRGINIA MARINE RESOURCES COMMISSION (VMRC) 16
4. NOTIFICATION OF LOCAL GOVERNMENTS AND RIPARIAN LANDOWNERS 17

G. CONTINUATION OF EXPIRING PERMITS 18

H. APPLICATION DENIAL 19

1. REASONS FOR NEW PERMIT DENIAL 19
2. REVIEW APPLICATION/NOTIFICATION OF APPLICANT 19
3. PUBLIC NOTICE OF THE INTENT TO DENY 20
4. PUBLIC HEARING 20
5. PREPARE THE DENIAL PACKAGE 21
6. PROCESS THE DENIAL PACKAGE 21
7. APPLICANT PETITION PROCEDURES 21
8. DENIAL OF A PERMIT REISSUANCE 21

SECTION III - ISSUANCE/REISSUANCE PROCEDURES

A. PERMIT DRAFTING 1

1. PERMIT PROCESSING TIMES 1
2. IDENTIFY MAJOR PERMITS 1
3. COMPLETE NPDES PERMIT RATING WORKSHEET 2
4. OUTFALL NUMBERING 2
5. FACT SHEET PREPARATION 3
6. EFFLUENT LIMITATIONS 3
7. EFFLUENT MONITORING FREQUENCY 9
8. PERMIT SPECIAL CONDITIONS 9
9. DRAFT PERMIT PREPARATION 16
10. DISCHARGE MONITORING REPORT (DMR) PREPARATION 17
11. PUBLIC NOTICE PREPARATION 18

GENERIC PUBLIC NOTICE FORMAT 19

B. DRAFT PERMIT REVIEW 27

1. REGIONAL REVIEW 27
2. OWPP REVIEW 27
3. VDH REVIEW 27
4. EPA REVIEW 27
5. OWNER REVIEW 29

C. PUBLIC PARTICIPATION 30

1. NEWSPAPER PUBLIC NOTICE 30
2. OPTIONAL PUBLIC NOTICE PROCEDURES 30
3. MAILING LIST AND WEBSITE POSTING 31
4. LOCAL GOVERNMENT NOTIFICATION 31
5. ADJACENT STATES RECOMMENDATIONS 32
6. OTHER AGENCY COMMENTS 32

7. PUBLIC HEARING 32
8. RESPONSE TO COMMENTS 33

D. FINAL PERMIT PROCESSING 35

1. FINAL PERMIT PACKAGE 35
2. DATING THE PERMIT 35
3. FINAL PACKAGE DISTRIBUTION 35
4. UPDATE CEDS 36

E. REVOCATION AND REISSUANCE PROCEDURES 37

1. CAUSES FOR REVOCATION AND REISSUANCE 37
2. PERMITTEE OR INTERESTED PARTY REQUESTED REVOCATION 37
3. STAFF INITIATED REVOCATION AND REISSUANCE 37
4. PROCESSING A PERMIT REVOCATION AND REISSUANCE 37
5. DENIAL OF REVOCATION AND REISSUANCE REQUESTS 38
6. PERMIT REQUIREMENTS 38

F. PUBLIC HEARING PROCEDURES 39

SECTION IV - MODIFICATION PROCEDURES

A. INITIATION OF MODIFICATIONS 1

1. CAUSES FOR MODIFICATION 1
2. MODIFICATION REQUESTS 2
3. PERMIT FEES 3
4. DENIAL OF REQUESTS FOR MODIFICATION 3
5. MODIFICATIONS NOT REQUIRING PUBLIC NOTICE 3

B. MODIFICATION PROCEDURES 5

1. REVIEW THE MODIFICATION REQUEST /APPLICATION 5
2. OWPP MODEL REVIEW 5
3. PREPARE THE FACT SHEET AND DRAFT PERMIT 5
4. PREPARE PUBLIC NOTICE 5

MODIFICATION PUBLIC NOTICE FORMAT 6

C. DRAFT PERMIT REVIEW 7

1. REGIONAL REVIEW 7
2. OWPP REVIEW 7
3. VDH REVIEW 7
4. EPA REVIEW 7
5. OWNER REVIEW 8

D. PUBLIC PARTICIPATION 9

1. NEWSPAPER PUBLIC NOTICE 9
2. OPTIONAL PUBLIC NOTICE PROCEDURES 9
3. MAILING LIST 9
4. LOCAL GOVERNMENT NOTIFICATION 10
5. ADJACENT STATES REVIEW 10
6. OTHER AGENCY REVIEW 10
7. PUBLIC HEARING 11
8. RESPONSE TO COMMENTS 12

E. FINAL PERMIT PROCESSING 13

1. MODIFIED PERMIT PACKAGE 13
2. DATING THE PERMIT 13
3. FINAL PACKAGE DISTRIBUTION 13
4. UPDATE CEDS 14

F. CHANGE OF OWNERSHIP/FACILITY NAME MODIFICATIONS 15

1. AUTOMATIC TRANSFER 15
2. CHANGE OF OWNERSHIP AS A MINOR MODIFICATION 15

SECTION V - TERMINATION PROCEDURES

A. TERMINATION OF PERMITS 1

1. CAUSES FOR PERMIT TERMINATION 1
2. TERMINATION PROCESS 2
3. PUBLIC NOTICE 2
4. BOARD ACTION 2

B. DENIAL OF REQUESTS FOR TERMINATION 3

SECTION L - LETTERS AND FORMS

A. AGENCY ADDRESSES AND TELEPHONE NUMBERS 1

VIRGINIA DEPT. OF HEALTH ADDRESSES AND PHONE NUMBERS 1
DEQ OFFICE OF WASTEWATER ENGINEERING AREA ENGINEER OFFICES 2
MAILING ADDRESSES FOR THE STATE AGENCIES IN THE STATES BORDERING VIRGINIA: 3
STATE AND FEDERAL AGENCY ADDRESSES 4

B. APPLICATION CORRESPONDENCE 5

APPLICATION TRANSMITTAL LETTER 5
REISSUANCE REMINDER LETTER 6
COMMON APPLICATION ERRORS 8
VPDES PERMIT APPLICATION ADDENDUM 9
POLLUTION PREVENTION FLYER 10
PAPERWORK REDUCTION ACT NOTICE 12
LOCAL GOVERNMENT ORDINANCE FORM 13
APPLICATION TRANSMITTAL LETTER TO VDH 15
COMMISSIONER OF THE REVENUE LETTER 16
APPLICATION RECEIPT LETTER TO LOCALITIES AND RIPARIAN LANDOWNERS 17
APPLICATION COMMENT LETTER TO OWNER 18
APPLICATION COMPLETE LETTER 19
NOTICE OF INTENT TO DENY APPLICATION 20
APPLICATION WITHDRAWAL FORM 21
REISSUANCE IN LIEU OF MODIFICATION 22
PERMIT REVOCATION AGREEMENT FORM FOR REVOCATION AND REISSUANCE 23

C. DRAFT PERMIT CORRESPONDENCE 24

DRAFT PERMIT TRANSMITTAL LETTER TO EPA 24
EPA TRANSMITTAL CHECKLIST 25
WATER QUALITY STANDARDS VARIANCE FORM 34
DRAFT PERMIT/PN TRANSMITTAL LETTER TO OWNER 35
PUBLIC NOTICE AUTHORIZATION FORM 36
PUBLIC NOTICE TRANSMITTAL LETTER TO NEWSPAPER 37
PUBLIC NOTICE VERIFICATION SHEET 38
DRAFT PERMIT/OPTIONAL PN TRANSMITTAL LETTER TO OWNER 30
DRAFT PERMIT TRANSMITTAL LETTER TO DGIF, F&WS, NMFS, VIMS, VMRC & ADJACENT STATES 31
PUBLIC NOTICE TRANSMITTAL LETTER TO LOCAL GOVERNMENTS 32

D. FINAL PERMIT CORRESPONDENCE 33

FINAL PERMIT TRANSMITTAL LETTER FORMAT 33
FINAL PERMIT PACKAGE REVIEW 35

E. MODIFICATION CORRESPONDENCE 36

SAMPLE FORMAT FOR A MODIFICATION REQUEST 36
CHANGE OF OWNERSHIP FORM TRANSMITTAL LETTER 37
CHANGE OF OWNERSHIP AGREEMENT FORM 38

F. TERMINATION CORRESPONDENCE 39

INTENT TO TERMINATE LETTER 39
TERMINATION AGREEMENT FORM 40
PERMIT TERMINATION SUMMARY FORM 41
TERMINATION NOTIFICATION LETTER 42

SECTION IN - INDUSTRIAL

A. NPDES PERMIT RATING WORK SHEET 1

1. DOCUMENTATION 1
2. WORK SHEET SUPPLEMENTAL INSTRUCTIONS 1

NPDES PERMIT RATING WORK SHEET 3

B. FEDERAL EFFLUENT GUIDELINES 40

C. FACT SHEET 41

D. PERMIT FORMAT 53

1. COVER PAGE 53
2. PART I A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS 54
3. PART II, PERMIT BOILERPLATE 55

E. BACTERIA AND CHLORINE LIMITATIONS/PROCEDURES 63

1. LIMIT DEVELOPMENT 63
2. ALTERNATE DISINFECTION 65

F. INDUSTRIAL SPECIAL CONDITIONS 66

G. STORM WATER DISCHARGES 76

1. EFFLUENT LIMITS, COMPLIANCE MONITORING AND ANALYTICAL MONITORING 76
2. STORM WATER MANAGEMENT EVALUATION 84
3. GENERAL STORM WATER SPECIAL CONDITIONS 86

H. STANDARD PERMIT DEVELOPMENT 140

1. COIN OPERATED LAUNDRIES 140
2. PETROLEUM STORAGE AND TRANSPORTATION 142
3. PULP AND PAPER MILLS 146
4. SHIPYARDS 153
5. WATER TREATMENT PLANTS 163
6. WOOD PRESERVING OPERATIONS 166

I. SAMPLING 170

1. INTRODUCTION 170
2. GENERAL GUIDANCE IN EXERCISING THE CASE-BY-CASE APPROACH 170
3. SAMPLE TYPE 170
4. REPORTING INSTRUCTIONS 171
5. MONITORING REDUCTIONS FOR REISSUANCES 171
6. ALTERNATE DISINFECTION - BACTERIA MONITORING FREQUENCIES 173

J. NUTRIENT ENRICHED WATERS PROCEDURES 174

K. BYPASS POINT SOURCES 175

SECTION MN - MUNICIPAL

A. FACT SHEET 1

B. PERMIT FORMAT 13

1. COVER PAGE 13
2. PART I A, EFFLUENT LIMITS PAGE 14
3. PART II, PERMIT BOILERPLATE 15

C. BACTERIA AND CHLORINE LIMITATIONS/PROCEDURES 23

1. LIMIT DEVELOPMENT 23
2. ALTERNATE DISINFECTION 24
3. HALOGEN BAN VARIANCE IN ENDANGERED/THREATENED SPECIES, NATURAL TROUT WATERS 28
4. DISINFECTION REDUCTIONS OR WAIVERS 29
5. CHLORINE REDUCTION TESTING PROGRAM 46

D. MUNICIPAL SPECIAL CONDITIONS 48

E. SAMPLING 65

1. INTRODUCTION 65
2. SAMPLE TYPES 65
3. SAMPLING SCHEDULE 65
4. SAMPLING SCHEDULE TABLE 66
5. ALTERNATE DISINFECTION - BACTERIA MONITORING 67
6. MONITORING REDUCTIONS FOR REISSUANCES 67
7. REPORTING 69

F. NUTRIENT ENRICHED WATERS PROCEDURES 70

G. BYPASS POINT SOURCES 71

H. SECONDARY AND EQUIVALENT TO SECONDARY TREATMENT LIMITS 72

1. EXAMPLE 1 72
2. EXAMPLE 2 73
3. EXAMPLE 3 74
4. FLOW CHART : EQUIVALENT TO SECONDARY TREATMENT REGULATION 75

I. TOTAL SUSPENDED SOLIDS LIMITS FOR WASTE STABILIZATION POND FACILITIES 77

J. PLANT EXPANSION/UPGRADE PROCEDURES 78

1. PERMITTEE REQUESTED EXPANSION OF A COMPLYING FACILITY 78
2. BOARD REQUIRED UPGRADE FOR A NON-COMPLYING FACILITY 78
3. BOARD REQUIRED EXPANSION/UPGRADE FOR A NON-COMPLYING FACILITY 79
4. SCHEDULE OF COMPLIANCE FOR REQUIRED EXPANSION/UPGRADE 79
5. PLANT EXPANSION -- CHLORINE PAGES 80

K. SWAMP AND MARSH WATERS 82

L. SEWAGE SLUDGE 83

FLOW CHART : SEWAGE SLUDGE PERMITTING IN VIRGINIA 84

1. IMPLEMENTATION STRATEGY FOR VPDES PERMIT REGULATION PART VI 85
2. SUBMITTAL OF SLUDGE MANAGEMENT PLAN 85
3. COORDINATION WITH VDH FOR SMP REVIEW AND APPROVAL 86
4. TECHNICAL CRITERIA USED FOR REVIEW AND APPROVAL OF SMP 86
5. SLUDGE MANAGEMENT PLAN REVIEW 86
6. LAND APPLICATION PLAN 88
7. AMENDMENTS TO THE SMP 88

8. FACT SHEET 88
9. LAND APPLICATION REQUIREMENTS 89
10. MONITORING 96
11. RECORDKEEPING AND REPORTING 98
12. A. EXAMPLE PART I A PAGE WHEN SLUDGE IS LAND APPLIED BY GENERATOR OR CONTRACTOR 102
12. B. EXAMPLE PART I A PAGE WHEN SLUDGE IS LAND APPLIED BY GENERATOR 104
13. SLUDGE SPECIAL CONDITIONS 105
14. TABLE I, RECOMMENDED PLANT AVAILABLE NITROGEN (PAN) APPLICATION RATES 113
15. TABLE II, ESTIMATED YIELDS 114
16. TABLE III, RESIDUAL PLANT AVAILABLE NITROGEN (PAN) 114
17. METHODS OF SEWAGE SLUDGE ANALYSIS 115
18. METHODS OF SOIL ANALYSIS AT LAND APPLICATION SITES 117
19. ANALYTICAL METHODS REFERENCES 118

M. COORDINATION WITH THE OFFICE OF WASTEWATER ENGINEERING 119

TABLE OF CONTENTS

A. VPDES PERMIT PROGRAM **1**

B. PURPOSE AND USE OF THE PERMIT MANUAL **2**

C. BASIS OF MANUAL **3**

D. ABBREVIATIONS **7**

E. DEFINITIONS **8**

PERMIT PROCESSING TRACKING SHEET **17**

VPDES PERMIT PROCESS FLOW CHART **18**

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 Hearings (9 VAC 25-230-10 et seq.)
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 Anitidegradation 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

* 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
OWPP Office of Water Permit Programs
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, ' 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.

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 (' 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 (**'** 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 9 VAC 25-260-00 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.

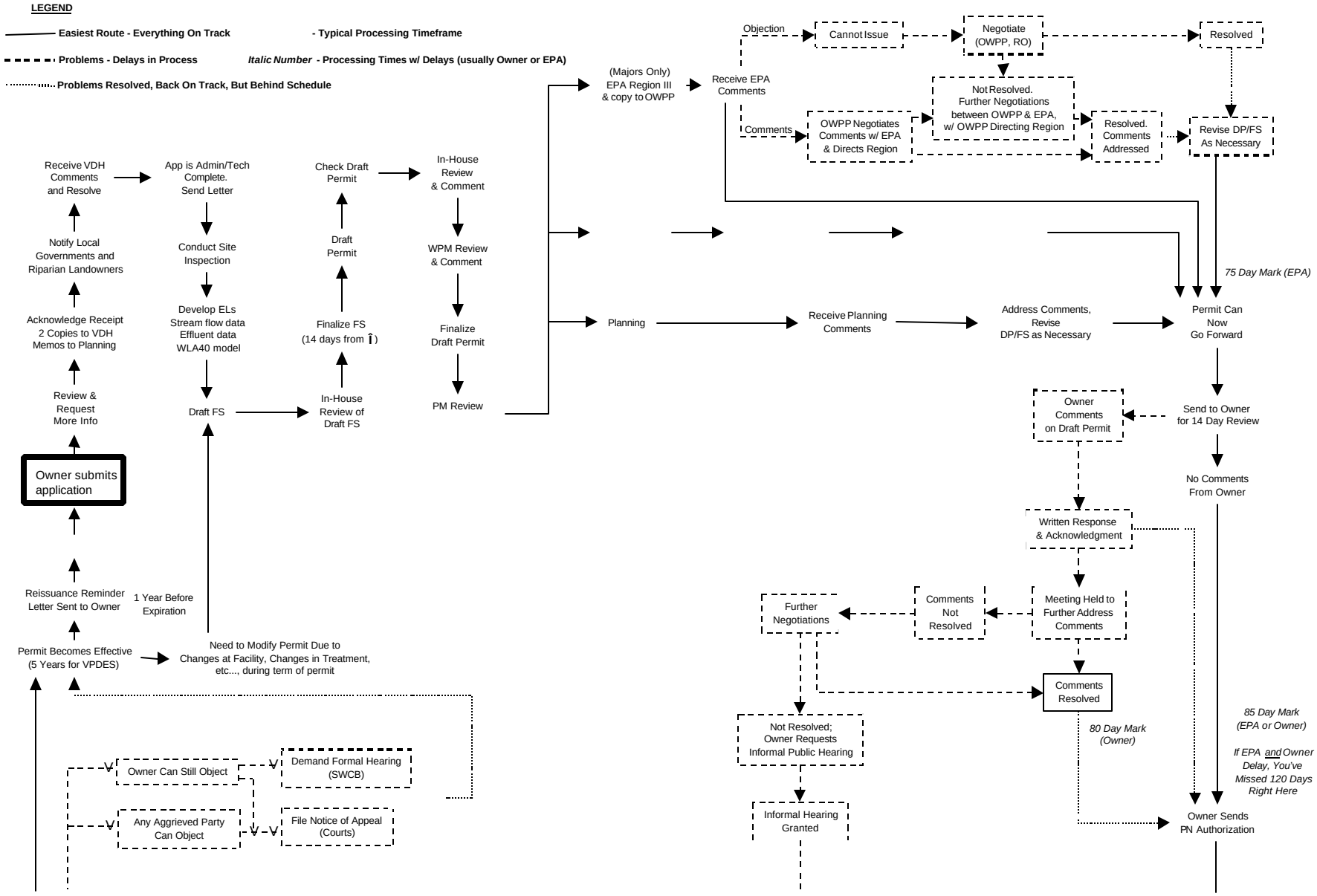
PERMIT PROCESSING TRACKING SHEET

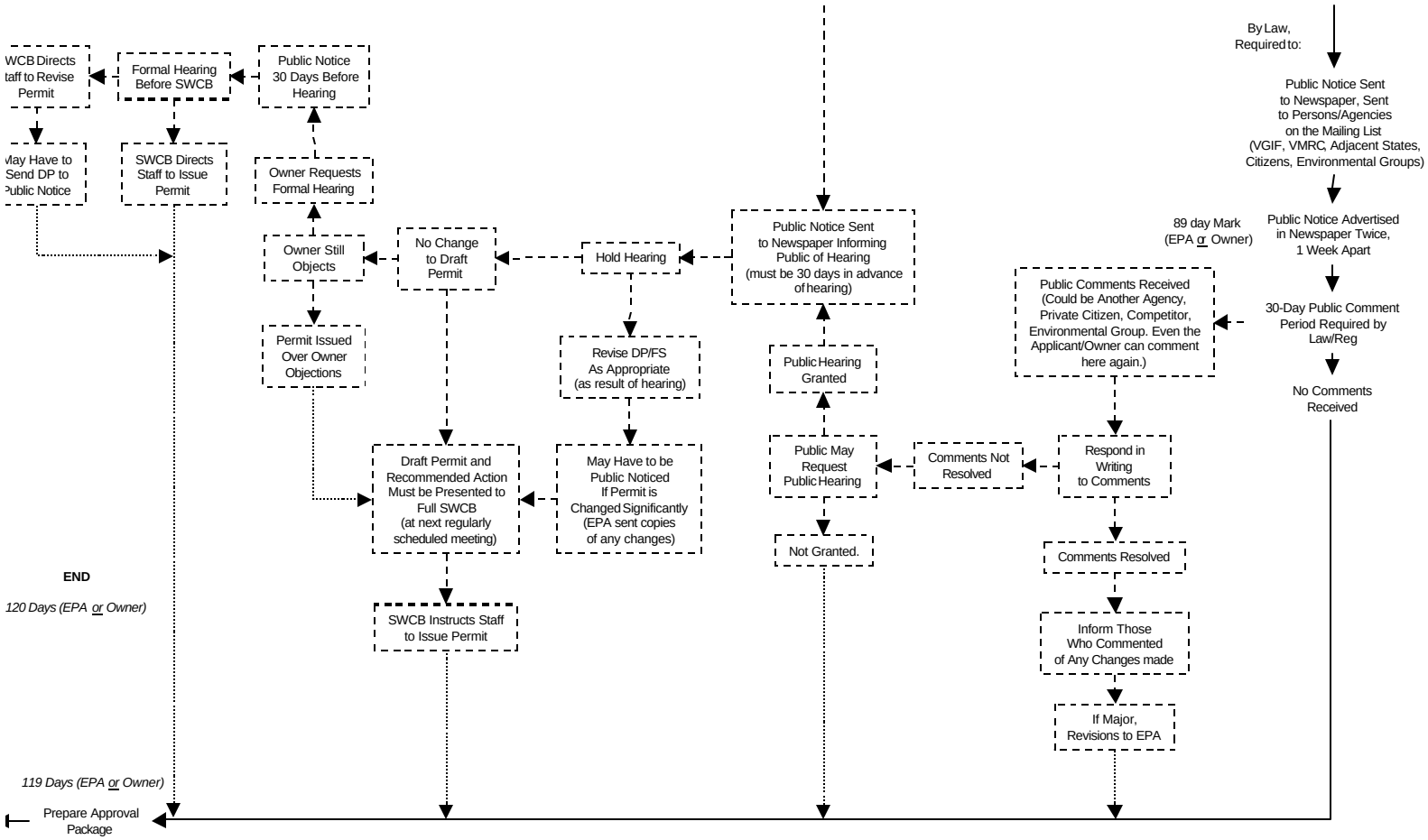
	Industrial		Municipal		Issuance		Reissuance		Modification

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)		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)	
VDH Comments Received		First Public Notice Publication Date	
Site Inspection		Second Public Notice Publication Date	
Site Inspection Report		Public Notice Comment Period Ends	
Application Deemed Complete (**45 days - begin 120 day clock**)		Verification of Publication Received	
Permit Number Obtained		OWPS Mailing List Notification Received	
Permit Number Confirmation Memo Received		Financial Assurance/Closure Documents Approved	
Industrial Rating Worksheet Completed (If $80, copy OWPS)		Final Package Prepared	
Fact Sheet Prepared		Permit Signed on	
Draft Permit and CEDS DMR Prepared		CEDS Updated	
Draft Permit Peer Review		Permit Package Distributed	
Draft Permit Management Review			
		PERMIT WRITER:	
Draft Permit Revised			

VPDES PERMIT PROCESS FLOW CHART





DEQ
DEPARTMENT OF
ENTAL QUALITY

VPDES Permit Process

Rev. 07/00

TABLE OF CONTENTS

PERMIT APPLICATIONS FLOW SHEET **1**

A. APPLICATION PROCESSING **2**

1. REISSUANCE REMINDER LETTER 2
2. INITIATE TRACKING SHEET 2
3. VPDES PERMIT APPLICATION FORMS 2
4. APPLICATION PACKAGE ENCLOSURES 2
5. APPLICATION FILING REQUIREMENTS 3
6. TESTING WAIVER PROCEDURES 4

B. MUNICIPAL PERMIT APPLICATION FORMS **5**

1. PRIVATELY OWNED TREATMENT WORKS (PVOTW) REQUIREMENTS 5
2. FINANCIAL ASSURANCE/CLOSURE REQUIREMENTS 5
3. FORM 2A 6
4. VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM 7
5. FORM 2F 7
6. DOMESTIC SEWAGE DISCHARGES ≤ 1000 GPD GENERAL PERMIT REGISTRATION STATEMENT 8
7. WATER QUALITY CRITERIA MONITORING FORM 8
8. CHLORINE DEMONSTRATIONS 8

C. INDUSTRIAL APPLICATION FORMS **9**

1. FORM 1 9
2. FORM 2B 9
3. FISH FARM QUESTIONNAIRE 9
4. FORM 2C 9
5. FORM 2D 10
6. FORM 2E 11
7. FORM 2F 11
8. WATER QUALITY CRITERIA MONITORING FORM 8
9. CHLORINE DEMONSTRATIONS 8

D. ADMINISTRATIVE REVIEW OF APPLICATION **13**

1. RECEIPT OF APPLICATION AND FEE 13
2. APPLICATION REVIEW 13
3. APPLICATION SIGNATURES 13
4. LATE OR DEFICIENT APPLICATIONS 14

E. TECHNICAL REVIEW OF APPLICATION **15**

1. TECHNICAL DETAILS 15
2. SITE INSPECTION 15
3. PERMIT NUMBERS 15
4. APPLICATION COMPLETE 15

F. APPLICATION REVIEW BY OTHER AGENCIES **16**

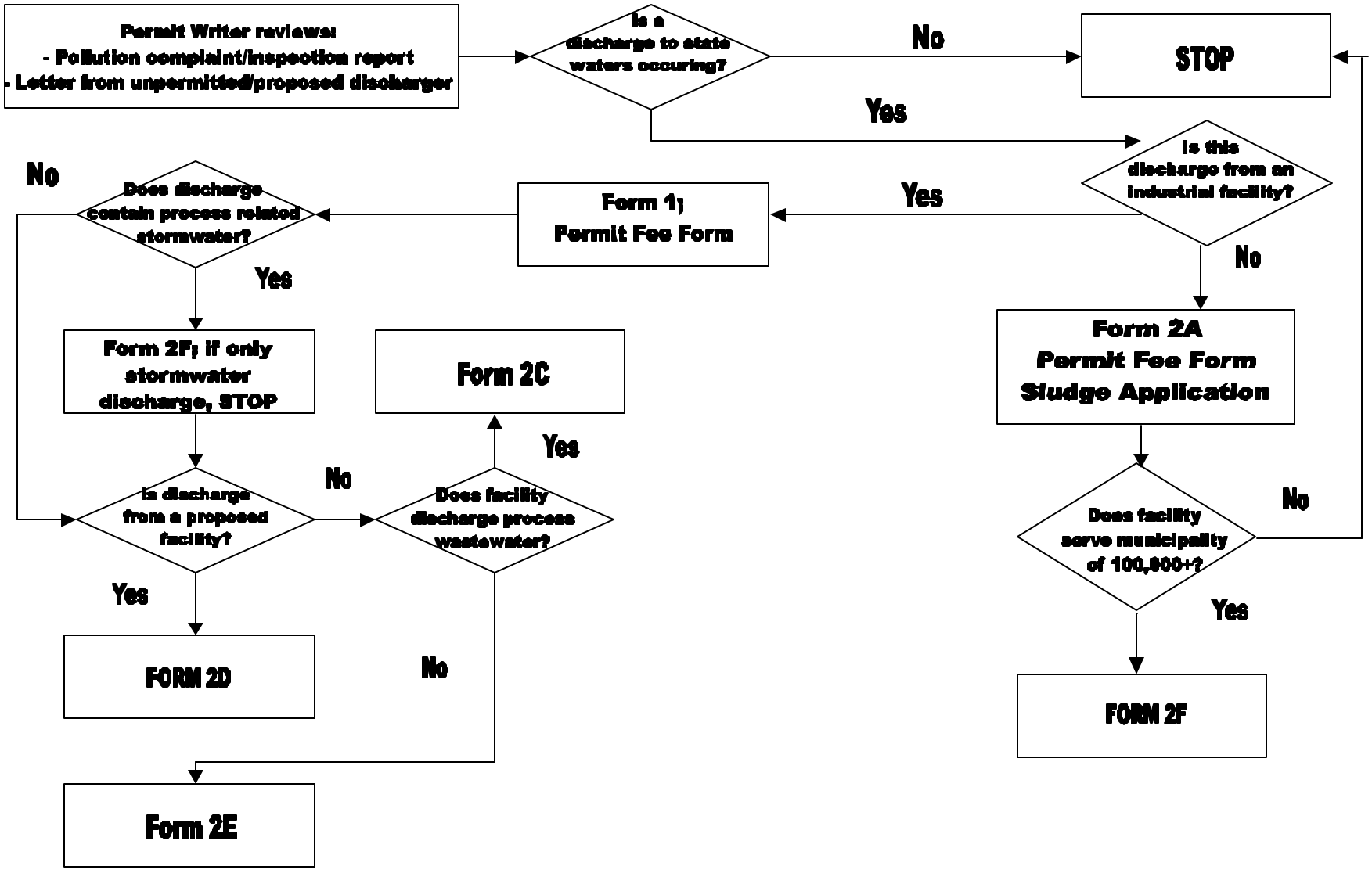
1. VIRGINIA DEPARTMENT OF HEALTH (VDH) 16
2. VDH-DIVISION OF SHELLFISH SANITATION (DSS) 16
3. VIRGINIA MARINE RESOURCES COMMISSION (VMRC) 16
4. NOTIFICATION OF LOCAL GOVERNMENTS AND RIPARIAN LANDOWNERS 17

G. CONTINUATION OF EXPIRING PERMITS **18**

H. APPLICATION DENIAL 19

1. REASONS FOR NEW PERMIT DENIAL 19
2. REVIEW APPLICATION/NOTIFICATION OF APPLICANT 19
3. PUBLIC NOTICE OF THE INTENT TO DENY 20
4. PUBLIC HEARING 20
5. PREPARE THE DENIAL PACKAGE 21
6. PROCESS THE DENIAL PACKAGE 21
7. APPLICANT PETITION PROCEDURES 21
8. DENIAL OF A PERMIT REISSUANCE 21

Permit Applications Flow Sheet



SECTION II -- APPLICATION PROCEDURES

A. Application Processing

1. Reissuance Reminder Letter

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 OWPP. 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 (9 VAC 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.

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

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 9 VAC 25-31-100 E 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.

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 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.

5. Application Filing Requirements

a. Municipal Applications

The owner or owner's agent files an original, complete and current application and at least four copies of the 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. Refer to Section L for VDH addresses and telephone numbers.

b. Industrial Applications

The owner or owner's agent of an industrial discharger files an original, complete, and current application and at least four copies of the 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. Refer to Section L for VDH addresses 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 written 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 industrial Forms 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, 9 VAC 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 9 VAC 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 OWPP. Contact OWPP 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 (9 VAC 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 (9 VAC 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.

Ensure that the appropriate DEQ OWE Area Engineer receives a copy of the sludge application form and solicit comments from that office on the sludge management plan. If the sludge management plan involves land application, send a copy to the Virginia Department of Health OEHS Division of Wastewater Engineering (address in section L) and allow for review by that office (See Section MN.L).

5. Form 2F

TWTDS with a design flow $\geq$ 1.0 MGD or 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 a description of the outfall locations and explain in detail why the outfalls are expected to discharge substantially identical effluents.

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 or through existing alternate disinfection 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). Details of the demonstration requirements appear under "Bacteria and Chlorine Limitations/Procedures" in Section MN.

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:

Total Residual Chlorine	BOD	COD*	TSS
TOC*	Fecal Coliform	Ammonia	Flow
pH	Oil & Grease	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 or through existing alternate disinfection 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). Details of the demonstration requirements appear under "Bacteria and Chlorine Limitations/Procedures" in Section MN.

D. Administrative Review of Application

1. Receipt of Application and Fee

a. Date stamp the permit application upon receipt. Include copies of the permit fee form and fee payment (check or documentation of intergovernmental transfer of funds) in the RO permit files. Refer to Section I for the permit processing flow chart.

b. Permit Fee Schedule (9 VAC 25-20-10 et seq.)

The appropriate fee must be paid prior to deeming an application 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.)

In cases where permit fee refunds must be issued, draft a memorandum from the Regional Director to the DEQ Fiscal Director detailing the relevant facts of the refund and route it for processing.

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 with a letter 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 9 VAC 25-31-100, to request additional information not identified on the application. This may 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 9 VAC 25-31-110 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 (9 VAC 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 OWPP 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. 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.

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. Allow VDH OEHS Division of Wastewater Engineering up to 45 days to complete their review of sludge management plans involving land application for municipals.

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). Refer to Section L for a sample Transmittal Letter and for the DSS addresse.

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.

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.

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 written request along with a copy of the topo map from the application that identifies the discharge location. 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.

<u>If the information is not received after the first letter, send a second 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.</u>

G. Continuation of Expiring Permits

(9 VAC 25-31-70)

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.

H. Application Denial

1. Reasons for new permit denial

According to 9 VAC 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. (9 VAC 25-31-260 B) Permit fees are not refunded when applications are denied.

3. Public Notice of the Intent to Deny

a. If the owner refuses to withdraw or modify the application, publish the public notice of the Intent to Deny. The Department will pay the cost of publishing the notice. 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 not intend to issue the permit to the applicant. The reasons for denial should be clearly listed in the notice.

The RO may combine the denial public notice with a notice for a public hearing if it appears that the applicant will request a hearing. See Section III for the specific steps in the public notice procedure and an example of the Public Notice format.

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. The Regional Director should concur on the tentative decision to deny prior to the publishing of the public notice.

d. If a significant response to the proposed denial is received during the 30 day comment period, the RO can recommend a public hearing. A memorandum for recommending a public hearing is prepared by the RO and signed for the Director. The Regional Director makes the decision on whether to hold a public hearing.

e. 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.

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 that received a public hearing, follow the hearing procedures in Section III.

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)

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)

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.

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)(9 VAC 25-31-70 C and 9 VAC 25-31-260 B). They follow the same basic procedure as a new permit denial, with a few exceptions.

Send the Notice of Intent to Deny letter under the authority in 9 VAC 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, issue the public notice and follow the rest of the procedures outlined above.

SECTION III – ISSUANCE/REISSUANCE PROCEDURES

TABLE OF CONTENTS

A. PERMIT DRAFTING 1

1. PERMIT PROCESSING TIMES 1
2. IDENTIFY MAJOR PERMITS 1
3. COMPLETE NPDES PERMIT RATING WORKSHEET 2
4. OUTFALL NUMBERING 2
5. FACT SHEET PREPARATION 3
6. EFFLUENT LIMITATIONS 3
7. EFFLUENT MONITORING FREQUENCY 9
8. PERMIT SPECIAL CONDITIONS 9
9. DRAFT PERMIT PREPARATION 16
10. DISCHARGE MONITORING REPORT (DMR) PREPARATION 17
11. PUBLIC NOTICE PREPARATION 18

GENERIC PUBLIC NOTICE FORMAT 19

B. DRAFT PERMIT REVIEW 27

1. REGIONAL REVIEW 27
2. OWPP REVIEW 27
3. VDH REVIEW 27
4. EPA REVIEW 27
5. OWNER REVIEW 29

C. PUBLIC PARTICIPATION 30

1. NEWSPAPER PUBLIC NOTICE 30
2. OPTIONAL PUBLIC NOTICE PROCEDURES 30
3. MAILING LIST AND WEBSITE POSTING 31
4. LOCAL GOVERNMENT NOTIFICATION 31
5. ADJACENT STATES RECOMMENDATIONS 32
6. OTHER AGENCY COMMENTS 32
7. PUBLIC HEARING 32
8. RESPONSE TO COMMENTS 33

D. FINAL PERMIT PROCESSING 35

1. FINAL PERMIT PACKAGE 35
2. DATING THE PERMIT 35
3. FINAL PACKAGE DISTRIBUTION 35
4. UPDATE CEDS 36

E. REVOCATION AND REISSUANCE PROCEDURES 37

1. CAUSES FOR REVOCATION AND REISSUANCE 37
2. PERMITTEE OR INTERESTED PARTY REQUESTED REVOCATION 37
3. STAFF INITIATED REVOCATION AND REISSUANCE 37
4. PROCESSING A PERMIT REVOCATION AND REISSUANCE 37
5. DENIAL OF REVOCATION AND REISSUANCE REQUESTS 38
6. PERMIT REQUIREMENTS 38

F. PUBLIC HEARING PROCEDURES 39

SECTION III – ISSUANCE/REISSUANCE PROCEDURES

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 OWPP 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 OWPP 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: 9 VAC 25-151
- Storm Water from Construction Activity; Regulation: 9 VAC 25-180
- Storm Water from Small MS4s; Regulation: 9 VAC 25-750
- Cooling Water Discharges; Regulation: 9 VAC 25-196
- Car Washes; Regulation: 9 VAC 25-194
- Seafood Processors; Regulation: 9 VAC 25-115
- Single Family Homes (sewage discharges less than 1000 gpd); Regulation: 9 VAC 25-110
- Nonmetallic mineral mining; Regulation: 9 VAC 25-190
- Ready-Mix Concrete Plants; Regulation: 9 VAC 25-193
- Petroleum Contaminated Sites; Regulation: 9 VAC 25-120

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.

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

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. Treat changes to the permit status as follows:

a. 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.

b. 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. Include a copy of the rating worksheet in the draft permit package.

c. Copy OWPP with any rating worksheet which classifies a new application/permit as a major or reclassifies a permit's major/minor status.

d. See the latest agency guidance on permit fees for procedures to follow when facilities change from major to minor after application receipt.

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 at 9 VAC 25-31-30 A. Refer to 40 CFR Chapter I, Subchapter N: Effluent Guidelines and Standards (40 CFR Parts 400 - 471), and the VPDES Technical Manual for determining specific ELG's.

(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 OWPP 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 OWPP 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 MIXER.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 OWPP for review. OWPP 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, OWPP review is not required, unless the model is outdated. Contact OWPP for more information on model applicability.

(c) OWPP 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 OWPP 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 Judgement (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 9 VAC 25-31-210 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 Judgement (BPJ) limits. Neither the Act nor the Virginia regulation 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 that are developed based on either a technology or water quality basis that 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, *etc*. As indicated by this definition, 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 judgement of the permit writer (or collective judgement of the issuing agency and confirmed by the permit writer) where that judgement is considered and applied on a case by case basis. The judgement 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 judgement 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 judgement 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 judgement 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 judgement regarding what limits would prevent objectionable conditions. A limit based on the judgement 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 not authorized to grant FDF variances; however, EPA may grant an FDF variance. Consult OWPP 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) Disinfection Waivers: Permittees may be granted a waiver from the requirement for disinfection in the bacteria standards. See 9 VAC 25-260-170 B and Section MN.

(5) 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.

(6) Chemical 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.

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 OWPP 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

Treatment works that receive wastewater from industrial users may have pretreatment requirements. The Regional Offices determine which POTWs need to develop a Pretreatment Program. Contact the regional pretreatment coordinator for assistance with these determinations. The program is initiated by including appropriate Special Conditions into the VPDES permit, which are 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)
- modelling 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 9 VAC 25-260. 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. As a minimum, it is recommended that the 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 (MS4's).

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.

Eleven categories of industrial activity are required to apply for storm water discharge permits. Basically, the term "industrial activity" covers manufacturing facilities; hazardous waste TSD facilities; landfills that receive or have received industrial wastes; recycling facilities; steam electric power generating facilities; transportation facilities; domestic sewage treatment plants greater than 1.0 MGD (or with an approved pretreatment program); and construction activities disturbing 5.0 or more acres. (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. Construction activities disturbing 5.0 or more acres are covered by the regulations regardless of the SIC code of the facility, or classification of what is under construction.

Under **Phase 2**, EPA added the requirement to permit small MS4's located in urbanized areas, and small construction sites (sites disturbing 1 to 5 acres). Small MS4's include systems owned by municipalities, federal facilities, State facilities (including VDOT), and universities. Phase 2 also authorized industrial facilities to be exempted from storm water permitting by way of the "No Exposure" certification.

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 MN and IN.** 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 25-151-10 et seq.). The requirements for individual industrial activity storm water discharges should be similar to those applicable under the general permit.

SECTION III – ISSUANCE/REISSUANCE PROCEDURES

(1) Selected Definitions: The VPDES Permit Regulation at 9 VAC 25-31-10, defines "storm water", "storm water discharge associated with industrial activity", and "storm water discharge associated with small construction 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 - 11 of this definition) include those facilities designated under the provisions of 9 VAC 25-31-120 paragraph A 1 e. 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 11;
2. Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 31l, 32 (except 323), 33, 344l, 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) (1999) 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 - 11 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. Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;

11. 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.

"Storm water discharge associated with small construction activity" means the discharge of storm water from:

1. Construction activities including clearing, grading, and exc avating that result in land disturbance of equal to or greater than one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. The Board may waive the otherwise applicable requirements in a general permit for a storm water discharge from construction activities that disturb less than five acres where storm water controls are not needed based on a ''total maximum daily load'' (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. For the purpose of this paragraph, the pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the Board that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis.

2. Any other construction activity designated by the either the Board or the EPA Regional Administrator, based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to surface waters.

(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 of the State, through a municipal separate storm sewer system, or through a non-municipal separate storm sewer system. Discharges of "sheet flow" off 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) Municipalities with a population of 100,000 or greater are required to obtain permit coverage for <u>all</u> of their municipally owned facilities engaging in industrial activities described above. These municipalities are: Arlington County, Alexandria, Chesapeake, Chesterfield County, Fairfax County, Hampton, Henrico County, Newport News, Norfolk, Portsmouth, Prince William County, Richmond, and Virginia Beach.

(g) Municipalities with a population less than 100,000 must have their municipally owned facilities engaging in industrial activities described above permitted by March 10, 2003, except for airports, power plants, and uncontrolled sanitary landfills (defined as those <u>not</u> meeting the runon/runoff requirements of Subtitle D of RCRA), which must be permitted now.

(h) 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.

(i) Facilities in SIC Codes 20 through 39 may have additional SWPPP requirements for SARA Title 313 water priority chemicals.

(3) Permit Options

There are three options for satisfying the VPDES permitting requirements for facilities discharging storm water associated with industrial activity.

First, the facility may be covered under a **general permit** if it qualifies based on its SIC code or industrial activity. (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.) To obtain coverage, facilities must file a complete Registration Statement with DEQ. We have developed two forms for this process: ***SWGP99-004-REG*** (6/99) for Construction SW GP's; and ***SWSG99-005-REG*** (6/99) for Industrial Facility SW GP's.

Second, 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, incorporate the storm water requirements into that permit.) To obtain coverage, facilities (except construction sites) must file ***EPA Forms 1 and 2F*** with DEQ. 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:** Construction sites requiring permit coverage (category 10) should be covered under a construction storm water general permit, unless the discharge is into one of the watersheds where coverage under the general permit is prohibited. In that case, an individual construction permit should be issued (individual construction applications do not use EPA Form 2F - contact OWPP for assistance.) If a facility has an individual VPDES permit and has ongoing construction activity on site, the requirements in the general storm water permit for construction sites may be included in the individual permit (again, contact OWPP for assistance in these cases.)

The third option is for the discharger to 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. We have developed a form for this certification: ***SW-NEC*** (9/00). (Note: form ***SWGP99-005-NOEX*** (6/99) was used when the SWGP became effective on June 30, 1999; this form was based on EPA's draft Phase 2 regulation and should no longer be used. The new form is based on EPA's final Phase 2 regulation.) These certifications must be filed every five years with DEQ, and if conditions change at the facility and materials or activities become exposed, the discharger must immediately file for a VPDES storm water permit. There are a few facilities that should not be granted this exemption. They include: steam electric power generating facilities; hazardous waste TSD facilities; and other facilities that DEQ decides are unacceptable for the exemption. (See the latest OWPP storm water permitting guidance for a detailed discussion of this topic.)

(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. The Regional Office has the discretion to include additional requirements based on site specific situations, but the Section IN minimum requirements should always be incorporated.

In some cases, effluent limitations based on federal effluent guidelines must be included in the permit. These limits should be placed on the Part I A page for the outfall.

Certain other categories of industrial facilities require effluent monitoring for their storm water discharges, due to the nature of the industrial activity or materials stored or used on site, have significant

potential for contributing pollutants to their discharges of storm water. This is called "analytical 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, VAR5, 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. Develop a separate Discharge Monitoring Report for the storm event monitoring. See the latest OWPP guidance for more information.

All facilities that have discharges of storm water associated with industrial activity must develop and implement a storm water pollution prevention plan (SWPPP). The mechanism through which this is accomplished is a permit special condition section entitled Storm Water Management. There is a generic SWPPP that applies to all industrial storm water discharges. In addition, there are some industrial categories 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 SWPPPs 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

(i) 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**.

(ii) Municipal Separate Storm Sewer Systems (MS4’s)

Under the Phase 1 storm water regulation, DEQ issued individual permits to municipalities with a population of 100,000 or more (defined as "large" and "medium" municipalities) for the storm water discharges from their municipal separate storm sewer systems (MS4’s). As part of their two part permit application, the municipalities were required to develop a Storm Water Management Program (SWMP) to control the discharge of pollutants from the MS4 to the maximum extent practicable (MEP). These Phase 1 MS4 permits require the municipalities to implement the SWMP, and may require chemical and/or biological monitoring of the discharges to the MS4, or of the receiving streams.

Under the Phase 2 storm water regulation, DEQ has issued permits to "small" MS4’s located in urbanized areas (as defined by the US Census Bureau’s 2000 Census). Small MS4’s include systems owned by municipalities, federal facilities, State facilities (including VDOT specifically), and public universities. In addition, any small MS4 located in a Phase 1 “large” or “medium” municipality is required to be permitted under this regulation.

Permits for regulated small MS4’s require the development, implementation and enforcement of an SWMP that includes the following "six minimum control measures": (1) public education and outreach on storm water impacts, (2) public involvement/participation, (3) illicit discharge detection and elimination, (4) construction site storm water runoff control, (5) post-construction storm water management in new development and redevelopment, and (6) pollution prevention/good housekeeping for municipal operations.

Regulated small MS4’s were supposed to apply for a permit by March 10, 2003, and have up to 5 years after DEQ issues permit coverage to develop and implement their SWMP. Small MS4 permit

applications must identify (1) the BMP's and Measurable Goals for each of the "six minimum control measures"; (2) the timing of the implementation of each control measure; and (3) the person or persons responsible for implementing each element of the small MS4 SWMP.

This manual will not address MS4 permits further. Please contact OWPP for guidance on ~~the~~ Phase 1 MS4 permits, and see OWPP guidance for further Phase 2 (small MS4) permitting information.

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: Compliance Schedules
- Part I D: Special Conditions, includes all permit conditions not listed separately

- Part I E: Sludge Management Plan, for municipal permits with large sludge conditions, otherwise, place in Part I D
- Part I F: Pretreatment
- Part I G: Toxics Management Plan
- Part I H: Storm Water Management
- 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 (9 VAC 25-31-250). 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.

NA on the DMR should match "NA" on the limits page. Where "NL" appears on the limits page, "NL" 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. 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 OWPP. OWPP will forward the request to OIS. OIS will create the parameter code and copy all regions and OWPP 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 dischargers that do not have a technology-based limit.

(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.**)

(3) Code# 213 - Cl_2 Inst. Tech (Min) - Use where exceptions to samples for #157 are allowed.

(4) Code# 158 - Total Cl_2 Final - For industries that have a technology based Cl_2 limit (steam electric for example).

g. CEDS/PCS Procedures

To be decided…..

11. Public Notice Preparation

a. Generic public notice format:

Once the permit has been drafted, the permit writer should prepare the newspaper public notice. The contents of a public notice are mandated by 9 VAC 25-31-290 D and by ' 62.1-44.15:01. The example public notice found in this section contains the mandated language. Deviation from the example should only be done when the permit writer is certain the final product will assure compliance with the regulation and the law. The generic public notice content is as follows:

Generic Public Notice Format

PUBLIC NOTICE
ISSUANCE/REISSUANCE/DENIAL OF A VPDES PERMIT TO
DISCHARGE TO STATE WATERS AND STATE CERTIFICATION UNDER
THE STATE WATER CONTROL LAW
[***** AND PRETREATMENT PROGRAM APPROVAL]

First Public Notice Issue Date: (**to be supplied by newspaper unless permit writer determines date in advance with newspaper's agreement**)
The State Water Control Board has under consideration the **issuance/reissuance/denial** of the following Permit and State Certificate: Permit No.: VA00**00000**
Name and Address of Permittee:
Facility Name and Location:

Discharge Description:**Existing/Proposed Municipal/Industrial** Discharge resulting from the operation of **(Brief description of operation)**.

Receiving Waters Name; River Mile; Effluent Flow; Total # Outfalls
Basin: Subbasin: Section: Class: Special Standards:

This proposed permit action is tentative. On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to **issue/reissue/deny** the permit subject to certain conditions. This permit will maintain the Water Quality Standards adopted by the Board.

The proposed permit action consists of limiting the following parameters: **list parameters and limits listed in the permit, for land application give volumes to be applied or say application will be made at standard agronomic rates and give location of land application sites, OR list reasons for denial**.

[*****Pursuant to Section 9 VAC 25-31-830 of the VPDES Permit Regulation, on **(date)** the Water Control Board granted final approval of the pretreatment program for this facility and it is an enforceable part of the permit. In accordance with state regulations, all comments on the pretreatment program received during the 30 day public comment period, which began on **(date)**, have been considered.]

*** Add these parts when public notice includes final pretreatment program approval.**

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:
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 25-260-14 E (for variances) OR 9 VAC 25-260-14 F (for WERs) OR 9 VAC 25-260-110 (for halogen ban)].

For WERs include the following:
A Water Effect Ratio (WER) is used to define the biologically available form of a metal and is multiplied by the water quality criterion to use in the calculation of the permit limit. The WER for [**PARAMETER**] in this permit is [**insert approved WER here**].

For variances use the following:
The variance is requested because the following condition(s) limit the attainment of the water quality criteria of the stream **(PICK WHICHEVER APPLIES)**:

Naturally occurring pollutant concentrations prevent the attainment of the use;

Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable the uses to be met;

Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use;

Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

Controls more stringent than those required by **' '** 301(b) and 306 of the CWA would result in substantial and widespread economic and social impact.

For both variances and WERs use the following:
If the [**variance to the water quality standards OR WER**] is approved by the U.S. Environmental Protection Agency, the permit limits in **Part I A** of the permit shall remain in effect until the permit's expiration date. If the [**variance OR WER**] is denied by EPA, the permittee shall achieve compliance with the permit limits based on the water quality standards [**without the variance OR with a WER of 1.0**] in **Part I B** of the permit. The Department is seeking public comment on the [**variance OR WER**] via this notice. A copy of the [**variance OR WER**] study can be obtained from the contact person listed below.

If modified disinfection requirements are proposed:
A modification to the disinfection requirements under the Board's Disinfection Policy has been requested and is incorporated into the proposed permit.

If a Total Maximum Daily Load (TMDL) has been developed:
A Total Maximum Daily Load (TMDL) has been approved by the U.S. EPA which addresses the following pollutants in this discharge: (***list parameters***). This draft permit was prepared in compliance with the allocations identified in the TMDL.

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**.

All pertinent information is on file and may be inspected, or 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 of the permit and may request a public hearing within 30 days from the date of the first notice. Address comments to the contact person listed above. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action.

*****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.

***These paragraphs should be revised as necessary, to include the public hearing dates etc., if the public notice is for a public hearing.**

END OF GENERIC PUBLIC NOTICE FORMAT

b. Example public notice

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 order to comply with this legal requirement, all VPDES permit public notices must list the parameters that have limits and their associated limits.

The law requires that the total quantity of each pollutant that may be discharged shall be listed in the public notice. Compliance with this can be accomplished by listing each pollutant once for each receiving stream and giving the total amount allowed by the permit (all outfalls combined). For the majority of permits this will be a simple process of listing the parameters and limits for the only outfall at the facility. When the permit has pollutants limited at more than one outfall to a receiving stream, the amount of each pollutant discharged should be calculated by using the following equation:

$$\frac{(Qd_1 x Cd_1)+(Qd_2 x Cd_2)...+(Qd_t x Cd_t)}{(Qd_1+Qd_2...+Qd_t)} = Cd_t$$

where: Qd is the flow from the outfall
Cd is the concentration limit for the parameter
t is the total number of outfalls to the stream

The value of Cd_t for each pollutant should be listed in the public notice. If more than one receiving stream is involved, then Cd_t should be calculated separately for each receiving stream.

Pollutant limits for conventional as well as toxic parameters should be expressed in units that correspond to how the parameter is analyzed. In most cases this is concentration units such as milligrams per liter (mg/l) or micrograms per liter (ug/l). These units may mean more to the public than quantity units like kilograms per day or pounds per day. Certain parameters will have to be expressed in other units (i.e. pH - maximum and minimum in standard units; flow - total flow to the receiving stream in MGD; temperature - maximum in ^oC or ^oF; Heat Rejection - sum of all limits in BTU/hr; Dissolved Oxygen - minimum in mg/l; bacteria - maximum in MPN/100ml; whole effluent toxicity - maximum in toxic units TU_a or TU_c).

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. By providing the concentration of each limited pollutant and the total flow from all outfalls to each receiving waterbody, we make it possible for interested persons to determine a loading for that pollutant if they want to.

Attachment 1 gives an example of how to develop the public notice for a VPDES permit with multiple outfalls. Include this worksheet in the Fact Sheet if it is used to develop the PN.

Attachment 2 is the permit public notice developed by following the worksheet. Note that if the permit limits had been for a municipal discharge they would have been in terms of monthly and weekly averages and the public notice would give the higher of the two averages rather than a maximum.

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 any pollutants and limits 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. Information on the quantity of waste and location of land application sites should be included in the permit application. The description of the activity should include a statement that materials are to be applied at agronomic rates if that is applicable. If the facility is

contracting with another party for sludge disposal, include a statement that says the activity will be conducted under a permit issued by the Department of Health under their Biosolids Use Regulation.

Attachment 3 gives a VPDES example of how to address land application in the public notice.

Attachment 1

Example VPDES Permit Public Notice Worksheet
(Multiple Outfalls/Parameters)

From the Fact Sheet for permit VA0099999, ABC Inc.:Discharges to Big Creek and to Little Creek

Outfall 001 Receiving Stream: Big Creek

Parameter	Limit
Flow, MGD	NL (application reports 1.0 MGD 30 day avg)
pH, s.u.	6.0 min, 9.0 max
TSS, mg/l	30 avg, 60 max
Oil & Grease, mg/l	15 avg, 20 max
copper, ug/l	15.0 avg, 15.0 max
zinc, mg/l	1.0 avg, 1.0 max

Outfall 002 Receiving Stream: Big Creek

Parameter	Limit
Flow, MGD	NL (application reports 0.10 MGD 30 day avg)
pH, s.u.	6.0 min, 9.0 max
TSS, mg/l	30 avg, 45 max
BOD, mg/l	30 avg, 45 max
DO, mg/l	5.0 min
TRChlorine, mg/l	non-detect

Outfall 003 Receiving Stream: Big Creek

Parameter	Limit
Flow, MGD	NL (application reports 0.050 MGD 30 day avg)
pH, s.u.	6.0 min, 9.0 max
copper, ug/l	39 avg, 39 max
zinc, mg/l	1.0 avg, 1.0 max
nickel, ug/l	50 avg, 50 max

Total flow to Big Creek = Q1 + Q2 + Q3 = 1 + 0.1 + 0.05 = 1.15 MGD

Total TSS to Big Creek = (Q1C1 + Q2C2)/ Q1+Q2 = (1x60 + 0.1x45)/ 1.1
= 64.5/1.1 = 58.6 mg/l

Total Cu to Big Creek = (Q1C1 + Q3C3)/ Q1+Q3 = (1x15 + 0.05x39)/ 1.05
= 16.95/1.05 = 16.1 ug/l

Total Zn to Big Creek = (Q1C1 + Q3C3)/ Q1+Q3 = (1x1 + 0.05x1)/ 1.05
= 1.05/1.05 = 1mg/l

Outfall 004 Receiving Stream: Little Creek

Parameter	Limit
Flow, MGD	NL (application reports 0.20 MGD 30 day avg)
pH, s.u.	6.0 min, 9.0 max
TSS, mg/l	30 avg, 60 max
Temp, ^{o}C	32 max

Attachment 2

Example Newspaper Public Notice Format; See Attachment 1 for worksheet

PUBLIC NOTICE
REISSUANCE OF A VPDES PERMIT TO
DISCHARGE TO STATE WATERS AND STATE CERTIFICATION UNDER
THE STATE WATER CONTROL LAW

First Public Notice Issue Date: (**to be supplied by newspaper unless permit writer determine date in advance with newspaper's agreement**)
The State Water Control Board has under consideration the reissuance of the following Permit and State Certificate: Permit No.: VA009999
Name and Address of Permittee: ABC Inc. 2324 Short St., Richmond, VA
Facility Name and Location: Big Creek Plant, 2324 Short St., Richmond, VA

Discharge Description: Existing Industrial Discharge resulting from the operation of a metal recycling plant and domestic sewage treatment plant.

Receiving Stream: Big Creek River Mile 3.4 Flow: 1.15 MGD Total Outfalls: 3
Basin: Middle James River Subbasin: N/A Section: 3 Class: III Special Standards: N/A
Receiving Stream: Little Creek River Mile 0.1 Flow: 0.20 MGD Total Outfalls: 1
Basin: Middle James River Subbasin: N/A Section: 3 Class: III Special Standards: None

This proposed permit action is tentative. On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to reissue the permit subject to certain conditions. This permit will maintain the Water Quality Standards adopted by the Board.

The proposed permit action consists of limiting the following parameters in Big Creek: pH 6.0 s.u. min, 9.0 s.u. max; Total Suspended Solids 58.6 mg/l max; oil & grease 20 mg/l max; copper 16.1 ug/l max; zinc 1.0 mg/l max; biochemical oxygen demand 45 mg/l max; dissolved oxygen 5.0 mg/l min; total residual chlorine non-detectable max; nickel 50 ug/l max. and the following parameters in Little Creek: pH 6.0 min, 9.0 max; total suspended solids 60 mg/l max; temperature 32 ^{o}C max.

All pertinent information is on file and may be inspected and copied by contacting John Q. Writer at:
Virginia DEQ, Piedmont Regional Office, 4949-A Cox Road, Glen Allen, VA 23060
Telephone No. (804) 527-5020; Email: jqwriter@deq.state.va.us

Persons may comment in writing or by email to the DEQ on the proposed permit action within 30 days from the date of the first notice. Address comments to the contact person listed above. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. 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.

Attachment 3

Example VPDES Permit Public Notice for Sludge Land Application

PUBLIC NOTICE
ISSUANCE OF A VPDES PERMIT TO
DISCHARGE TO STATE WATERS AND STATE CERTIFICATION UNDER
THE STATE WATER CONTROL LAW

First Public Notice Issue Date: (**to be supplied by newspaper unless permit writer determines date in advance with newspaper's agreement**)
The State Water Control Board has under consideration the issuance of the following Permit and State Certificate: Permit No.: VA009998
Name and Address of Permittee: City of Waldo, 1234 Main Street, Waldo, VA
Facility Name and Location: Waldo Sewage Treatment Plant, 459 River Rd, Waldo, VA
Discharge Description: Proposed discharge resulting from the operation of a domestic sewage treatment plant.
Receiving Stream: Striped Creek; River Mile 2.4; Effluent Flow: 3.0 MGD; Total # Outfalls: 1
Basin: Roanoke; Subbasin: Roanoke; Section: 2d; Class: IV; Special Standards: None

This proposed permit action is tentative. On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to issue the permit subject to certain conditions. This permit will maintain the Water Quality Standards adopted by the Board.
The proposed permit action consists of limiting the following parameters: biochemical oxygen demand 45 mg/l weekly average; total suspended solids 45 mg/l weekly average; pH 6.0 s.u. min, 9.0 s.u. max; and total residual chlorine 0.20 mg/l weekly average.

The city has submitted a sludge management plan that proposes to land apply an estimated 9,000 tons of sludge per year to agriculture lands. Sludge application will be made at standard agronomic rates. The sludge management plan identifies land application sites on approximately 1,200 acres in the counties of Bedford, Botetourt and Franklin. These sites are on farms owned or operated by O.W. Coachman, Hubert Moore, Donald Moore, Joe Frakas, Jeffery Lancaster, Dennis Smith, Garland Jones, Blue Stone Farms, T.D. Rexrode, John Anderson and Don Stevens. After the permit is issued, additional sites in these counties may be selected according to the criteria listed in the land application plan portion of the city's sludge management plan. Additional public notice will be provided when these sites are selected.

All pertinent information is on file and may be inspected and copied by contacting **John Q. Writer** at:
Virginia DEQ, West Central Regional Office, 3019 Peters Creek Rd., Roanoke, VA 24019
Telephone No. (540) 562-6700 Email: jqwriter@deq.state.va.us

Persons may comment in writing or by email to the DEQ on the proposed permit action within 30 days from the date of the first notice. Address comments to the contact person listed above. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. 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.

B. Draft Permit Review

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. 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 that states that the discharge either is in conformance with applicable area or basin-wide water quality control and waste management plans or policies or that the discharge will be included in the applicable plan during its next revision. Do not issue/reissue any permits which conflict with any 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. OWPP Review

The staff of OWPP is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to OWPP for review and indicate which program areas (technical, TMP, pretreatment, storm water, groundwater, etc.) need review. Consult OWPP 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 and permits for minor discharges into 303(d) listed waters) (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 and for minors discharging to waters included on the 303(d) list (if the discharges are within the listed segment). This may be concurrent with the submittal of this information to VDH. OWPP 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 OWPP. OWPP will request an electronic copy of specific draft package items from the region if necessary for discussions with EPA. The region need only send the entire final package to OWPP once the permit is signed (see Section III.D.3) (For minor facilities not discharging to 303(d) list waters, forward the permit and other supporting documentation to EPA after the final permit has been signed.) 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 OWPP and the Regional Office. The liaison role for OWPP is intended to assure that the agency speaks consistently about our regulations and procedures. In cases involving EPA, it is appropriate for OWPP 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 OWPP staff should be notified in advance and either participate in the discussion or be kept apprised of the discussion. OWPP will process requests for EPA assistance quickly and they will communicate information from EPA to the regional offices in a full and timely way.

With use of the EPA Transmittal Checklists EPA has agreed to reduced review periods for certain permits. For these permits EPA will provide what has been termed a 3-day review. For 3-day review permits, send the package including the checklist and proceed with permit reissuance. There is no need to wait for EPA comments before proceeding with processing. An approval letter will not be sent, but EPA should provide an email documentation of their review that will be forwarded to the region for the file. For permits that are not designated as 3-day review permits, proceed with the full 30-day review as described below in III.B.4.b.

New major permit issuances require a full 30-day review. For major reissuances, the permits for which EPA agrees to a 3-day review will be negotiated with EPA every year based on some percentage of the major permits due for reissuance processing in that year. This list will be distributed to the regions via guidance memoranda. The current list is posted on DEQNET under addenda to Guidance Memorandum 01-2027.

For TMDL minors that require EPA review (issuances or reissuances), facilities that discharge to a listed segment and do not discharge the TMDL parameter get a 3-day review. Facilities that discharge the TMDL parameter to a listed segment where the TMDL has not yet been completed get a 3-day review. Facilities that discharge the TMDL parameter to a listed segment for which the TMDL has been completed get a full 30-day review.

All modifications get a 3-day review. Also, draft permit revisions that are made after EPA review and are resent to EPA will retain their original designation as a 3-day or 30-day review permit.

If the region desires a more in-depth review by EPA for a 3-day review permit they can specifically request this of EPA.

The rest of this section pertains to permits that get a full 30-day review by EPA.

b. EPA can either comment upon and/or object to any of the documents 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. 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 OWPP for follow-up with EPA. Comments and/or objections by EPA will be specified in writing and directed to OWPP. OWPP 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 OWPP for concurrence and routing to EPA. EPA will advise OWPP in writing if the deficiencies have or have not been corrected to the EPA's satisfaction.

d. If EPA has further objections, OWPP will coordinate efforts with the RO to reach agreement with EPA. Upon notification from OWPP 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 in a single letter. The owner is responsible for the payment of the public notice publishing cost and authorizes the RO to publish the public notice via the authorization form. Receipt of the form is required before public noticing can proceed. A sample transmittal letter is shown in Section L.

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 does not sign and submit the PN authorization form within 14 days, processing ceases. 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 authorizing 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. The region may decide to stop negotiations and decide that the application is recorded as incomplete 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 receipt of the PN authorization form, 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. Print out, 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. EPA then comments in writing.

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

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 OWPP 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 OWPP staff. The mailing list is distributed once every two weeks by OWPP. This procedural step will also trigger publication on the DEQ website since public notices received by OWPP 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 OWPP 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 OWPP 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.

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.

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

a. In accordance with 9 VAC 25-31-310, the Hearing Procedures and Procedural Rule No. 1, action relative to a discharge proposal is generally delayed and a public hearing held when a public hearing is required by statute or when all three of the following conditions exist:

(1) There is significant public interest in the issuance, reissuance, denial, major modification or termination of the permit in question, and

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

(3) The action requested is not consistent with, or is in violation of the SWCL, federal law or any regulation promulgated thereunder.

b. The Regional Director may decide 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 decision as to whether

a public hearing will be granted. The Regional Office may want to involve headquarters support groups if the hearing request involves disputed issues pertinent to them.

c. Attempt to resolve all requests for hearings in writing prior to submitting the final package to the Regional Director for signature. This should occur within the 30 day public notice comment period.

d. 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. The authorization memorandum to the Director for approval or denial of the hearing is prepared by the RO and signed "for" the Director.

When a public hearing is requested, do not issue the permit until after the Regional Director has made a decision on holding a public hearing. The permit public comment period is automatically extended to the end of any public hearing comment period.

e. The owner may request a public hearing 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.

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 (9 VAC 25-31-310 A 3), including publication for two successive weeks in a local newspaper.

f. Once a hearing is scheduled, the RO is responsible for preparing and making the staff presentation. Follow the Hearing Procedures in Section III.

g. If a decision is made to deny the permit based upon the hearing, follow the denial procedures described in Section II of this manual.

h. 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 public comment period closes for the permit or 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.

- 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.

D. Final Permit Processing

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 utilizing a concurrence sheet. It should be signed 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 is titled "Director, Department of Environmental Quality" (9 VAC 25-31-920). It is signed for the Director 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 for the Director 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)).

3. Final Package Distribution

Copy and distribute the permit package as follows:

a. Owner by CERTIFIED MAIL (' 62.1-44.15(9))

- Transmittal Letter (original)
- Permit (original)
- DMR (original)

- Response To Comments (copy)
- Fact Sheet (only if permit modified since draft package sent)

b. Office of Water Permit Programs
- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)
- Fact Sheet including EPA checksheet (copy)
- Application (copy)
- Response To Comments (copy)

c. EPA
- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)
- Response To Comments (copy)
- Application (copy) (minor permits)
- Fact Sheet (copy) (minor permits)

d. RO Permit File
- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)
- Response To Comments (original)
- Fact Sheet (original)
- Application (original)

e. Regional Compliance Auditor
- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)

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.

E. Revocation and Reissuance Procedures

(9 VAC 25-31-370)

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

(9 VAC 25-31-390)

a. A permit revocation and reissuance is justified for any of the reasons specified as "Causes for Modification" in 9 VAC 25-31-390 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 OWPP 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

(9 VAC 25-31-370 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 reissuance fee must be paid, 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.

Key: PN - Public Notice OU - Originating Unit HN - Hearing Notice PO - Policy Office OD - Office Director

A. Determining Need for Hearing on Applications for Permits

1. 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.
2. OU makes a determination as to whether the responses and requests meet the applicable provisions of Section II and III of **Appendix B**.
   a. 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 B below for authorization to deny holding a hearing.
   b. If the responses meet the applicable provisions of Section II of **Appendix B**, the OU will proceed under B below for authorization to convene a hearing.

B. 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 and made in accordance with the Delegation of Authority Memorandum signed by the Director. In those cases where the owner has requested a hearing and there has been no notice of the comment period, the final decision on holding a public hearing should be made by the Office Director within 30 days after the request for public hearing was received.)
1. The OU shall prepare an authorization memorandum to the Office Director (see **Appendix A.2**) that includes:
   a. brief background
   b. details of notification (i.e., dates and name of newspapers) in local paper of general circulation in the localities affected
   c. details of notification (i.e. dates of letters) to chief elected local official, chief administrative officer, and local planning district commission
   d. summary of responses and requests from public notices
   e. summary of OU's attempts to address comments from the public
   f. analysis of review of responses and requests as they apply to Sections II and III of **Appendix B**.
   g. recommendation for denying or holding a hearing
   h. rationale for recommendation
   i. target date for Board action (for planning purposes)
   j. copy of all responses, or a representative sampling of responses, received (per Office Director direction)
2. OU submits the following to the Office Director:
   a. authorization memorandum (described in B.1.)
   b. addressed envelopes for the owner, chief elected local official, chief administrative officer, local planning district commission, and those individuals and organizations who responded to the

public notice to notify persons of the hearing or a sample of the letter for the OD's signature to inform persons that a hearing has been denied

c. necessary permit/certificate/certification documents for Office Director's signature if recommendation is to deny convening a hearing

3. Office Director approves recommendation and, (1) in the case of denial, signs appropriate permit documents, returns package to OU and directs the OU to sign and mail the notification letters; and (2) in the case of approval of convening a hearing, forwards the package to the OU. (**Note:** Any letters prepared to notify persons that a hearing has been authorized should be for the OU Director's signature and mailed upon notification that the Office Director has authorized a hearing. Letters to notify that a hearing has been authorized are not required as long as notice of the date, time and place of the hearing are mailed within 14 days of Office Director approval to convene a hearing.)

C. Arrangements for Hearing

1. OU determines legal requirements for notice of public hearing.
2. OU notifies owner that a public hearing has been authorized and requests authorization to publish, with payment by owner, notice of hearing.
3. OU considers hiring a court reporter instead of taping the hearing if OU has reason to believe the final decision will be challenged.
4. OU arranges for a convenient date and location for the hearing allowing for compliance with all legal requirements. As a general rule, permit public hearings should be held at 7:00 p.m. and a question and answer period scheduled for ½ hour prior to the convening of the public hearing.
5. OU arranges for a Hearing Officer by contacting the Board Member that is nearest geographically to the hearing site.
6. OU establishes date, at least 15 days after hearing, for close of hearing file.
7. OU prepares draft notice for review by PO (Regulatory Affairs Manager) (See boilerplate language in **Appendix C**).
8. OU finalizes notice.
9. OU mails the notice to interested persons, including, but not limited to, those required to receive the permit public notice, persons who responded to the permit public notice and appropriate Agency staff (Policy Office: Regulatory Affairs and Public Affairs Managers). (9 VAC 25-31-290)
10. 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.
11. Office of Policy causes notice of hearing to be published in the Virginia Register and put on web page.
12. OU prepares opening remarks for Hearing Officer (See **Appendix E**).
13. OU prepares technical presentation
14. OU prepares briefing memorandum for hearing officer. (**NOTE**: Briefing memorandum can be an updated hearing authorization memorandum or the technical presentation if it is sufficient to inform the Hearing Officer of the background and the issues surrounding the permit action.)
15. OU starts official 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.)
16. OU sends package to Hearing Officer (See **Appendix A.2**) (opening remarks, briefing memorandum, travel arrangements, map, etc.) 10 days prior to hearing.
17. Office 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.

D. Conduct of Hearing

1. Attendees include technical support personnel from OU and, as necessary, management representatives from the appropriate headquarters or regional office based on program or geographical areas of responsibility.
2. OU tapes proceedings and receives all written statements for inclusion in the hearing file.
3. OU closes file in accordance with date specified in notice.
4. OU prepares a general summary of the hearing, in memorandum format, for presentation to the Board.
5. OU reviews technical issues and develops preliminary recommendations for concurrence by the Office Director for Board action.

E. Board Action

1. OU notifies PO of proposed agenda item, including proposed Board decision, in accordance with applicable Board meeting schedule.
2. OU prepares memorandum (See **Appendix A.2**) containing background, reference to the hearing and attaches summary of public comments and the special conditions section of the permit. In addition, OU prepares separate document containing draft recommendation and submits to Office Director and PO. Draft recommendations must address any statutory determinations required of the Board for issuing the permit.
3. OU prepares and presents technical presentation and summary of the hearing to the Board and makes staff recommendations.
4. OU prepares minute setting forth Board action and submits to PO in accordance with schedule established by PO.
5. OU prepares documentation to carry out Board action for Office Director's signature (permit, transmittal letter, etc.) and transmits documents to owner.

F. Response to Comments and Files

1. OU maintains response to comments for public review.
2. OU maintains hearing file and tape/transcript of public hearing permanently.

APPENDIX A.1
PROCEDURE FOR INFORMAL HEARINGS

ACTIVITY	RESPONSIBILITY	DATE DUE (IF APPLICABLE)	DATE DONE (IF APPLICABLE)
1. Maintain List of all PN commenters	OU		
2. Respond to all comments received following close of public comment period	OU		
3. Prepare authorization to convene or deny public hearing	OU	Within 14 days after close of PN comment period	
4. Acquire Office Director approval and either (1) establish tentative schedule for public hearing or (2) prepare letters to notify requesters of denial of request and skip to 15.	OU	Within 30 days after close of PN comment period	
5. Notify owner that hearing has been authorized and receive authorization to publish notice of hearing in newspaper (once per week for 2 consecutive weeks)			
6. Determine need for hiring a court reporter instead of taping (if likely that decision on permit is to be appealed, consider hiring a court reporter for the hearing)	OU		
7. Notify PO (Cindy Berndt)	OU		
8. Contact Board Member to Serve as Hearing Officer; select tentative dates	OU	Within 2 days after item 4	
9. Arrange Date, Time, & Location for public hearing	OU		
10. Notify Hearing Officer and owner of date, time and place of public hearing; encourage owner participation at public hearing	OU		
11. Prepare Notice for Public & Newspaper and send notice to PO for review	OU		
12. PO notify OU of comments/approval of notice	OU		
13. Develop mailing list of persons who received PN, persons who commented on the PN (9 VAC 25-31-310 and 9 VAC 25-230-50)	OU		
14. Determine newspaper to run HN	OU		

15. Distribute notice to newspapers, to mailing list developed in 13 and to PO (Regulatory Affairs and Public Affairs Managers) or for denial distribute letter to requesters notifying that the request has been denied	OU	Within 15 days of the close of the PN comment period	
16. Submit notice to Virginia Register and post on web site	PO		
17. Verify receipt of notice by newspapers	OU		
18.. Verify publication of notice by newspapers	OU	At least 30 days before the public hearing	
19. Prepare Opening Remarks for Hearing Officer (See **Appendix E**)	OU		
20. Prepare Technical Presentation	OU		
21. Prepare Briefing Memorandum	OU		
22. Establish Official File/Exhibit List (See **Appendix A.2** and **Appendix D**)	OU		
23. Send Package to Hearing Officer (See **Appendix A.2**)	OU		
24. Contact Hearing Officer to schedule a meeting prior to the hearing	OU		
25. Hold hearing	OU/Hearing Officer	At least 30 days after the first date of publication of notice of hearing and between 30 to 60 days of 15	
26. Close hearing file	OU	In accordance with date in notice of hearing (at least 15 days after hearing)	
27. After file closed, complete file (see **Appendix D**) (prepare transcript, if required)	OU		
28. Prepare summary of public comments for Board	OU		
29. Inform PO of need to put on agenda	OU	Within deadline set by PO	
30. Acquire Office Director's approval of agenda item (Agenda Review)	OU		

31. Submit agenda materials for distribution to the Board (see **Appendix A.2** for details)	OU	Within deadline set by PO	
32. Prepare Technical Presentation for Board meeting	OU		
33. Approve Technical Presentation	OD		
34. Make technical presentation to the Board and present summary of public comments to the Board	OU	Within 90 days of public hearing	
35. Prepare Minute of Board action and other documents resulting from Board action	OU		
36. Submit Minute, approved by Office Director, to PO	OU	Within deadline set by PO	
37. Transmit approved permit/certificate documents to owner & other appropriate persons	OU	Within 14 days of Board action	
38. Have response to comments available for the public (9 VAC 25-31-320)	OU	Within 14 days of Board action	
39. Maintain hearing file and tape/transcript permanently (9 VAC 25-230)	OU		

APPENDIX A.2
SUBMITTAL CHECKLIST

SUBMITTAL ITEM & COMPONENTS	SUBMITTED
Denial Package (From OU) * memorandum * summary or copy of responses to public notice * sample letter to responders from OU Director * permit/certificate package for Office Director's signature	
Authorization Package (From OU) * memorandum * copy of public notice, and give the name of the newspapers which ran the public notice, and date of publication * list of individuals, organizations who responded to the public notice * addressed envelopes for the owner and those individuals and organizations who responded to the public notice	_____
Technical Presentation (From OU)	
Briefing Memorandum For Hearing Officer (From OU)	
Material for Hearing File (From OU) * draft permit - fact sheet * responses to public notice * authorization memorandum * hearing notice * newspaper notice certifications * technical support documentation	
Hearing Officer Package (OU) * briefing memorandum * opening remarks * travel arrangements	
Board Meeting Materials (OU) * memorandum to the board containing following sections: purpose, background, summary of public comments, agency response to comments * special conditions section of the draft permit * separate document containing draft recommendations	

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. 9 VAC 25-230-50 A:

That there is significant public interest in the action, and
That there are substantial disputed issues relevant to the permit action, and
That the issuance is not inconsistent with, or in violation of, the Water Control Law, federal law, or any regulation promulgated thereunder, or
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 - 9 VAC25-230-70

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 of 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. 9 VAC 25-230-50 (Procedural Rule No. 1 [Section 1.12(d)]

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

STATE WATER CONTROL BOARD
NOTICE OF PUBLIC HEARING

The State Water Control Board will hold a public hearing to receive comments on the proposed (type of action) for (name of facility), (facility mailing address). The purpose of the hearing is to receive comments on the (proposed action).

(Name of facility) is a (type of operation) with (an existing or a proposed) discharge from its (type of discharge) to (receiving stream). The facility is located at (location of facility).

Public Notice No. (number) for the proposed (type of action) was published in the (name of papers) on (dates). Some individuals who responded to the public notice expressed concern over the (statement of concern).

The hearing will be held in the (location) on (date) at (time). In addition, the Department of Environmental Quality's staff will conduct an informational briefing on this (type of action) at 6:30 p.m. The public is invited to hear a brief explanation of the permit and questions are welcomed. This informal, fact-finding proceeding is being held pursuant to Section 9-6.14:11 of the Code of Virginia (list section of State Water Control Law, Agency regulation and/or procedure).

The hearing is being held at a public facility believed to be accessible to persons with disabilities. Any person with questions on the accessibility should contact ([give name, address, email address, fax number and phone number of staff member] or if same as contact below use [the staff person below]). Interpreter services for the deaf will be provided, if requested. Persons needing interpreter services for the deaf must notify (staff contact) no later than (date [at least ten working days before hearing]).

Anyone wishing to speak at the hearing may do so, subject to any limitations imposed by the Hearing Officer. Anyone wishing to submit written comments for the public comments file may do so at the hearing or by mail. Comments must be received by (give time and date for closing file [at least 15 days after the hearing]), at which time the file will close. Written comments should include the name and address of the presenter and a complete, concise statement of the factual basis for the comments. The comments should be addressed to ([the staff contact below] or if different give [staff contact's name, address, telephone number, fax number and email address]).

More specific information on the proposed (type of action) including the fact sheet, draft permit and other documents are available by contacting (give name of permit writer or supervisor, grade 13 or above) at the Department of Environmental Quality (address, telephone number, fax, number and email address).

[**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 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)
- Copies of Notices Published in Virginia Register
- Draft Permit - Fact Sheet
- Responses to Public Notice
- Authorization Memorandum
- Newspaper Notice Certification
- Technical Support Documentation

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 Director of the Department's [insert office name] Office. 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 9-6.14:11 of the Code of Virginia, 9 VAC 25-31-10 et seq. (VPDES Permit Regulation) and the 9 VAC 25-230-10 et seq. (Board's Procedural Rule No. 1).

The State Water Control Board will ultimately decide whether to [issue/reissue] 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

TABLE OF CONTENTS

A. INITIATION OF MODIFICATIONS 1

1. CAUSES FOR MODIFICATION 1
2. MODIFICATION REQUESTS 2
3. PERMIT FEES 3
4. DENIAL OF REQUESTS FOR MODIFICATION 3
5. MODIFICATIONS NOT REQUIRING PUBLIC NOTICE 3

B. MODIFICATION PROCEDURES 5

1. REVIEW THE MODIFICATION REQUEST /APPLICATION 5
2. OWPP MODEL REVIEW 5
3. PREPARE THE FACT SHEET AND DRAFT PERMIT 5
4. PREPARE PUBLIC NOTICE 5

MODIFICATION PUBLIC NOTICE FORMAT 6

C. DRAFT PERMIT REVIEW 7

1. REGIONAL REVIEW 7
2. OWPP REVIEW 7
3. VDH REVIEW 7
4. EPA REVIEW 7
5. OWNER REVIEW 8

D. PUBLIC PARTICIPATION 9

1. NEWSPAPER PUBLIC NOTICE 9
2. OPTIONAL PUBLIC NOTICE PROCEDURES 9
3. MAILING LIST 9
4. LOCAL GOVERNMENT NOTIFICATION 10
5. ADJACENT STATES REVIEW 10
6. OTHER AGENCY REVIEW 10
7. PUBLIC HEARING 11
8. RESPONSE TO COMMENTS 12

E. FINAL PERMIT PROCESSING 13

1. MODIFIED PERMIT PACKAGE 13
2. DATING THE PERMIT 13
3. FINAL PACKAGE DISTRIBUTION 13
4. UPDATE CEDS 14

F. CHANGE OF OWNERSHIP/FACILITY NAME MODIFICATIONS 15

1. AUTOMATIC TRANSFER 15
2. CHANGE OF OWNERSHIP AS A MINOR MODIFICATION 15

SECTION IV -- MODIFICATION PROCEDURES

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 (9 VAC 25-31-370). 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 9 VAC 25-31-390 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 9 VAC 25-31-30; 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 9 VAC 25-31-100 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 9 VAC 25-31-220 B or C or 9 VAC 25-31-800 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 9 VAC 25-31-800 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 9 VAC 25-31-220 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).

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.

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. OWPP Model Review

Regional modeling packages do not require OWPP review. Send other models to OWPP 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 OWPP review. Send any other changes in an approved model to OWPP for review.

3. Prepare the Fact Sheet and Draft Permit

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.

4. Prepare Public Notice

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.

SECTION IV -- MODIFICATION PROCEDURES

Modification Public Notice Format

PUBLIC NOTICE
MODIFICATION OF A VPDES PERMIT TO DISCHARGE
TO STATE WATERS AND STATE CERTIFICATION UNDER
THE STATE WATER CONTROL LAW
[* AND PRETREATMENT PROGRAM APPROVAL (MODIFICATION)]

First Public Notice Issue Date: (**to be supplied by newspaper unless permit writer determines date in advance with newspaper's agreement**)
The State Water Control Board has under consideration modification of the following Permit and State Certificate: Permit No.: VA00**00000**
Name and Address of Permittee:
Facility Name and Location:
Discharge Description: Existing **Municipal/Industrial** Discharge resulting from the operation of **(Brief description of plant)**.
Receiving Waters Name; River Mile; Flow; Total # Outfalls:
Basin: Subbasin: Section: Class: Special Standards:

This proposed permit action is tentative. On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to modify the permit subject to certain conditions. This permit will maintain the Water Quality Standards adopted by the Baord.

The proposed permit action consists of [**Say what changes are being made to the permit. If limits are changing, list those parameters and limits listed in the permit. For new land application sites, give volumes to be applied or say application will be made at standard agronomic rates and give location of land application sites.**

[*** Pretreatment Program Approval (Modification)** :
Pursuant to Section 9 VAC 25-31-830 of the VPDES Permit Regulation, on **(date)** the Water Control Board granted final approval (modification) of the pretreatment program for this facility and it is an enforceable part of the permit. In accordance with state regulations, all comments on the pretreatment program received during the 30 day public comment period, which began on **(date)**, have been considered.]
* Add these parts when public notice includes final pretreatment program approval.

See Section III for other applicable PN language re: variances, etc.

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: jqwriter@deq.state.va.us.

Persons may comment in writing or by email to the DEQ on the proposed permit action within 30 days from the date of the first notice. Address comments to the contact person listed above. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period and specific to the modification will be considered. DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. 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.

C. Draft Permit Review

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 that states that the discharge either is in conformance with applicable area or basin-wide water quality control and waste management plans or policies or that the discharge will be included in the applicable plan during its next revision. Do not issue/reissue any permits which conflict with any 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. OWPP Review

The staff of OWPP is available for technical and procedural review of applications, draft permits, and FS. If review is desired, submit the package to OWPP for review and indicate which program areas (technical, TMP, pretreatment, storm water, groundwater, etc.) need review. Consult OWPP 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. For minor facilities, forward the permit and other documentation to EPA 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 for major facilities to EPA after drafting. 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.

With use of the EPA Transmittal Checklists EPA has agreed to reduced review periods for certain permits. For these permits EPA will provide what has been termed a 3-day review. For 3-day review permits, send the package including the checklist and proceed with permit reissuance. There is no need to wait for EPA comments before proceeding with processing. An approval letter will not be sent, but EPA should provide an email documentation of their review that will be forwarded to the region for the file.

All modifications get a 3-day review. If the region desires a more in-depth review by EPA we can specifically request this of EPA. For any permit modification receiving a full 30-day review by EPA see the sections below pertaining to 30-day reviews.

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 OWPP for follow-up with EPA. Any comments and/or objections by the EPA will be specified in writing and directed to OWPP. OWPP 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 OWPP for concurrence and routing to EPA. EPA will advise OWPP 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, OWPP 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 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 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 Modification/PN Letter to Owner in Section L.

c. When using the optional public notice procedure, transmit the public notice and PN verification form to the permittee using the Modification/Optional PN to Owner in Section L.

d. The owner is responsible for the payment of the public notice and authorizes the RO to publish the public notice via the authorization form. Receipt of the authorization form is required before public noticing can proceed.

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 receipt of the PN authorization form, 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 copies 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

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, Modification/Optional PN Letter to Owner).

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 OWPP 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 OWPP staff. The mailing list is distributed once every two weeks by OWPP.

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 OWPP 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.

If the applicant is one of the local officals listed above, receipt of the PN authorization from that person constitutes the notice required by law. Other government officals 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 9 VAC 25-31-310, the Hearing Procedures and Procedural Rule No. 1, action relative to a discharge proposal is generally delayed and a public hearing held when the following exist:

(1) There is significant public interest in the issuance, reissuance, denial, major modification or termination of the permit in question, and

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

(3) The action requested is not consistent with, or is in violation of the SWCL, federal law or any regulation promulgated thereunder; or

(4) That a public hearing is required by statute.

b. The Regional Director may decide 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 decision as to whether a public hearing will be granted. The Regional Office may want to involve headquarters support groups if the hearing request involves disputed issues pertinent to them.

c. Attempt to resolve all requests for hearings in writing prior to submitting the final package to the Regional Director for signature. This should occur within the 30 day public notice comment period.

d. 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. The authorization memorandum to the Director for approval or denial of the hearing is prepared by the RO and signed "for" the Director.

When a public hearing is requested, do not modify the permit until after the Regional Director has made a decision on holding a public hearing. The permit public comment period is automatically extended to the end of any public hearing comment period.

e. The owner may request a public hearing up to 30 days after the permit is modified (**'** 62.1-44.25). If the permit was mailed to the owner, add 3 days to this.

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 (9 VAC 25-31-310 A 3), including publication for two successive weeks in a local newspaper.

f. Once a hearing is scheduled, the RO is responsible for preparing and making the staff presentation. Follow the Hearing Procedures in Section III.

g. If a decision is made to deny the permit modification based upon the hearing, follow the denial procedures described in Section II of this manual.

h. 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

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 to the RD utilizing a concurrence sheet. It should be signed by the appropriate regional personnel including the Planning representative and Water Permit Manager.

d. The permit's signature line is titled "Director, Department of Environmental Quality" (9 VAC 25-31-920). It is signed for the Director 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 for the Director 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

Copy and distribute the permit package as follows:

a. Owner by CERTIFIED MAIL (' 62.1-44.15(9))
- Transmittal Letter (original)
- Permit (original)
- DMR (original)
- Response to Comments (copy if modification required a public notice)
- Fact Sheet (for change of ownership where new owner did not see draft permit package)

b. Office of Water Permit Programs
- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)
- Response to Comments (copy)
- Application/Modification Request (copy)
- Fact Sheet (copy)

c. EPA
- Transmittal Letter (copy)

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

d. RO Permit File

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

e. Regional Compliance Auditor

- Transmittal Letter (copy)
- Permit (copy)
- DMR (copy)

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.

F. Change of Ownership/Facility Name Modifications

A change of ownership can be accomplished either as an automatic transfer under 9 VAC 25-31-380 B or as a minor modification under 9 VAC 25-31-400. 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 agreement between the existing and proposed new owner containing a specific date of transfer of permit, or responsibility, coverage and liability between them, 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.

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 (eg. 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 -- TERMINATION PROCEDURES

TABLE OF CONTENTS

A. TERMINATION OF PERMITS 1

1. CAUSES FOR PERMIT TERMINATION 1
2. TERMINATION PROCESS 2
3. PUBLIC NOTICE 2
4. BOARD ACTION 2
5. UPDATE CEDS 3

B. DENIAL OF REQUESTS FOR TERMINATION 3

SECTION V -- TERMINATION PROCEDURES

A. Termination of Permits

(§ 62.1-44.15(5) and 9 VAC 25-31-410)

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 termination of a permit may only be made by the State Water Control Board (§ 62.1-44.14). Before a 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. Termination Process

a. Termination is proposed by the staff, the permittee or another interested person and the staff decides to terminate the permit.

b. Notify the permittee of the proposed termination and advise him of his right to a hearing. Include the Termination Agreement Form with the letter. See the example letter in Section L.

c. If the permittee signs and submits the Termination Agreement Form, and if there is no pending state or federal enforcement action on the permit, and if the discharge will permanently cease on or before the termination date, the RO forwards the Permit Termination Summary Form to DPL (See example in Section L). This action is done without public notice.

d. If the permittee does not agree to the termination, or if there is a pending enforcement action on the permit, contact the permittee in writing without delay and arrange a meeting to discuss the permittee's situation. The RO should make it clear to the permittee that the meeting is being held under the informal fact finding provisions of the Administrative Process Act, § 9-6.14:11.

If the permittee agrees to the termination following the ":11" hearing, follow the rest of the termination procedures in this section.

If the RO and the permittee do not reach agreement and the RO still intends to terminate the permit, a formal hearing is required before the State Water Control Board (APA § 9-6.14:12 and Procedural Rule No. 1). Contact DPL and OWPP for further guidance if a formal hearing is necessary.

e. Document all steps in the process in the permit file.

f. Interested persons should be notified of the RO's decision regarding their termination request.

3. Public Notice

If the permittee does not agree to the termination or if there is a pending state or federal enforcement action on the permit, a Notice of Intent to Terminate must be issued under 9 VAC 25-31-370 D. A Notice of Intent to Terminate is a type of draft permit which follows the same procedures as any draft permit. 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. See Section III for public notice format.

4. Board Action

a. For permit terminations done without public notice, the RO submits the Permit Termination Summary Form (See Section L) to DPL so that the permit termination is placed before the Board. If a formal hearing is held before the Board, the permit termination will be done then.

b. If there is a pending enforcement action, but the permittee agrees to the termination, the permit may be terminated by the Board after public notice, without holding a public hearing.

c. DPL compiles the RO termination list and includes it on the upcoming Board meeting agenda.

d. If the termination is approved by the Board, OWPP prepares the minute of the Board decision. Once the Director approves the minute, OWPP will distribute it to all affected regions. Regions should retain a copy for the RO files. The RO notifies the permittee by sending a copy of the minute from the Board meeting, and a transmittal letter (Refer to example in Section L). This notification to the permittee must be sent by certified mail (§ 62.1-44.15(9)).

5. Update CEDS
The RO will modify CEDS to reflect the facility's change in status.

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.

SECTION L - LETTERS AND FORMS

TABLE OF CONTENTS

A. AGENCY ADDRESSES AND TELEPHONE NUMBERS 1

VIRGINIA DEPARTMENT OF HEALTH ADDRESSES AND PHONE NUMBERS: 1
DEQ OFFICE OF WASTEWATER ENGINEERING AREA ENGINEER OFFICES: 2
MAILING ADDRESSES FOR THE STATE AGENCIES IN THE STATES BORDERING VIRGINIA: 3
STATE AND FEDERAL AGENCY ADDRESSES 4

B. APPLICATION CORRESPONDENCE 5

APPLICATION TRANSMITTAL LETTER 5
REISSUANCE REMINDER LETTER 6
COMMON APPLICATION ERRORS 8
VPDES PERMIT APPLICATION ADDENDUM 9
POLLUTION PREVENTION FLYER 10
PAPERWORK REDUCTION ACT NOTICE 12
LOCAL GOVERNMENT ORDINANCE FORM 13
APPLICATION TRANSMITTAL LETTER TO VDH 15
COMMISSIONER OF THE REVENUE LETTER 16
APPLICATION RECEIPT LETTER TO LOCALITIES AND RIPARIAN LANDOWNERS 17
APPLICATION COMMENT LETTER TO OWNER 18
APPLICATION COMPLETE LETTER 19
NOTICE OF INTENT TO DENY APPLICATION 20
APPLICATION WITHDRAWAL FORM 21
REISSUANCE IN LIEU OF MODIFICATION 22
PERMIT REVOCATION AGREEMENT FORM FOR REVOCATION AND REISSUANCE 23

C. DRAFT PERMIT CORRESPONDENCE 24

DRAFT PERMIT TRANSMITTAL LETTER TO EPA 24
EPA TRANSMITTAL CHECKSHEET 25
WATER QUALITY STANDARDS VARIANCE FORM 34
DRAFT PERMIT/PN TRANSMITTAL LETTER TO OWNER 35
PUBLIC NOTICE AUTHORIZATION FORM 36
PUBLIC NOTICE TRANSMITTAL LETTER TO NEWSPAPER 37
PUBLIC NOTICE VERIFICATION SHEET 38
DRAFT PERMIT/OPTIONAL PN TRANSMITTAL LETTER TO OWNER 30
DRAFT PERMIT TRANSMITTAL LETTER TO DGIF, F&WS, NMFS, VIMS, VMRC & ADJACENT STATES 31
PUBLIC NOTICE TRANSMITTAL LETTER TO LOCAL GOVERNMENTS 32

D. FINAL PERMIT CORRESPONDENCE 33

FINAL PERMIT TRANSMITTAL LETTER FORMAT 33
FINAL PERMIT PACKAGE REVIEW 35

E. MODIFICATION CORRESPONDENCE 36

SAMPLE FORMAT FOR A MODIFICATION REQUEST 36
CHANGE OF OWNERSHIP FORM TRANSMITTAL LETTER 37
CHANGE OF OWNERSHIP AGREEMENT FORM 38

F. TERMINATION CORRESPONDENCE 39

INTENT TO TERMINATE LETTER 39
TERMINATION AGREEMENT FORM 40
PERMIT TERMINATION SUMMARY FORM 41
TERMINATION NOTIFICATION LETTER 42

SECTION L - LETTERS AND FORMS

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.

SECTION L - LETTERS AND FORMS

A. Agency Addresses and Telephone Numbers

Virginia Department of Health Addresses and Phone Numbers

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	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	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 l347 Piney Forest Road Danville, VA 24540 Telephone: (434) 836-8416 Fax: (434) 836-8424	Amelia, Amherst, Appomattox, Bedford, Buckingham, Brunswick, Campbell, Charlotte, Cumberland, Franklin, Halifax, Henry, Lunenburg, Mecklenburg, Nottoway, Patrick, Pittsylvania, Prince Edward **Cities**: Bedford, Danville, Lynchburg, Martinsville
LEXINGTON l31 Walker Street Lexington, VA 24450-2431 Telephone: (540) 463-7136 Fax: (540) 463-3892	Albemarle, Alleghany, Augusta, Bath, Botetourt, Clarke, Craig, Frederick, Fluvanna, Greene, Highland, Louisa, Nelson, Page, Roanoke, Rockbridge, Rockingham, Shenandoah, Warren **Cities**: Buena Vista, Charlottesville, Clifton Forge, Covington, Harrisonburg, Lexington, Roanoke, Salem, Staunton, Waynesboro, Winchester
EAST CENTRAL 300 Turner Road Richmond, VA 23225 Telephone: (804) 674-2880 Fax: (804) 674-2815	Charles City, Chesterfield, Essex, Gloucester, Goochland, Hanover, Henrico, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Powhatan, Northumberland, Richmond, Westmoreland **Cities**: Richmond
SOUTHEAST 830 Southampton Ave. Rm. 2058 Norfolk, VA 23510 Telephone: (757) 683-2000 Fax: (757) 683-2007	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 Wastewater Engineering
109 Governor Street, 5th Floor
Richmond, VA 23219
Telephone: (804) 864-7473
Fax: (804) 864-7475

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

DEQ Office of Wastewater Engineering Area Engineer Offices

Office	Area Served
Daniel P. Scott, P.E. 454 East Main Street Abingdon, VA 24210 Phone: 276-646-3577 email: dpscott@deq.state.va.us	Lee, Scott, Dickinson, Buchanan, Russell, Washington, Wise, Bland, Giles, Wythe, Smyth, Grayson, Carroll, Pulaski, Tazewell, Floyd, Montgomery
Kemper Loyd, P.E. Valley Regional Office Phone: 540-574-7814 email: ckloyd@deq.state.va.us	Bath, Highland, Rockbridge, Augusta, Rockingham, Page, Shenandoah, Warren, Frederick, Clarke, Nelson, Albemarle, Fluvanna, Greene
Marcia J. Degen, P.E. West Central Regional Office Phone: 540-562-6753 email: mjdegen@deq.state.va.us	Craig, Patrick, Franklin, Roanoke, Botetourt, Alleghany, Bedford, Amherst, Appomattox, Campbell, Pittsylvania, Henry
Rob VanLier, P.E. DEQ Charlottesville Office Phone: 434-975-0897 email: rjvanlier@deq.state.va.us	Caroline, King George, Louisa, Spotsylvania, Orange, Madison, Culpeper, Stafford, Rappahannock, Fauquier, Prince William, Fairfax, Loudon, Arlington
Raymond "Reed" Barrows, P.E. Piedmont Regional Office Phone: 804-527-5167 email: rrbarrows@deq.state.va.us	Halifax, Mecklenburg, Charlotte, Lunenbeurg, Prince Edward, Buckingham, Cumberland, Nottoway, Amelia, Brunswick, Dinwiddie, Sussex, Prince George, Surry, Chesterfield, Powhatan, Henrico, Hanover, Goochland, Westmoreland, Northumberland, Lancaster, Richmond, Essex, King and Queen, King William, Charles City, New Kent, Greenville, Middlesex, Mathews
Marcy Garnett, P.E. Tidewater Regional Office Phone: 757-518-2199 email: mggarnett@deq.state.va.us	Southampton, Isle of Wight, Suffolk, Chesapeake, Portsmouth, Virginia Beach, Hampton, York, Gloucester, Newport News, Norfolk, Northampton, Accomack, James City

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

Kentucky	Department for Environmental Protection Division of Water, KPDES Branch 14 Reilly Road Frankfort, Kentucky 40601 Telephone: 502-564-3410
Maryland	Wastewater Discharge Permit Program Maryland Department of the Environment 1800 Washington Blvd. Baltimore, Maryland 21230 Telephone: 410-631-3000
North Carolina	Division of Water Quality Department of Environment and Natural Resources 1617 Mail Service Center Raleigh, North Carolina 27699-1617 Telephone: 919-733-7015
Tennessee	Department of Environment and Conservation Division of Water Pollution Control 401 Church St., L and C Annex, 6th Floor Nashville, Tennessee 37243-1534 Telephone: 615-532-0625
West Virginia	Division of Water Resources 1201 Greenbrier Street, East Charleston, West Virginia 25311-1088 Telephone: 304-558-2107

State And Federal Agency Addresses

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

Virginia Marine Resources Commission
2600 Washington Ave. 3rd Floor
Newport News, VA 23607
Telephone: 757-247-2200

B. Application Correspondence

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 Water Quality Criteria Monitoring form if appropriate**]

Upon completing the application, return the original and four copies 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.

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 welcome and will better enable us to complete processing before permit expiration. The instructions and application forms are enclosed [*include Water Quality Criteria Monitoring form if appropriate*]. [**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.][**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 will result in the waiver being denied.]

[For discharges to saltwater and transition zone that will require enterococci limits: Note that new bacteria standards are in effect which will require that enterococci limits be placed in your permit. If you prefer to continue to use chlorine limits as a surrogate parameter as was the case with fecal coliform limits you must demonstrate the ability of the chlorine limits to allow the enterococci bacteria standard to be met. This demonstration can be submitted with the permit application for reissuance. In this case, if the demonstration shows the bacteria standard will be met, only chlorine limits will be necessary. If you prefer not to submit demonstration results with your application the permit will contain chlorine limits and require bacteria monitoring sufficient to generate a data set adequate to perform an evaluation. Please contact the regional office for information on demonstration requirements if you intend to submit the demonstration results with your application.]

Upon completing the application, return the original and four copies to the [ ] Regional Office at the above address.

In addition, we must receive the appropriate permit fee before we can process your application. Based on your current permit, the fee for this permit action is [ ]. Please follow the instructions on the enclosed Permit Application Fee form concerning payment of the fees.

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.***)

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 fine 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 questions 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 at or below the discharge point
__ 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 Flyer

Pollution Prevention and Pollution Control

Know Your Options

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Pollution Prevention May HelpYour 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 and regulatory standards. These facilities are realizing that pollution prevention is very often economically beneficial and can result in significant environmental benefits.

What is Pollution Prevention?

Liquid, solid and /or gaseous waste materials are generated during the manufacture products. In addition to environmental problems, these waste streams represent a loss of valuable materials and energy from the production process and may require significant investment in pollution control equipment to meet more stringent 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.

For example, a Richmond metal finisher added an ion exchange polishing process to their pretreatment system, which enabled them to eliminate the need to discharge to the local Publicly Owned Treatment Works (POTW). The new system allows total effluent flow to be reused continuously in the plant. By investing in pollution prevention efforts, the facility reduced their water purchase and disposal costs by 80%.

Pollution Prevention Assistance

The Office of Pollution Prevention, a voluntary, non-regulatory technical assistance program within the Virginia Department of Environmental Quality, is available to assist your facility with its pollution prevention efforts. Services of OPP include:

- Access to engineers trained to assist you in evaluating your processes and needs
- Access to up-to-date information on new and innovative pollution prevention techniques
- P2 training and workshops targeted at specific waste-generating activities
- Industry-specific reports and fact sheets researched and written by Office of Pollution Prevention staff for the benefit of Virginia-based facilities
- On-site assistance in the form of APollution Prevention Opportunity Assessments@

(over)

For more information, please contact:

Office of Pollution Prevention
Virginia Department of Environmental Quality
PO Box 10009
Richmond, VA 23240 - 0009
804-698-4235/4545
http://www.deq.state.va.us/p2

More Resources for Pollution Prevention Information:

Virginia Department of Environmental Quality's Small Business Assistance Office
http://www.deq.state.va.us/osba/smallbiz.html
Environmental Protection Agency's Pollution Prevention Division
http://www.epa.gov/opptintr/p2home
Waste Reduction Resource Center
http://wrrc.p2pays.org
State and Territorial Air Pollution Prevention Administration, Association of Local Air Pollution Control Officials (STAPPA/ALAPCO)
http://www.4cleanair.org
EPA EnviroSense: Assists in Pollution Prevention implementation
http://es.epa.gov
Department of Energy's Office of Pollution Prevention
http://em.doe.gov/wastemin
Technology Transfer Network Bulletin Board
http://www.epa.gov/ttn

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

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. 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

Commissioner of the Revenue Letter

Regional DEQ Letterhead

DATE

Commissioner of the Revenue
Address

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) According to your current permit, your complete application for reissuance is due at least 180 days before the permit expires. In the event that your VPDES permit expires as a result of your failure to reapply in a timely manner, your facility will be considered as "discharging without a valid VPDES permit", which is a violation of the State Water Control Law and state regulations.

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:_____

C. Draft Permit Correspondence
Draft Permit Transmittal Letter to EPA

Regional Letterhead
Date

[**Current VA permit reviewer's name**] (3WP12)
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: VPDES Permit No. VA00**00000 Facility Name**
[Choose one: **Major Permit for review and approval OR Minor permit associated with a 303(d) listed segment**]

Dear Sir:

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, this is to advise that the Board intends to **issue/reissue/modify** the referenced permit. Attached are copies of the application (**or modification request**), Fact Sheet, draft permit, and other pertinent documentation.

Please send any comments and/or objections regarding this permit to the Virginia Department of Environmental Quality, at the following address:

Virginia DEQ
Office of Water Permit Programs
P.O. Box 10009
Richmond, Virginia 23240

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.

Sincerely,

[Permit Writer]

Enclosures:
Draft VPDES Permit
Draft Fact Sheet
Application

Cc: OWPP

(*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.)*

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 _____

Water Quality Standards Variance Form

Documentation that water quality standards variance or water effect ratio procedure was duly processed according to state law.

- 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

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

Draft Permit/PN Transmittal Letter to Owner

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. Please complete, sign, and return the attached authorization form which will allow us to mail the notice to the newspaper and allow the newspaper to bill you for the public notice.

2. A minimum of 30 days will be allowed for public response following the date of the first public notice. 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.

Please return the Public Notice Authorization as soon as possible so that we can continue processing your permit. If you have not submitted the authorization 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.]

[**For proposed facilities:** If development of the 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, you will also be 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 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 Authorization Form

AUTHORIZATION TO BILL APPLICANT FOR A PUBLIC NOTICE

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 the:

[**Insert Newspaper name here**]

Agent/Department to be billed: _____

_____

Applicant's Address: _____

_____

_____

Agent's Telephone No: _____

Authorizing Agent: _____
Signature

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

ATTENTION PERMITTEE: PLEASE COMPLETE THIS FORM AND RETURN IT WITHIN 14 DAYS TO [REGIONAL OFFICE ADDRESS]

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) Add the first public notice issue date to the public notice;

2) Publish it in the legal section in the smallest print possible; and

3) Forward the bill for your services to:

[**Facility Name and Address**]

4) 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

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

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 the 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, you will also be 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

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

Dear Sir:

This letter transmits a copy of the VPDES draft permit and supporting documentation for your review. 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.**] A Discharge Monitoring Report (DMR) form is included with the permit. Please make additional copies of the DMR for future use. The first DMR for the month of [**month**] is due by [**date**]. Please send DMRs to:

Regional Office Address

Please reference the effluent limits in your permit and report monitoring results on the DMRs to the same number of significant digits as are included in the permit limit for the parameter.

[**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 proposed facilities:** If development of the 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, you will also be 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.]

[**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 § 1.23(b) of the Board's Procedural Rule No. 1. 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: OWPP
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		
	OWPP	Copy	Copy	Copy	Copy	Copy
	EPA	Copy	Copy	Copy	Copy	Copy
	RO Enforce.	Copy	Copy			
	Regional File	Copy	Copy	Original	Original	Original
	Other					

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: I (We) hereby agree to the transfer of ownership modification to the referenced VPDES Permit.

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

Signed: _____ Date: _____

Printed Name: _____ Title: _____

Address: _____

_____

NEW OWNER: 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.

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.

F. Termination Correspondence

Intent to Terminate Letter

Regional Letterhead

Date

Facility Contact
Facility Name
Address

RE: Termination of VPDES Permit No. VA00_____

Dear :

We intend to 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 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 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 § 62.1-44.15(5) of the State Water Control Law for the following reasons:

[**Provide reason for Termination -- Refer to Permit Manual, Section V for the causes 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.

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.

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 § 1.23 (b) of the Board's Procedural Rule No. 1. 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 **(muni only)**

SECTION IN -- INDUSTRIAL

TABLE OF CONTENTS

A. NPDES PERMIT RATING WORK SHEET 1

1. DOCUMENTATION 1
2. WORK SHEET SUPPLEMENTAL INSTRUCTIONS 1

NPDES PERMIT RATING WORK SHEET 3

B. FEDERAL EFFLUENT GUIDELINES 40

C. FACT SHEET 41

D. PERMIT FORMAT 53

1. COVER PAGE 53
2. PART I A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS 54
3. PART II, PERMIT BOILERPLATE 55

E. BACTERIA AND CHLORINE LIMITATIONS/PROCEDURES 63

1. LIMIT DEVELOPMENT 63
2. ALTERNATE DISINFECTION 65

F. INDUSTRIAL SPECIAL CONDITIONS 66

G. STORM WATER DISCHARGES 76

1. EFFLUENT LIMITS, COMPLIANCE MONITORING AND ANALYTICAL MONITORING 76
2. STORM WATER MANAGEMENT EVALUATION 84
3. GENERAL STORM WATER SPECIAL CONDITIONS 86
4. GENERAL STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS 89
5. SECTOR-SPECIFIC STORM WATER REQUIREMENTS 95

H. STANDARD PERMIT DEVELOPMENT 140

1. COIN OPERATED LAUNDRIES 140
2. PETROLEUM STORAGE AND TRANSPORTATION 142
3. PULP AND PAPER MILLS 146
4. SHIPYARDS 153
5. WATER TREATMENT PLANTS 163
6. WOOD PRESERVING OPERATIONS 166

I. SAMPLING 170

1. INTRODUCTION 170
2. GENERAL GUIDANCE IN EXERCISING THE CASE-BY-CASE APPROACH 170
3. SAMPLE TYPE 170
4. REPORTING INSTRUCTIONS 171
5. MONITORING REDUCTIONS FOR REISSUANCES 171
6. ALTERNATE DISINFECTION - BACTERIA MONITORING FREQUENCIES 173

J. NUTRIENT ENRICHED WATERS PROCEDURES 174

K. BYPASS POINT SOURCES 175

SECTION IN -- INDUSTRIAL

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 OWPP 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 OWPP. If a major facility is changed and no longer qualifies as a major, the RO should forward a copy of that work sheet to OWPP 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 OWPP 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.

SECTION IN -- INDUSTRIAL

NPDES PERMIT RATING WORK SHEET

? Regular Addition
? DiscretionaryAddition
? 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

SECTION IN – INDUSTRIAL

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 → → YES→ Type I

↓ NO

Does discharge contain only process → → → YES→ Type II

↓ NO

Does discharge contain neither noncontact cooling water nor process → YES→ Type III

↓ NO

Is process wastewater flow greater than 1 → → → YES→ Type II

↓ NO

Is process wastewater flow greater than 10% of the total → → YES→ Type II

↓ NO

Is noncontact cooling water greater than 90% of the total → → YES→ Type I

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

SECTION IN – INDUSTRIAL

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	V	BENTONITE	1	1	0
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AA	FIRE CLAY	1	1	0
1459	CLAY, CERAMIC & REFRACTORY MATERIALS		NR	FULLER'S EARTH	1	1	99
1455	KAOLIN AND BALL CLAY	436	AG	KAOLIN	1	1	1
1455	KAOLIN AND BALL CLAY	436	AH	BALL CLAY	1	1	2
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AI	FELDSPAR	1	1	5
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AC	KYANITE	1	1	2
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AD	SHALE AND COMMON CLAY	1	1	3
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	AE	APLITE	1	1	4
1459	CLAY, CERAMIC & REFRACTORY MATERIALS	436	W	MAGNESITE	1	1	1
1459	CLAY, CERAMIC & REFRACTORY MATERIALS		NR	OTHER CLAY, CERAMIC & REFR MINERALS	1	1	99
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	J	BARITE	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	K	FLUORSPAR	1	1	0
1474	POTASH, SODA AND BORATE MINERALS	436	L	SALINES FROM BRINE LAKE	1	1	1
1474	POTASH, SODA AND BORATE MINERALS	436	M	POTASH	1	1	3
1474	POTASH, SODA AND BORATE MINERALS	436	N	BORAX	1	1	2
1474	POTASH, SODA AND BORATE MINERALS	436	O	SODIUM SULFATE	1	1	4
1474	POTASH, SODA AND BORATE MINERALS		NR	OTHER POTASH AND BORATE MINERALS, NR	1	1	99
1474	POTASH, SODA AND BORATE MINERALS	436	P	TRONA	1	1	5
1475	PHOSPHATE ROCK	436	R	PHOSPHATE ROCK	6	6	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	Q	ROCK SALT	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING,NEC	436	S	FRASCH SULFER	1	1	0
1479	CHEMICAL & FERTILIZER MINERAL MINING	436	T	MINERAL PIGMENTS	1	1	1
1479	CHEMICAL & FERTILIZER MINERAL MINING	436	U	LITHIUM	1	1	2
1479	CHEMICAL & FERTILIZER MINERAL MINING		NR	OTHER CHEMICAL/FERTILIZER MINERALS	1	1	99
1481	NONMETALLIC MINERALS (EXCEPT FUELS) SERVICE		NR		1	1	99
1499	MISC NONMETALLIC MINERALS, NEC	436	E	GYPSUM	1	1	0
1499	MISC NONMETALLIC MINERALS, NEC	436	AJ	TALC, STEATITE, SOAPSTONE AND PYROPHYLLITE	1	1	0
1499	MISC NONMETALLIC MINERALS, NEC	436	G	ASBESTOS AND WOLLASTONITE	1	1	2
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

SECTION IN – INDUSTRIAL

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	F	CANNED AND PRESERVED FRUITS	1	1	2
2034	DRIED & DEHYDRATED FRUITS, VEGS	407	G	CANNED AND PRESERVED VEGETABLES	1	1	3
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	F	CANNED AND PRESERVED FRUITS	1	1	1
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	G	CANNED AND PRESERVED VEGETABLES	1	1	2
2035	PICKLED FRUITS & VEG., VEG. SAUCES	407	H	CANNED AND MISC. SPECIALTIES	1	1	3
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	A	APPLE JUICES	1	1	1
2037	FROZEN FRUITS, FRUIT JUICES & VEGS	407	G	CANNED AND PRESERVED VEGETABLES	1	1	6
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2091	CANNED AND CURED FISH AND SEAFOODS	408	N	TUNA PROCESSING	1	1	13
2091	CANNED AND CURED FISH AND SEAFOODS	408	Z	AT/GLF COAST HAND-SHUCKED OYSTER PROCESS	1	1	24
2091	CANNED AND CURED FISH AND SEAFOODS	408	O	ALASKAN MECHANIZED SALMON PROCESSING	1	1	15
2091	CANNED AND CURED FISH AND SEAFOODS	408	AA	STEAMED AND CANNED OYSTER PROCESSING	1	1	25
2091	CANNED AND CURED FISH AND SEAFOODS	408	T	ALASKAN BOTTOM FISH PROCESSING	1	1	18
2091	CANNED AND CURED FISH AND SEAFOODS	408	AB	SARDINE PROCESSING	1	1	26
2091	CANNED AND CURED FISH AND SEAFOODS	408	V	NON-ALASKAN MECH BOTTOM FISH PROCESSING	1	1	20
2091	CANNED AND CURED FISH AND SEAFOODS	408	AC	ALASKAN SCALLOP PROCESSING	1	1	27
2091	CANNED AND CURED FISH AND SEAFOODS	408	L	SO NON-BREADED SHRIMP PROCESS/CNTG STS	1	1	11
2091	CANNED AND CURED FISH AND SEAFOODS	408	S	WEST COAST MECHANIZED SALMON PROCESSING	1	1	17
2091	CANNED AND CURED FISH AND SEAFOODS	408	U	NON-ALASKAN CONV BOTTOM FISH PROCESSING	1	1	19
2091	CANNED AND CURED FISH AND SEAFOODS	408	J	REMOTE ALASKAN SHRIMP PROCESSING	1	1	9
2091	CANNED AND CURED FISH AND SEAFOODS	408	P	ALASKAN HAND-BUTCHERED SALMON PROCESSING	1	1	14
2091	CANNED AND CURED FISH AND SEAFOODS	408	AD	NON-ALASKAN SCALLOP PROCESSING	1	1	28
2091	CANNED AND CURED FISH AND SEAFOODS	408	AE	ALASKAN HERRING FILLET PROCESSING	1	1	29
2091	CANNED AND CURED FISH AND SEAFOODS	408	AF	NON-ALASKAN HERRING FILLET PROCESSING	1	1	30
2091	CANNED AND CURED FISH AND SEAFOODS	408	AG	ABALONE PROCESSING	1	1	31
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	A	FARM RAISED CATFISH PROCESSING	1	1	1
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	Y	PAC COAST HAND-SHUCKED OYSTER PROCESSING	1	1	24
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	Z	AT/GLF COAST HAND-SHUCKED OYSTER PROCESS	1	1	25
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	C	MECHANIZED BLUE CRAB PROCESSING	1	1	3
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AB	SARDINE PROCESSING	1	1	26
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	E	REMOTE ALASKAN CRAB MEAT PROCESSING	1	1	5
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	AC	ALASKAN SCALLOP PROCESSING	1	1	27
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	R	WEST COAST BUTCHERED SALMON PROCESSING	1	1	17
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	T	ALASKAN BOTTOM FISH PROCESSING	1	1	19
2092	FRESH OR FROZEN PACKAGED FISH AND SEAFOOD	408	V	NON-ALASKAN MECH BOTTOM FISH PROCESSING	1	1	21
2095	ROASTED COFFEE		NR		1	1	99
2097	MANUFACTURED ICE		NR		1	1	99
2098	MACARONI, SPAGHETTI, VERMICELLI & NOODLES		NR		1	1	99
2099	FOOD PREPARATIONS, NEC		NR		1	1	99
2096	POTATO CHIPS, CORN CHIPS		NR		1	1	99
2066	CHOCOLATE & COCOA PRODUCTS		NR		1	1	99
2111	CIGARETTES		NR		1	1	99
2121	CIGARS		NR		1	1	99
2131	TOBACCO (CHEWING AND SMOKING) AND SNUFF		NR		1	1	99
2141	TOBACCO STEMMING AND REDRYING		NR		1	1	99
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	C	LOW WATER USE PROCESSING	2	9	1
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	C	LOW WATER USE PROCESSING	2	9	2
2211	BROAD WOVEN FABRIC MILLS, COTTON	410	D	WOVEN FABRIC FINISHING	9	10	3
2221	BROAD WOVEN FABRIC MILLS, SYNTHETICS	410	D	WOVEN FABRIC FINISHING	9	10	3
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2299	TEXTILE GOODS NEC	410	C	LOW WATER USE PROCESSING	2	9	2
2311	MEN'S & BOY'S SUITS & COATS		NR		1	1	99
2321	MEN'S & BOY'S SHIRTS (EXCEPT WORK)		NR		1	1	99
2322	MEN'S & BOY'S UNDERWEAR		NR		1	1	99
2323	MENS & BOY'S NECKWEAR		NR		1	1	99
2325	MEN'S & BOY'S SEPARATE TROUSERS		NR		1	1	99
2326	MEN'S & BOY'S WORK CLOTHING		NR		1	1	99
2329	MEN'S & BOY'S CLOTHING, NEC		NR		1	1	99
2331	WOMEN'S, MISSES & JUNIORS' BLOUSES & SHIRTS		NR		1	1	99
2335	WOMEN'S, MISSES' & JUNIORS' DRESSES		NR		1	1	99
2337	WOMEN'S, MISSES' & JUNIORS' SUITS, SKIRTS		NR		1	1	99
2339	WOMEN'S, MISSES' & JUNIORS OUTERWEAR, NEC		NR		1	1	99
2341	WOMEN'S, MISSES', CHILDREN'S & INFANTS' UNDERWEAR & NIGHTWEAR		NR		1	1	99
2342	BRASSIERS, GIRDLES & ALLIED GARMENTS		NR		1	1	99
2353	HATS, CAPS & MILLINERY		NR		1	1	99
2361	GIRL'S, CHILDREN'S & INFANT'S DRESSES		NR		1	1	99
2369	GIRL'S, CHILDREN'S & INFANT'S OUTERWEAR		NR		1	1	99
2371	FUR GOODS		NR		1	1	99
2381	DRESS & WORK GLOVES, EXCEPT KNIT & ALL-LEATHER		NR		1	1	99
2384	ROBES & DRESSING GOWNS		NR		1	1	99
2385	WATERPROOF OUTERWEAR		NR		1	1	99
2386	LEATHER & SHEEP-LINED CLOTHING		NR		1	1	99
2387	APPAREL BELTS		NR		1	1	99
2389	APPAREL & ACCESSORIES, NEC		NR		1	1	99
2391	CURTAINS & DRAPERIES		NR		1	1	99
2392	HOUSEFURNISHINGS, EXCEPT CURTAINS & DRAPERIES		NR		1	1	99
2393	TEXTILE BAGS		NR		1	1	99
2394	CANVAS & RELATED PRODUCTS		NR		1	1	99
2395	PLEATING, DECORATIVE & NOVELTY STITCHING		NR		1	1	99
2396	AUTOMOTIVE TRIMMINGS, APPAREL FINDINGS		NR		1	1	99
2397	SCHIFFLI MACHINE EMBRODERIES		NR		1	1	99
2399	FABRICATED TEXTILE PRODUCTS, NEC		NR		1	1	99
2411	LOGGING	429	I	WET STORAGE	1	1	1
2411	LOGGING	429	U	LOG WASHING	1	1	2
2411	LOGGING, NEC		NR		1	1	99
2411	SAWMILLS & PLANNING MILLS, GENERAL				3	3	1
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	A	BARKING	1	1	2
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	K	SAWMILLS AND PLANNING MILLS	1	1	3
2421	SAWMILLS & PLANNING MILLS, GENERAL	429	L	FINISHING	1	1	4
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	A	BARKING	1	1	1
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	I	WET STORAGE	1	1	2
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	J	LOG WASHING	1	1	3
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	K	SAWMILLS AND PLANNING MILLS	1	1	4
2426	HARDWOOD DIMENSION & FLOORING MILLS	429	L	FINISHING	1	1	5
2429	SPECIAL PRODUCT SAWMILLS NEC	429	I	WET STORAGE	1	1	1
2429	SPECIAL PRODUCT SAWMILLS NEC	429	J	LOG WASHING	1	1	2
2429	SPECIAL PRODUCT SAWMILLS NEC	429	K	SAWMILLS AND PLANNING MILLS	1	1	3
2429	SPECIAL PRODUCT SAWMILLS NEC	429	L	MILLWORK	1	1	4
2431	MILLWORK	429	K	SAWMILLS AND PLANNING MILLS	1	1	1
2431	MILLWORK	429	L	MILLWORK	1	1	2
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2491	WOOD PRESERVING	429	F	WOOD PRESERVING	10	10	3
2493	RECONSTITUTED WOOD PRODUCTS	429	M	PARTICLEBOARD	3	3	0
2493	WOOD PRODUCTS NEC		NR		3	3	99
2499	WOOD PRODUCTS NEC	429	M	PARTICLEBOARD	1	1	1
2499	WOOD PRODUCTS NEC	429	A	BARKING	1	1	2
2499	WOOD PRODUCTS NEC	429	D	HARDBOARD - DRY PROCESS	1	1	3
2499	WOOD PRODUCTS NEC	429	E	HARDBOARD - WET PROCESS	1	7	4
2499	WOOD PRODUCTS NEC	429	I	WET STORAGE	1	1	5
2499	WOOD PRODUCTS NEC	429	J	LOG WASHING	1	1	6
2499	WOOD PRODUCTS NEC	429	L	FINISHING	1	1	7
2511	WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2511	WOOD HOUSEHOLD FURNITURE, EXCEPT UPHOLSTERED	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2512	WOOD HOUSEHOLD FURNITURE, UPHOLSTERED	429	Q	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2512	WOOD HOUSEHOLD FURNITURE, UPHOLSTERED	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2514	METAL HOUSEHOLD FURNITURE	433	A	METAL FINISHING	1	9	1
2514	METAL HOUSEHOLD FURNITURE		NR	NO ELECTROPLATING	1	1	99
2515	MATTRESSES AND BEDSPRINGS		NR		1	1	99
2517	WOOD TV, RADIO, PHONOGRAPH & SEWING MACHINE CABINETS	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2517	WOOD TV, RADIO, PHONOGRAPH & SEWING MACHINE CABINETS	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2519	HOUSEHOLD FURNITURE, NEC	429	P	WOOD FURN & FIXTURE PROD W WATER	1	1	2
2519	HOUSEHOLD FURNITURE, NEC	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2521	WOOD OFFICE FURNITURE	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2521	WOOD OFFICE FURNITURE	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
2522	METAL OFFICE FURNITURE	433	A	METAL FINISHING	1	9	0
2522	METAL OFFICE FURNITURE		NR	NO ELECTROPLATING	1	1	99
2531	PUBLIC BUILDING AND RELATED FURNITURE	429	O	WOOD FURN & FIXTURE PROD W/O WATER	1	1	1
2531	PUBLIC BUILDING AND RELATED FURNITURE	429	P	WOOD FURN & FIXTURE PROD W/WATER	1	1	2
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	K	DISSOLVING SULFITE PULP	10	10	9
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	P	SODA	4	5	14
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	U	PAPER GRADE SULFITE (DRUM WASH)	8	8	15
2611	PAPER MILLS EXCEPT BUILDING PAPER	430	V	UNBLEACHED KRAFT AND SEMI-CHEMICAL	10	10	16
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	A	UNBLEACHED KRAFT	10	10	17
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	B	SEMI-CHEMICAL	1	5	18
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	D	UNBLEACHED KRAFT-NTRL SULFITE-SEMI-CHEM	10	10	19
2621	PAPER MILLS EXCEPT BUILDING PAPER	430	U	PAPERGRADE SULFITE (DRUM WASH)	8	8	30
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 &		NR		3	3	99

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
	SCREEN						
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2819	INORGANIC CHEMICALS NEC	415	U	SULFURIC ACID	3	3	144
2819	INORGANIC CHEMICALS NEC	415	Z	BARIUM CARBONATE	3	3	15
2819	INORGANIC CHEMICALS NEC	415	AB	BORIC ACID	6	6	20
2819	INORGANIC CHEMICALS NEC	415	S	SODIUM SILICATE	3	3	129
2819	INORGANIC CHEMICALS NEC	415	X	AMMONIUM CHLORIDE	3	3	9
2819	INORGANIC CHEMICALS NEC	415	AM	FERROUS SULFATE	3	3	46
2819	INORGANIC CHEMICALS NEC	415	AM	FLUORINE	3	3	48
2819	INORGANIC CHEMICALS NEC	415	AO	HYDROGEN	3	3	53
2819	INORGANIC CHEMICALS NEC	415	AP	HYDROGEN CYANIDE	1	7	54
2819	INORGANIC CHEMICALS NEC	415	AQ	IODINE	3	3	61
2819	INORGANIC CHEMICALS NEC		NR	SILVER OXIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AR	LEAD MONOXIDE	3	3	64
2819	INORGANIC CHEMICALS NEC		NR	SODA ALUM	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AT	MANGANESE SULFATE	3	3	71
2819	INORGANIC CHEMICALS NEC		NR	SODIUM ANTIMONIATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AV	NITRIC ACIDE (STRONG)	3	3	80
2819	INORGANIC CHEMICALS NEC	415	BN	SODIUM CHLORATE	10	10	120
2819	INORGANIC CHEMICALS NEC	415	AY	POTASSIUM IODIDE	3	3	98
2819	INORGANIC CHEMICALS NEC		NR	SODIUM COMPOUNDS, INORGANIC	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BA	SILVER NITRATE	6	6	115
2819	INORGANIC CHEMICALS NEC		NR	SODIUM CYANIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BC	SODIUM FLUORIDE	3	3	125
2819	INORGANIC CHEMICALS NEC		NR	STANNIC AND STANNOUS CHLORIDE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	BE	SODIUM HYDROSULFITE	3	3	126
2819	INORGANIC CHEMICALS NEC		NR	STRONTIUM CARBONATE (PRECIPITATED/OXIDE)	6	6	99
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2819	INORGANIC CHEMICALS NEC	415	AU	NICKEL SALTS (NICKEL CARBONATE)	8	9	172
2819	INORGANIC CHEMICALS NEC		NR	PERCHLORIC ACID	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS (COPPER CHLORIDE)	10	10	173
2819	INORGANIC CHEMICALS NEC		NR	POTASH ALUM	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS(COPPER IODIDE)	10	10	174
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM ALUMINUM SULFATE	6	6	99
2819	INORGANIC CHEMICALS NEC	415	AJ	COPPER SALTS (COPPER NITRATE)	10	10	175
2819	INORGANIC CHEMICALS NEC		NR	POTASSIUM CYANIDE	6	6	99
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	B	EMULSION CRUMB RUBBER	8	8	1
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	C	SOLUTION CRUMB RUBBER	8	8	2
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)	428	D	LATEX RUBBER	8	8	3
2822	SYNTHETIC RUBBER (VULCANIZABLE ELASTOMER)		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2823	CELLULOSIC MAN-MADE FIBERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2823	CELLULOSIC MAN-MADE FIBERS	416	B	RAYON FIBERS	8	9	1
2823	CELLULOSIC MAN-MADE FIBERS	416	C	OTHER FIBERS	8	9	2
2824	SYNTHETIC ORGANIC FIBERS, EXCEPT CELLULOSIC	416	C	OTHER FIBERS	8	9	0
2824	SYNTHETIC ORGANIC FIBERS, EXCEPT CELLULOSIC		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2835	BIOLOGICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	1
2835	BIOLOGICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	2
2836	BIOLOGICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	3
2836	BIOLOGICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	4
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	A	FERMENTATION PRODUCTS	6	8	3
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	B	EXTRACTION PRODUCTS	6	8	2
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS	439	C	CHEMICAL SYNTHESIS PRODUCTS	6	8	1
2833	MEDICINAL CHEMICALS & BOTANICAL PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2834	PHARMACEUTICAL PREPARATIONS	439	D	MIXING/COMPOUNDING-FORMULATION	6	8	0
2834	PHARMACEUTICAL PREPARATIONS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	A	SOAP MANUFACTURING BY BATCH KETTLE	5	5	12
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	B	FATTY ACID MANUFACTURING BY FATSPLITTING	5	5	1
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	C	SOAP MANUFACTURING BY FATTY ACID NEUTRALIZATION	5	5	13
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	D	GLYCERINE CONCENTRATION	5	5	2
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	P	MANUFACTURING OF LIQUID DETERGENTS	5	5	9
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	E	GLYCERINE DISTILLATION	5	5	3
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	G	MANUFACTURING OF BAR SOAPS	5	5	4
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	H	MANUFACTURING OF LIQUID SOAPS	5	5	8
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	O	MANUFACTURING OF SPRAY DRIED DETERGENTS	5	5	11
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	F	MANUFACTURING OF SOAP FLAKES & POWDERS	5	5	10
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	Q	MANUFACTURING OF DETERGENTS BY DRY BLEND	5	5	6
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	R	MANUFACTURING OF DRUM DRIED DETERGENTS	5	5	7
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS	417	S	MANUFACTURING OF DETERGEN BAR & CAKES	5	5	5
2841	SOAP & OTHER DETERGENTS, EXC SPECIALTY CLEANERS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
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 &		NR	OTHER PAINTS	8	8	99

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
	ALLIED PRODUCTS						
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3021	RUBBER AND PLASTICS FOOTWEAR	428	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	4
3021	RUBBER AND PLASTICS FOOTWEAR	428	F	MD-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	3
3021	RUBBER AND PLASTICS FOOTWEAR	428	G	LG-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	6	6	1
3021	RUBBER AND PLASTICS FOOTWEAR	428	J	LATEX-DIPPED, MOLDED, EXTRUDED GOODS	5	5	2
3021	RUBBER AND PLASTICS FOOTWEAR		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3021	RUBBER AND PLASTICS FOOTWEAR	463	A	CONTACT COOLING & HEATING WATER (PLASTICS)	4	6	5
3021	RUBBER AND PLASTICS FOOTWEAR	463	B	CLEANING (PLASTICS)	5	6	6
3069	RECLAIMED RUBBER	428	H	WET DIGESTION RECLAIM	8	8	2
3069	RECLAIMED RUBBER	428	I	PAN, DRY DIGESTION & MECHANICAL RECLAIM	8	8	1
3069	RECLAIMED RUBBER		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3052	RUBBER & PLASTICS HOSE AND BELTING	428	E	SM-SIZED GEN MOLDED, EXTR & FABR RUBBER PLANT	5	5	3
3052	RUBBER & PLASTICS HOSE AND BELTING	428	F	MD-SIZED GEN MOLDED, EXTR 7 FABR RUBBER PLANT	6	6	2
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

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3087	CUSTOM COMPOUNDING OF PURCHASED PLASTIC RESINS	463	A	CONTACT COOLING & HEATING WATER	4	6	20
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	W	MAGNESITE	1	1	2
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	X	DIATOMITE	1	1	3
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AG	KAOLIN	1	1	4
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AJ	TALC, STEATITE, SOAPSTONE & PYROPHYLLITE	1	1	5
3295	MINERALS & EARTHS, GROUND OR OTHERWISE	436	AL	GRAPHITE	1	1	6
3295	MINERALS & EARTHS, GROUND OR OTHERWISE		NR	OTHER MINERALS & EARTHS	1	1	99
3296	MINERAL WOOL	426	A	INSULATION FIBERGLASS	1	1	1
3296	MINERAL WOOL		NR	OTHER MINERAL WOOLS	1	1	99
3299	NONMETALLIC MINERAL PRODUCTS, NEC		NR		1	1	99
3312	BLAST FURNACES, STEEL WORKS & ROLLING MI	420	A	COKEMAKING	10	10	6
3312	BLAST FURNACES, STEEL WORKS & ROLLING MI	420	B	SINTERING	9	9	23
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	C	IRONMAKING	10	10	5
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	D	STEELMAKING	10	10	1
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	E	VACUUM DEGASSING	3	9	24
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	F	CONTINUOUS CASTING	1	7	10
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	G	HOT FORMING	1	3	16
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	H	SALT BATH DESCALING	9	10	22
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	J	COLD FORMING	10	10	7
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	K	ALKALINE CLEANING	8	8	9
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	L	HOT COATING	10	10	13
3312	BLAST FURNACES, STEEL WORKS & ROLLING MILLS	420	I	ACID PICKLING	10	10	20
3313	ELECTROMETALLURGICAL PRODUCTS	420	D	STEELMAKING	10	10	2
3313	ELECTROMETALLURGICAL PRODUCTS	420	F	CONTINUOUS CASTING	1	7	3
3313	ELECTROMETALLURGICAL PRODUCTS		NR	NON-CONTACT COOLING WATER ONLY	1	1	99
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	421	K	PRIMARY COLUMSIUM-TANTALUM	10	10	13

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
	NONFERROUS METALS EXCEPT CU & AL						
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3341	SECONDARY SMELT & REFIN OF NONFERROUS METALS	421	F	SECONDARY COPPER	1	8	7
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3398	METAL HEAT TREATING	433	A	METAL FINISHING	1	9	0
3399	PRIMARY METAL PRODUCTS, NEC	433	A	METAL FINISHING	1	9	1
3399	PRIMARY METAL PRODUCTS, NEC	471	K	METAL POWDERS	7	9	2
3399	PRIMARY METAL PRODUCTS, NEC		NR	OTHER PRODUCTS	1	1	99
3411	METAL CANS	465	D	CAN MAKING	1	7	0
3412	METAL BARRELS, DRUMS AND PAILS	433	A	METAL FINISHING	1	9	0
3412	METAL BARRELS, DRUMS AND PAILS		NR	DRUM RECYCLING	8	8	99
3412	METAL BARRELS, DRUMS AND PAILS		NR	NO ELECTROPLATING	1	1	99
3421	CUTLERY	433	A	METAL FINISHING	1	9	0
3421	CUTLERY		NR	NO ELECTROPLATING	1	1	99
3423	HAND AND EDGE TOOLS, NEC	433	A	METAL FINISHING	1	9	0
3423	HAND AND EDGE TOOLS, NEC		NR	NO ELECTROPLATING	1	1	99
3425	HAND SAWS AND SAW BLADES	433	A	METAL FINISHING	1	9	1
3429	HARDWARE, NEC	433	A	METAL FINISHING	1	9	0
3429	HARDWARE, NEC		NR	NO ELECTROPLATING	1	1	99
3431	METAL SANITARY WARE	466	B	CAST IRON BASIS MATERIAL	10	10	0
3432	PLUMBING FIXTURE FITTINGS & TRIM		NR	NO ELECTROPLATING	1	1	99
3432	PLUMBING FIXTURE FITTINGS & TRIM	433	A	METAL FINISHING	1	9	1
3432	PLUMBING FIXTURE FITTINGS & TRIM	468	A	COPPER FORMING	1	9	2
3567	HEATING EQUIPMENT, EXCEPT ELECTRIC	433	A	METAL FINISHING	1	9	1
3567	HEATING EQUIPMENT, EXCEPT ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC	433	A	METAL FINISHING	1	9	2
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3441	FABRICATED STRUCTURAL METAL		NR		1	1	99
2431	METAL DOORS, SASH AND TRIM				1	1	1
3442	METAL DOORS, SASH AND TRIM	433	A	METAL FINISHING	1	9	2
3442	METAL DOORS, SASH AND TRIM		NR	NO ELECTROPLATING	1	1	99
3443	FABRICATED PLATE WORK (BOILER SHOPS)		NR		1	1	99
3444	SHEET METAL WORK		NR		1	1	99
3449	SHEET METAL WORK		NR		1	1	99
3446	ARCHITECTURAL METAL WORK		NR		1	1	99
3448	PREFABRICATED METAL BUILDINGS		NR		1	1	99
3449	MISCELLANEOUS METAL WORK		NR		1	1	99
3451	SCREW MACHINE PRODUCTS	433	A	METAL FINISHING	1	9	0
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3489	ORDINANCE AND ACCESSORIES, NEC	433	A	METAL FINISHING	1	9	0
3489	ORDINANCE AND ACCESSORIES, NEC		NR	NO ELECTROPLATING	1	1	99
3493	STEEL SPRINGS, EXCEPT WIRE	433	A	METAL FINISHING	1	9	0
3493	STEEL SPRINGS, EXCEPT WIRE		NR	NO ELECTROPLATING	1	1	99
3492	VALVES & HOSE FITTINGS	433	A	METAL FINISHING	1	9	1
3491	INDUSTRIAL VALVES	433	A	METAL FINISHING	1	9	2
3494	VALVES AND PIPE FITTINGS, NEC	433	A	METAL FINISHING	1	9	3
3494	VALVES AND PIPE FITTINGS, NEC		NR	NO ELECTROPLATING	1	1	99
3494	VALVES AND PIPE FITTINGS, NEC		NR	NO ELECTROPLATING	1	1	99
3492	VALVES & HOSE FITTINGS		NR	NO ELECTROPLATING	1	1	99
3495	WIRE SPRINGS	433	A	METAL FINISHING	1	9	0
3495	WIRE SPRINGS		NR	NO ELECTROPLATING	1	1	99
3496	MISC. FABRICATED WIRE PRODUCTS	433	A	METAL FINISHING	1	9	0
3496	MISC. FABRICATED WIRE PRODUCTS		NR	NO ELECTROPLATING	1	1	99
3497	METAL FOIL AND LEAF	468	A	COPPER FORMING	1	9	2
3497	METAL FOIL AND LEAF	471	E	PRECIOUS METALS FORMING	1	10	7
3497	METAL FOIL AND LEAF	465	C	ALUMINUM BASIS MATERIAL COATING	5	5	1
3497	METAL FOIL AND LEAF	471	B	LEAD/TIN/BISMUTH FORMING	9	10	4
3497	METAL FOIL AND LEAF	471	C	MAGNESIUM FORMING	5	5	5
3497	METAL FOIL AND LEAF	471	D	NICKEL-COBALT FORMING	8	9	6
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3552	TEXTILE MACHINERY		NR	NO ELECTROPLATING	1	1	99
3553	WOODWORKING MACHINERY	433	A	METAL FINISHING	1	9	0
3553	WOODWORKING MACHINERY		NR	NO ELECTROPLATING	1	1	99
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3612	TRANSFORMERS	433	A	METAL FINISHING	1	9	0
3612	TRANSFORMERS		NR	NO ELECTROPLATING	1	1	99
3612	TRANSFORMERS		NR	DRY TRANSFORMERS	8	8	99
3625	RELAYS AND INDUSTRIAL CONTROLS	433	A	METAL FINISHING	1	9	0
3625	RELAYS AND INDUSTRIAL CONTROLS		NR	NO ELECTROPLATING	1	1	99
3613	SWITCHGEAR AND SWITCHBOARD APPARATUS		NR	NO ELECTROPLATING	1	1	99
3613	SWITCHGEAR AND SWITCHBOARD APPARATUS	433	A	METAL FINISHING	1	9	0
3621	MOTORS AND GENERATORS	433	A	METAL FINISHING	1	9	0
3621	MOTORS AND GENERATORS		NR	NO ELECTROPLATING	1	1	99
3548	WELDING APPARATUS, ELECTRIC		NR	NO ELECTROPLATING	1	1	99
3548	WELDING APPARATUS		NR	NO ELECTROPLATING	1	1	99
3624	CARBON AND GRAPHITE PRODUCTS		NR	CARBON & GRAPHITE PRODUCTS	8	8	99
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC	433	A	METAL FINISHING	1	9	0
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC		NR	NO ELECTROPLATING	1	1	99
3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC		NR	FUEL CELLS	8	8	99
3631	HOUSEHOLD COOKING EQUIPMENT	433	A	METAL FINISHING	1	9	1
3631	HOUSEHOLD COOKING EQUIPMENT		NR	NO ELECTROPLATING	1	1	99
3631	HOUSEHOLD COOKING EQUIPMENT	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	3
3631	HOUSEHOLD COOKING EQUIPMENT	466	C	ALUMINUM BASIS MATERIAL (PORCELAIN)	10	10	2
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS	433	A	METAL FINISHING	1	9	1
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS		NR	NO ELECTROPLATING (PORCELAIN)	1	1	99
3632	HOUSEHOLD REFRIGERATORS AND FREEZERS	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	2
3633	HOUSEHOLD LAUNDRY EQUIPMENT	433	A	METAL FINISHING	1	9	1
3633	HOUSEHOLD LAUNDRY EQUIPMENT		NR	NO ELECTROPLATING (PORCELAIN)	1	1	99
3633	HOUSEHOLD LAUNDRY EQUIPMENT	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	2
3634	ELECTRIC HOUSEWARES AND FANS	433	A	METAL FINISHING	1	9	0
3634	ELECTRIC HOUSEWARES AND FANS		NR	NO ELECTROPLATING	1	1	99
3635	HOUSEHOLD VACUUM CLEANERS	433	A	METAL FINISHING	1	9	0
3635	HOUSEHOLD VACUUM CLEANERS		NR	NO ELECTROPLATING	1	1	99
3639	SEWING MACHINES	433	A	METAL FINISHING	1	9	0
3639	SEWING MACHINES		NR	NO ELECTROPLATING	1	1	99
3559	SEWING MACHINES	433	A	METAL FINISHING	1	9	0
3559	SEWING MACHINES		NR	NO ELECTROPLATING	1	1	99
3639	HOUSEHOLD APPLIANCES, NEC	433	A	METAL FINISHING	1	9	3
3639	HOUSEHOLD APPLIANCES, NEC	466	A	STEEL BASIS MATERIAL (PORCELAIN)	10	10	1
3641	ELECTRIC BULBS	433	A	METAL FINISHING	1	9	2
3641	ELECTRIC BULBS	469	D	LUMINESCENT MATERIALS	1	1	1
3643	CURRENT-CARRYING WIRING DEVICES	433	A	METAL FINISHING	1	9	0
3643	CURRENT-CARRYING WIRING DEVICES		NR	NO ELECTROPLATING	1	1	99
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3625	ELECTRONIC COMPONENTS, NEC		NR		1	1	99
3691	STORAGE BATTERIES	461	A	CADMIUM BATTERIES	5	10	14
3691	STORAGE BATTERIES	461	B	CADMIUM BATTERIES	5	5	1
3691	STORAGE BATTERIES	461	C	LEAD BATTERIES	2	9	5
3691	STORAGE BATTERIES	461	D	LECLANCHE BATTERIES	5	5	17
3691	STORAGE BATTERIES	461	E	LITHIUM BATTERIES	5	5	7
3691	STORAGE BATTERIES	461	O	MERCURY (WESTON) CELLS	5	5	11
3691	STORAGE BATTERIES	461	G	ZINC BATTERIES	10	10	4
3691	STORAGE BATTERIES	461	O	MERCURY (RUBEN) BATTERIES	5	5	10
3691	STORAGE BATTERIES	461	O	LEAD ACID RESERVE BATTERIES	5	5	6
3691	STORAGE BATTERIES	461	F	MAGNESIUM BATTERIES	5	5	9
3692	PRIMARY BATTERIES, DRY & WET	461	A	CADMIUM BATTERIES	5	10	14
3692	PRIMARY BATTERIES, DRY & WET	461	B	CALCIUM BATTERIES	5	5	1
3692	PRIMARY BATTERIES, DRY & WET	461	C	LEAD BATTERIES	2	9	5
3692	PRIMARY BATTERIES, DRY & WET	461	E	LITHIUM BATTERIES	5	5	7
3692	PRIMARY BATTERIES, DRY & WET	461	F	MAGNESIUM BATTERIES	5	5	9
3692	PRIMARY BATTERIES, DRY & WET	461	O	MERCURY (RUBEN) BATTERIES	5	5	10
3692	PRIMARY BATTERIES, DRY & WET	461	O	MERCURY (WESTON) CELLS	5	5	11
3692	PRIMARY BATTERIES, DRY & WET	461	O	LEAD ACID RESERVE BATTERIES	3	3	6
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

SECTION IN – INDUSTRIAL

1987 SIC Code	1987 Title	CFR Part	CFR Sub-Part	Sub-part Title	Human Health Toxicity Number	Total Toxicity Number	Industrial Sub-category Number
3829	MEASURING & CONTROLLING DEVICES, NEC	433	A	METAL FINISHING	1	9	4
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

SECTION IN – INDUSTRIAL

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	HYDRO ELECTRIC PWER GEN. (W/SAN. WST.)	6	6	1
4931	ELECTRIC AND OTHER SERVICES COMBINED	423	A	STEAM ELECTRIC POWER GENERATING	6	6	2
4941	WATER SUPPLY		NR		7	7	0
4952	SEWERAGE SYSTEMS		NR		1	1	0
4953	REFUSE SYSTEMS		NR	SOLID WASTE FACILITIES	7	7	1
4953	REFUSE SYSTEMS		NR	HAZARDOUS WASTE TREATMENT FACILITIES	10	10	2
4959	SANITARY SERVICES, NEC		NR		1	1	0
4961	STEAM SUPPLY		NR		1	1	0
5052	COAL & OTHER MINERALS & ORES		NR		8	8	0
5093	SCRAP & WASTE MATERIALS		NR		10	10	0
5143	DAIRY PRODUCTS	405	A	RECEIVING STATIONS	1	1	0
5169	CHEMICALS AND ALLIED PRODUCTS, NEC		NR		10	10	0
5171	PETROLEUM BULK STATIONS & TERMINALS		NR		8	8	0
5191	FARM SUPPLIES		NR		6	6	0
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	E	SMALL PROCESSOR	1	1	1
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	F	MEAT CUTTER	1	1	2
5421	MEAT AND FISH (SEAFOOD) MARKETS	432	G	SAUSAGE AND LUNCHEON MEATS PROCESSOR	1	1	3
5421	MEAT AND FISH (SEAFOOD) MARKETS		NR	OTHER MARKETS WITHOUT PROCESSING	1	1	99
7211	POWER LAUNDRIES, FAMILY AND COMMERCIAL	444	3	POWER LAUNDRIES	3	3	0
7213	LINEN SUPPLY	444	9	LINEN SUPPLY	6	6	0
7219	LAUNDRY, GARMENT SERVICES, NEC	444	5	DIAPER SERVICE	3	3	0
7215	COIN-OPERATED LAUNDRIES & DRY CLEANING	444	1	COIN-OPERATED LAUNDRIES	3	3	0
7216	DRY CLEANING PLANTS, EXCEPT RUG CLEANING	444	2	DRY CLEANING PLANTS	3	3	0
7217	CARPET & UPHOLSTERY CLEANING	444	4	CARPET & UPHOLSTERY CLEANING	3	3	0
7218	INDUSTRIAL LAUNDERERS	444	8	INDUSTRIAL LAUNDRY	6	6	0
7219	LAUNDRY, GARMENT SERVICES, NEC	444	6	LAUNDRY, GARMENT SERVICES NEC	1	1	0
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 444

C. 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 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/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

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 (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. (***If the discharge is into a 303(d) listed water (TMDL), add this sentence: "The limitations in this permit were developed in accordance with § 303(d)(4) of the Clean Water Act. Therefore, antidegradation restrictions do not apply.")***

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 WLA.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. Federal Effluent guidelines – cite CFR
2. Water Quality-based Limits: - show calculations or cite WQM plan reference
3. Best Engineering Judgement: - provide narrative rationale
4. Best Professional Judgement: - provide narrative rationale
5. Other (e.g. wasteload allocation model): - specify & document with model output or WLA from TMDL or basin plan

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 9 VAC 25-31-250*)

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 Sewerage Regulations, 9 VAC 25-60-820, and 9 VAC 25-260-170, bacteria standards; other 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. Notification Levels

Rationale : Required by VPDES Permit Regulation, 9 VAC 25-31-200 A for all manufacturing, commercial, mining, and silvicultural dischargers.

c. O&M Manual Requirement

Rationale: Required by Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9 VAC 25-31-190 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.

d. Licensed Operator Requirement

Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 D and The Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 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.)*

e. Materials Handling/Storage

Rationale: 9 VAC 25-31-50 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.

f. Best Management Practices

Rationale: VPDES Permit Regulation, 9 VAC 25-31-220 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.

g. Nutrient Enriched Waters Reopener

Rationale: Policy for Nutrient Enriched Waters, 9 VAC 25-40-10 et seq. 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.

h. Water Quality Criteria Reopener

Rationale: VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of the water quality standards.

i. 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.

j. Compliance Reporting Under Part I A

Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when toxic 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.

k. 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.

l. 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.

m. 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.

n. Sludge Use and Disposal

Rationale: VPDES Permit Regulation, 9 VAC 25-31-100 J; 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.)

o. 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.

p. 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. 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.

q. Toxics Management Program

Rationale: VPDES Permit Regulation, 9 VAC 25-31-210 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.

r. 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.

s. Storm Water Management

Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of storm water from industrial activity in 9 industrial categories. 9 VAC 25-31-120 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, 9 VAC 25-151-10 et seq. VPDES Permit Regulation, 9 VAC 25-31-220 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.

t. 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 it they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

u. Limitation Monitoring Waiver

Rationale: Monitoring for one or more technology-based effluent limitations may be waived if the permittee provides the demonstration required by 9 VAC 25-31-220 A 2.

v. Bacterial Effluent Limitations and Monitoring Requiements – Additional Instructions

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 9 VAC 25-260.

w. Part II, Conditions Applicable to All Permits

Rationale: VPDES Permit Regulation, 9 VAC 25-31-190 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 (9 VAC 25-31-280 B 4). This includes, but is not limited to:*

- *waivers from application testing requirements*
- *variances from technology guidelines(9 VAC 25-31-220 A 2) or water quality standards*
- *variances from VPDES permit manual guidance*)

23. Public Notice Information required by 9 VAC 25-31-280 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 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 if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. 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.

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 Comment: (*State* **"No comments were received during the public notice" or "Comments received during the pubic notice are provided in the attached Response to Comments"** *Include significant comments from VDH and EPA in the Response to Comments.)*

25. 303(d) Listed Segments (TMDL): (*Indicate if the facility discharges to a segment that is listed on the current 303(d) list ant 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 the current 303(d) list, then the fact sheet must include some description of how the TMDL requirements are being met. Permit writers may choose from one of the following categories to fulfill this requirement.)*

Permits for discharges into segments listed in part 1:

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 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.

Example fact sheet language:

This facility discharges directly to (**name of receiving stream**). The stream segment receiving the effluent is listed for non attainment of (**list parameter**) in part I of the current approved 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 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 for non attainment of **(list parameter)** in part I of the current approved 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 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 for non attainment of **(list parameter)** in part I of the current approved 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.

<u>TMDL not approved, permit does not have 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 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 for non attainment of (**list parameter**) in part I of the current approved 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 part II:

Part II 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 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 for non attainment of (**list parameter**) in part I of the current approved 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

Compliance attained but segment not delisted:

Fact Sheet Information:
- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter 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 for non attainment of (**list parameter**) in part I of the current approved 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 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 for non attainment of **(list parameter**) in part I of the current approved 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 segments listed in part III:

Part III is an informational section and may not necessarily lead to TMDLs. No permit re-opener condition is necessary for permits that authorize a discharge to the segments listed in this part. However, it is suggested that a discussion be included in the fact sheet relative to implementation of the tributary strategy for the Chesapeake Bay Initiatives.

Example fact sheet language:

No general language can be given for this category. The general requirements of the particular tributary strategy that impacts the permit should be briefly identified and should include a brief discussion of how this facility is complying with the initiatives identified in the strategy.

Special Permit considerations:
None (*However, note that this may depend on the facility history and compliance with the strategy. If they do not make any effort to comply, certain strategies may eventually lead to a permit limit.*)

Permits for discharges into segments listed in part IV:

Part IV is a listing of threatened waters that currently meet the criteria. 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 threatened (as noted above).
- The parameter 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 threatened for (**list parameter**) in part IV of the current approved 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 segments listed in part V:

Part V is a listing of segments that do not meet the standard due to natural conditions. It is readily apparent that if a segment fails to attain the standards solely due to natural conditions then the standard is somehow in error and needs to be corrected.

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 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 for non attainment of (**list parameter**) in part V of the current approved 303(d) list. The non attainment 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 non-attainment.

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

D. 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 effluent limitations, monitoring requirements, and other conditions set forth in this permit.

Owner: **(Name of Owner)**
Facility Name: **(Name of Facility)**
City/County:
Facility Location:

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

Stream: **(Receiving Waters name)**
River Basin:
River Subbasin:
Section:
Class:
Special Standards:

The authorized discharge shall be in accordance with this cover page, Part I - Limitations and Monitoring Requirements and Part II - Conditions Applicable To All VPDES Permits, as set forth herein.

_____
Director, 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.

E. Bacteria and Chlorine Limitations/Procedures

1. Limit Development

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 is 1/day. This frequency is sufficient for assuring protection of the receiving stream. This is similar to the monitoring for other toxics. Increasing the frequency of monitoring on a case-by-case basis may be appropriate. However, in most instances, the permit limits for disinfection or operation and maintenance requirements may require more frequent internal monitoring to insure adequate disinfection.

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 WLA.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 WLA.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 WLA.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.
- WLA.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.

- WLA.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.

g. Bacteria Standards

If the industrial discharge has a domestic sewage component requiring disinfection the following paragraphs apply.

If bacteria limits are required in the permit they should be for E. coli in freshwater or for enterococci in saltwater or the transition zone. Fecal coliform limits will no longer be used, **except** for discharges into shellfish waters, where both fecal coliforms and the below bacterial parameters (enterococci most likely) are to be limited. (See below regarding shellfish waters.)

E.coli and enterococci bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean	Single Sample Maximum
Fresh water		
E.coli (N/100 ml)	126	235
Saltwater and Transition Zone		
enterococci (N/100 ml)	35	104

The disinfection policy of 9 VAC 25-260-170.B (Water Quality Standards) requires that all effluents attain the above applicable bacteria concentrations prior to discharge. In other words, they are effluent requirements as well as in-stream criteria because no mixing zone is allowed.

Where effluent sampling is performed more than once per month, the geometric mean applies and this number should go in the permit as a monthly average. Where effluent sampling is performed once per month or less, the single sample maximum applies and should go in the permit as a Daily Maximum.

If chlorine limits are to be used instead of enterococci bacteria limits, the permittee must demonstrate the ability of the chlorine limits to allow the enterococci bacteria standard to be met. (The agency has already analyzed sufficient data to determine that chlorine limitations that were sufficient to meet fecal limits will also maintain E. coli criteria.) For new issuances, this demonstration should be made during the application process if possible, or if no effluent is available to test the bacteria limits 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 with a compliance schedule for meeting the bacteria limits (up to four years is acceptable). 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 chlorine demonstration requirements in Section MN and the permit should include the special condition '**Bacterial**

Effluent Limitations and Monitoring Requirements - Additional Instructions " that appears in the Industrial Special Conditions section of the manual which follows.

See the "Bacteria and Chlorine Limitations/Procedures " paragraphs in Section MN for information on chlorine demonstration requirements.

2. Alternate Disinfection

When the permittee uses a disinfection method other than chlorine, disinfection is assured by using bacteria limits in Part I A. In some cases, chlorine may be used as a backup disinfection method. When chlorine is used as a backup for an alternative disinfection method, include bacteria monitoring on Part I A and add a footnote to chlorine conditions in Part I B if a chlorine demonstration has been made as discussed in the preceding paragraphs. This is essentially the reverse of the procedure used when chlorine is the disinfection method and bacteria limits are added in the special conditions in case an alternative is used after the permit is issued. Bacteria monitoring may be required due to the location of the discharge (i.e. PWS or shellfish waters) in addition to being required due to the use of alternate disinfection. In these instances, place both bacteria limits and chlorine on the Part I A page. In reissuing permits to facilities that have used alternate disinfection in the past to meet fecal coliform limits, and where these limits are being changed to E. coli or enterococci for the first time, it may be necessary to give the permittee a compliance schedule for meeting the new limits. The need for a compliance schedule should be determined by a demonstration of the ability of the alternate disinfection to meet the new limits. This demonstration can be made either with the application or after reissuance through a special condition. The demonstration requirements are described in Section MN. If demonstration is satisfied, fecal coliform limitations and monitoring should not be required in the VPDES permit. The applicable freshwater or saltwater/transition zone geometric mean E.coli or enterococci limitations should be included on the Part 1.A. page. If demonstration is not satisfied, the permit should contain fecal coliform monitoring and a compliance schedule for meeting the applicable freshwater or saltwater/transition zone geometric mean limitations. Monitoring frequency should be in accordance with the Alternate Disinfection section of this manual. If demonstration is to be made during the permit term, the VPDES permit should contain fecal coliform limitations per this manual and the permit should include the special condition listed as "**Bacterial Effluent Limitations and Monitoring Requirements - Additional Instructions** " appearing in the Industrial Special Conditions section of the manual which follows. No demonstration should be required if the applicant chooses to meet the new bacteria standards without a compliance schedule.

a. Part I B language when chlorine is used as a backup to alternate disinfection

Total Residual Chlorine (TRC) Effluent Limitations and Monitoring Requirements

If chlorination is chosen as a disinfection method, TRC [DMR # 005] shall be limited and monitored by the permittee as specified below:

1. Effluent TRC shall be monitored, following dechlorination, 1/day by grab sample and limited as specified below:

	Monthly Average	Weekly Average
TRC (mg/l)	*	*

2. TRC shall be monitored at the outlet of each operating chlorine contact tank, prior to dechlorination, [**frequency from sampling table**] by grab sample.

3. No more than [**10% of total number of monthly samples**] of all samples taken at the outlet of the chlorine contact tank shall be less than [**1.0 mg/l or 1.5 mg/l**] for any one calendar month.[DMR # 157]

4. No TRC sample collected at the outlet of the chlorine contact tank, prior to dechlorination, shall be less than 0.60 mg/l. [DMR # 213]

The above requirements, if applicable, shall substitute for the bacteria requirements delineated in Part I A.

- Use values derived from waste load allocations.

3. Shellfish Waters

For sewage discharges into 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 average. 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.

F. 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 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*)

a. The permittee shall monitor the TRC at the outlet of the chlorine contact tank once per [**frequency from sampling table**] by grab sample.

b. No more than [**10% of total no. of monthly samples**] of all samples taken at the outlet of the 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.*

c. No TRC sample collected at the outlet of the chlorine contact tank shall be less than 0.60 mg/l.

d. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

If chlorine disinfection is not used, E. coli/enterococci (*choose one*) shall be limited and monitored by the permittee as specified below:

	Geometric Mean	Single Sample Maximum
Fresh water		
E.coli (N/100 ml)	126	235
Saltwater and Transition Zone		
enterococci (N/100 ml)	35	104

(Where effluent sampling is performed more than once per month, the geometric mean applies. Where effluent sampling is performed once per month or less, the single sample maximum applies)

This E. coli/enterococci (*choose one*) requirement, if applicable, shall substitute for the TRC requirements delineated elsewhere in Part I.

2. **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.

3. **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. 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 completion of construction]**. 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. Discussion of Best Management Practices, if applicable;
c. Treatment system design, treatment system operation, routine preventive maintenance of units within the treatment system, critical spare parts inventory and record keeping;
d. A plan for the management and/or disposal of waste solids and residues.
e. 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.
f. Procedures for measuring and recording the duration and volume of treated wastewater discharged

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, 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. Discussion of Best Management Practices, if applicable;
c. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;
d. A plan for the management and/or disposal of waste solids and residues.
e. 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.
f. Procedures for measuring and recording the duration and volume of treated wastewater discharged.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for 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.

4. **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.

5. **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 so as not to permit a discharge of such product, materials, industrial wastes, and/or other wastes to State waters, except as expressly authorized.

6. **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.*)

7. **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.

8. **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.

9. **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. 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.)

Department of Environmental Quality
Water Quality Criteria Monitoring
Attachment A

New form under construction
Add Here

10. **Compliance Reporting under Part I A and Part I B** *(use for permit with water quality-based limits for toxics or conventional pollutants in Part I A and B. Modify this example as needed for effluent parameters in the permit.)*

a. The quantification levels (QL) shall be as follows:

Effluent Characteristic	Quantification Level
BOD5	5.0 mg/l
TSS	1.0 mg/l
Chlorine	0.10 mg/l
Ammonia-N	0.20 mg/l
Total Recoverable Cadmium	0.80ug/l
Total Recoverable Copper	7.2 ug/l
Total Recoverable Nickel	13 ug/l
Total Recoverable Zinc	52 ug/l

(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 = 0.02; 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) QLs for other conventionals are: Oil&Grease = 5.0 mg/l; COD = 10 mg/l; TKN = 0.50 mg/l; Color = 1.0 pcu.

b. Reporting

Monthly Average -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I A and B shall be determined as follows: All concentration data below the QL listed above shall be treated as zero. All concentration data equal to or above 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, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is <QL, then report "<QL" for the quantity. Otherwise use the calculated concentration.

Daily Maximum -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in Part I A and B shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL 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, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is <QL, then report "<QL" for the quantity. Otherwise use the calculated concentration.

c. Any single datum required shall be reported as "<QL" if it is less than the QL in a. above. Otherwise the numerical value shall be reported.

d. Monitoring results shall be reported using the same number of significant digits as listed in the permit.

11. **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.

12. **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**] 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.*)

13. **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.

14. **Sewage Sludge** (*See Municipal Section*)

15. **Effluent Monitoring Frequencies** (*For permits that are being reissued with reduced monitoring frequency. Change the parameter list as needed.*)

If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration.

(List 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.

16. **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.

17. **Toxics Management Program** -- *Refer to the latest TMP implementation guidance for special condition text and rationale regarding TMP implementation.*

18. **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 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.

19. **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.

20. **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.

21. **Bacterial Effluent Limitations and Monitoring Requiements – Additional Instructions**

(*Use when chlorine demonstrations are to be required by the permit.)*

1. Beginning no later than [*insert date no later than six months of the permit effective date*], enterococci monitoring shall be performed at a minimum as prescribed below:
Monitoring Frequency: [*select appropriate 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 (*or fecal coliform for alternate disinfection demonstrations*) shall be sampled within 15 minutes of the time each enterococci sample is taken. The date and time the samples were collected shall also be recorded. If only one datum is collected in any given calendar month, it shall be compared to the single sample maximum of 104 colonies/100 ml for compliance with the applicable water quality criterion. If more than one datum are collected in any given calendar month, the geometric mean for that month shall be compared to 35 colonies/100 ml for compliance with the applicable water quality criterion.
2. No later than [*insert date no later than one year after the permit effective date*], a demonstration of adequate disinfection as described in item 3 below shall be completed, or the limitations and monitoring requirements in item 4 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:
a. The original data set including the following information and data:
- date and time sample collected
- enterococci (colonies/100 ml)
- chlorine residual after contact but before dechlorination (mg/l)
- chlorine contact time (minutes) (*fecal coliform data replaces chlorine data for alternate disinfection demonstrations)*
- flow (mgd)

b. The geometric mean calculations and results; and
c. A summary of results in tabular format and a statement of successful or unsuccessful demonstration of the requirements of item 3.
In the case of unsuccessful demonstration, the permittee shall comply with item 4.
3. If there are no exceedences of the applicable enterococci criterion in a minimum of 12 consecutive samples collected under item 1 while chlorine limitations (*or fecal limits)*are being complied with, then upon written notification from DEQ, enterococci monitoring shall no longer be required.
4. If there are any exceedences of the applicable enterococci criterion in the data set collected under item 1 while chlorine limitations (*or fecal limits*) are being complied with, then:
a. The following limitations and monitoring requirements shall become effective for enterococci in accordance with the schedule of compliance in item 4.b below:

	Discharge Limit	Monitoring Requirements	
	Monthly Average	Frequency	Sample Type
enterococci	35	2/Month	Grab
(N/100 ml)	(Geometric Mean)	Between 10 a.m. and 4 p.m.	

[*revise frequency as appropriate*]

b. The permittee shall achieve compliance with the final limits for enterococci specified in item 4.a above in accordance with the following schedule:

(1) Submit Progress Report	By [*insert date no later than permit effective date + 12 months*], and annually thereafter
(2) Achieve compliance with final limits	By [*insert date no later than permit effective ate + 4 years*]

5. Enterococci sampling and analysis shall be performed in accordance with the following: Samples shall be analyzed for enterococci in accordance with one of the following methods:

a. EPA Method 1600: Membrane Filtration Method for Enterococci in Water

b. Standard Methods (18th, 19th, 20th editions) Method 9230B: Multiple Tube Technique for Fecal Streptococcus and Enterococcus Groups

c. Standard Methods (18th, 19th, 20th editions) Method 9230C: Membrane Filter Techniques for Fecal Streptococcus and Enterococcus Groups

d. ASTM Method D6503 (ASTM Volume 11.02): Standard Test Method of Enterococci in Water Using Enterolet(TM)

G. 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 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.

1. Effluent Limits, Compliance Monitoring and Analytical 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
Cement Manufacturing (Sector E)	Runoff from material storage piles at cement manufacturing facilities [40 CFR Part 411 Subpart C]	Total Suspended Solids	50 mg/L, daily max
		pH	6.0 - 9.0 S.U.
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.
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
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.
Hazardous Waste Landfills (Sector J)	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]	BOD5	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 K)	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]	BOD5	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.

In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previously measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled. This requirement should be placed at the bottom of the storm event monitoring Part I.A page.

c. Analytical 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" 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.

In addition to the analytical results, permittees are required to provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the

previously measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled. 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 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 Monitoring for Storm Water Discharges

Industrial Sector	Industrial Activity	Parameter	Monitoring Cut-off Concentration
Sector A – Timber Products	General Sawmills and Planing Mills (SIC 2421)	TSS	100 mg/L
		Zn	120 ug/L
	Wood Preserving (SIC 2491)	As	50 ug/L
		Cu	18 ug/L
		Cr	16 ug/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, 2593 and 2499)	TSS	100 mg/L
Sector B - Paper and Allied Products	Paperboard Mills (SIC 2631)	BOD5	30 mg/L
Sector C – Chemical and Allied Products	Agricultural Chemicals (SIC 2873-2879)	NO2+NO3	0.68 mg/L
		TKN	1.5 mg/L
		Fe	1 mg/L
		Zn	120 ug/L
		Total P	2 mg/L
	Industrial Inorganic Chemicals (SIC 2812-2819)	Al	750 ug/L
		Fe	1 mg/L
		TKN	1.5 mg/L
		NO2+NO3	0.68 mg/L
	Soaps, Detergents Cosmetics and Perfumes (SIC 2841-2844)	TKN	1.5 mg/L
		NO2+NO3	0.68 mg/L
		Zn	120 ug/L
	Plastics, Synthetics and Resins (SIC 2821-2824)	Zn	120 ug/L
Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturers	Asphalt Paving and Roofing Materials (SIC 2951 and 2952)	TSS	100 mg/L
Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products	Clay Product Manufacturers (SIC 3245-3259, 3261-3269)	Al	750 ug/L
	Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	TSS	100 mg/L
		pH	6.0 – 9.0 S.U.
		Fe	1 mg/L
Sector F – Primary Metals Facilities	Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Al	750 ug/L
		Zn	120 ug/L
	Iron and Steel Foundries (SIC 3321-3325)	TSS	100 mg/L
		Al	750 ug/L
		Cu	18 ug/L
		Fe	1 mg/L
		Zn	120 ug/L

	Rolling, Drawing, and Extruding of Non-Ferrous Metals (SIC 3351-3357)	Cu	18 ug/L
		Zn	120 ug/L
	Non-Ferrous Foundries (SIC 3363-3369)	Cu	18 ug/L
		Zn	120 ug/L
Sector G – Metal Mining (Ore Mining and Dressing) Facilities	Copper Ore Mining and Dressing Facilities (SIC 1021)	TSS	100 mg/L
Sector H – Coal Mines and Coal Mining-Related Facilities	Coal Mines and Related Areas (SIC 1221-1241)	Al	750 ug/L
		Fe	1 mg/L
		TSS	100 mg/L
Sector J – Hazardous Waste TSD Facilities	Hazardous Waste Treatment Storage and Disposal Facilities	TKN	1.5 mg/L
		TOC	110 mg/L
		TSS	100 mg/L
		As	50 ug/L
		Cd	3.9 ug/L
		CN	22 ug/L
		Pb	120 ug/L
		Hg	2.4 ug/L
		Se	20 ug/L
		Ag	4.1 ug/L
Section K – Landfills, Land Application Sites and Open Dumps	All Landfills, Land Application Sites and Open Dumps	TSS	100 mg/L
	All Landfills, Land Application Sites and Open Dumps Except MSWLF Areas Closed in Accordance with Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.	Fe	1 mg/L
Section L – Automobile Salvage Yards	Automobile Salvage Yards (SIC 5015)	TSS	100 mg/L
		Al	750 ug/L
		Fe	1 mg/L
		Pb	120 ug/L
Sector M – Scrap Recycling and Waste Recycling Facilities	Scrap Recycling Facilities (SIC 5093)	TSS	100 mg/L
		Al	750 ug/L
		Cu	18 ug/L
		Cd	3.9 ug/L
		Cr	16 ug/L
		Fe	1 mg/L
		Pb	120 ug/L
		Zn	120 ug/L
Sector N – Steam Electric Power Generating Facilities	Steam Electric Generating Facilities	Fe	1 mg/L
Sector P – Water Transportation Facilities	Water Transportation Facilities (SIC 4412-4499) – Vehicle Maintenance Areas and Equipment Cleaning Areas	Al	750 ug/L
		Fe	1 mg/L
		Zn	120 ug/L
Sector R – Air Transportation Facilities	Airport Facilities (SIC 45XX) – Those that use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis must monitor the outfalls that receive the deicing activity runoff.	BOD5	30 mg/L
		TKN	1.5 mg/L
		pH	6.0 – 9.0 S.U.
Sector T – Food and Kindred Products	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
		BOD5	30 mg/L

		TKN	1.5 mg/L
		NO2+NO3	0.68 mg/L
Sector X – 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 ug/L
Sector Y – Leather Tanning and Finishing	Leather Tanning and Finishing Facilities (SIC 3111)	TKN	1.5 mg/L
Sector Z – Fabricated Metal Products	Fabricated Metal Products Except Coating (SIC 3411-3471, 3482-3499, 3911-3915)	Al	750 ug/L
		Fe	1 mg/L
		Zn	120 ug/L
	Fabricated Metal Coating and Engraving (SIC3479)	Zn	120 ug/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.

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 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, see the latest OWPP storm water permitting guidance, or contact OWPP for assistance.

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 measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm even; and an estimate of the total volume (in gallons) of the discharge sampled.

* See monitoring requirements in Part I **B 1** *(reference storm water sample type special condition*).

2. Storm Water Management Evaluation

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 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- 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 "any restriction on quantities, rates, and concentrations of constituents discharged from point sources. The CWA does not say that effluent limitations need be numeric." The use of BMPs falls in line with the CWA which notes the need to control these discharges to the maximum extent necessary to mitigate impacts on water quality.

Guidance Memo 96-001 recommends that chemical water quality-based limits not be placed on 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 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 judgement. 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 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 toxicity, result in an LC_{50} of less than 100% effluent, will not indicate unacceptable values. However, those results 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 Evaluation condition. Use the following condition where screening criteria and effluent data indicate a potential problem and BMPs are necessary to control the specific contaminants/toxicity contained in storm water. The toxicity tests should accompany the quarterly chemical monitoring for the same outfalls.

* * * * *

B. STORM WATER MANAGEMENT EVALUATION

The Storm Water Pollution Prevention Plan, SWPPP, which is to be developed and maintained in accordance with Part I.____ of this permit, shall have a goal of reducing pollutants discharged at all the regulated storm water outfalls.

1. 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
[List]	**[List]**

2. Toxicity Screening

a. The permittee shall conduct annual acute toxicity tests on the outfalls noted in A.1 above using grab samples of final effluent. These tests shall be 48-hour static tests using **[NAME SPECIES]**, 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. 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.

b. 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) An estimate of the total volume of storm water discharged through each outfall during the discharge event.

(3) The time at which the discharge event began, the time at which the effluent was sampled, and the duration of the discharge event.

3. 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 and the toxicity screening required by this special condition. Those results 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.

4. 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. The first report is due on **[February 10, ____** *no more than 2 years from effective date of permit***]**.
* * * * *

3. 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 29 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.***

* * * * *

B. GENERAL STORM WATER SPECIAL CONDITIONS

1. Sample Type *(If paragraph "b" is not used, do not include "a" for the first paragraph)*

a. 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 is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be 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 nonstorm water discharge.

b. 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.

2. 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:

a. The date and duration (in hours) of the storm event(s) sampled;

b. The rainfall measurements or estimates (in inches) of the storm event which generated the sampled discharge; and

c. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) 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.

3. 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.).

4. Representative Discharges

When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes substantially identical effluents are discharged, 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.

5. Quarterly Visual Examination of Storm Water Quality.

The permittee shall perform and document a 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.

a. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examination shall 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 such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previous measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be 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. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term.

b. Visual examination reports must be maintained onsite with the pollution prevention plan. The report shall 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.

c. If the facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies 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.

d. 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.).

6. Allowable Nonstorm Water Discharges.

a. The following nonstorm water discharges are authorized by this permit provided the nonstorm water component of the discharge is in compliance with 6.b, below.

(1) Discharges from fire fighting activities;
(2) Fire hydrant flushings;
(3) Potable water including water line flushings;
(4) Uncontaminated air conditioning or compressor condensate;
(5) Irrigation drainage;
(6) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;
(7) 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);
(8) Routine external building wash down which does not use detergents;
(9) Uncontaminated ground water or spring water;
(10) Foundation or footing drains where flows are not contaminated with process materials such as solvents;
(11) 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).

b. Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

(1) Identification of each allowable non-storm water source;
(2) The location where it is likely to be discharged; and
(3) Descriptions of appropriate BMPs for each source.

c. If mist blown from cooling towers is included as one of the allowable non-storm water discharges, the facility must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower. The permittee must determine that the levels of such chemicals in the discharges will not cause or contribute to a violation of an applicable water quality standard after implementation of the BMPs selected to control such discharges.

7. 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 this facility shall be prevented or minimized in accordance with the applicable storm water pollution prevention plan

for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill. 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 (1998), 40 CFR 117 (1998) or 40 CFR 302 (1998) occurs during a 24 hour period, the permittee is required to notify the Department in accordance with the requirements of **Part II G** as soon as he or she has knowledge of the discharge. In addition, 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. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110 (1998), 40 CFR 117 (1998) and 40 CFR 302 (1998) or § 62.1-44.34:19 of the Code of Virginia.
* * * * *

4. 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 from one of the 29 regulated industrial sectors. 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.***
*** * * * ***

B. STORM WATER POLLUTION PREVENTION PLAN

Refer to **Part C** for sector-specific storm water management requirements.

[For reissuances with existing SWPPs A storm water pollution prevention plan was required to be developed and implemented for the facility by 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 SWPP requirements** A storm water pollution prevention plan is required to be developed for the facility. The plan shall be prepared in accordance with good engineering practices.**]** The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Permittees must 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 by incorporating by reference other plans or documents such as an erosion and sediment control plan, 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 B.**4. If an erosion and sediment control plan is being incorporated by reference, it shall have been approved by the locality in which the activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulation 4 VAC 50-30-10 et seq. All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit.

1. Deadlines for Plan Preparation and Compliance

a. 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.]

b. 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.

2. Signature and Plan Review

a. Signature/Location. The plan shall be signed in accordance with Part II.K., and be retained onsite at the facility that generates the storm water discharge in accordance with Part II.B.2.

b. Availability. The permittee shall make the storm water pollution prevention plan, annual site compliance inspection report, or other information available to the Department upon request.

c. Required Modifications. The Director, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Such notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan require modifications in order to meet the minimum requirements of this permit. Within 60 days of such notification from the Director, (or as otherwise provided by the Director), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the Director a written certification that the requested changes have been made.

3. Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to surface waters or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under **Part B.4** of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. New owners shall review the existing plan and make appropriate changes. Amendments to the plan may be reviewed by the Department in the same manner as **Part B.2**.

4. Contents of the Plan

The contents of the pollution prevention plan shall comply with the requirements listed below and those in **Part C [D, E, F, etc]**. The plan shall include, at a minimum, the following items.

a. Pollution Prevention Team. The plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

b. Description of Potential Pollutant Sources. The plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. The plan shall identify all activities and significant materials that may potentially be significant pollutant sources. The plan shall include, at a minimum:

(1) Drainage. A site map indicating an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under **Part B.4.b.(3)** have occurred, and the 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 and wastewaters, locations used for the treatment, filtration, or storage of water supplies, liquid storage tanks, processing areas, and storage areas. The map must indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls; and for each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with industrial activity. Factors to consider include the toxicity of chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified;

(2) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of submission of the application for this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of the application for this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives;

(3) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility within the 3 year period immediately prior to the date of submission of the application for this permit. Such list shall be updated as appropriate during the term of the permit;

(4) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit; and

(5) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices, and wastewater treatment activities to include sludge drying, storage, application or disposal activities. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, total suspended solids, etc.) of concern shall be identified.

c. Measures and Controls. The permittee shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

(1) Good Housekeeping. Good housekeeping requires the clean and orderly maintenance of areas that may contribute pollutants to storm water discharges. The plan shall describe procedures performed to minimize contact of materials with storm water runoff. Particular attention should be paid to areas where raw materials are stockpiled, material handling areas, storage areas, liquid storage tanks, material handling areas, and loading/unloading areas.

(2) Preventive Maintenance. A preventive maintenance program shall involve: timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins); inspection and testing of facility equipment and systems to uncover conditions that could cause breakdowns or failures which could result in discharges of pollutants to surface waters; and appropriate maintenance of such equipment and systems.

(3) Spill Prevention and Response Procedures. Areas where potential spills can occur that can contribute pollutants to storm water discharges, and their accompanying drainage points, shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(4) Inspections. Facility personnel who are familiar with the industrial activity, the BMPs and the storm water pollution prevention plan shall be identified to inspect designated equipment and areas of the facility. 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. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained with the pollution prevention plan.

(5) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(6) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(7) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(8) Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide for the implementation and maintenance of measures that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices; reuse of collected storm water (such as for a process or as an irrigation source); inlet controls (such as oil/water separators); snow management activities; infiltration devices, wet detention/retention devices; or other equivalent measures.

d. Comprehensive Site Compliance Evaluation. Qualified facility personnel who are familiar with the industrial activity, the BMPs and the storm water pollution prevention plan shall conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall include the following:

(1) Areas contributing to a storm water discharge associated with industrial activity such as material storage, handling, and disposal activities shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made;

(2) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with **Part B.4.b** and pollution prevention measures and

controls identified in the plan in accordance with **Part B.4.c** shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation;

(3) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with **Part B.4.d.2** shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with **Part II.K**; and

(4) Where compliance evaluation schedules overlap with inspections required under **Part B.4.c.(4)**, the compliance evaluation may be conducted in place of one such inspection.

5. Special Pollution Prevention Plan Requirements

In addition to the minimum standards listed in **Part B.4**. and **Part C [D, E, F, etc.]**, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines.

a. Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to EPCRA Section 313 Requirements. In addition to the requirements of **Part C [D, E, F, etc.]** and other applicable conditions of this permit, storm water pollution prevention plans for facilities subject to reporting requirements under EPCRA Section 313, prior to May 1, 1997, for chemicals that are classified as Section 313 water priority chemicals, except as provided in **Part B.5.a.(2)(b)**, and where there is the potential for these chemicals to mix with storm water discharges, shall describe and ensure the implementation of practices that are necessary to provide for conformance with the following guidelines.

(1) In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided unless otherwise exempted under **Part B.5.a.(3)**. At a minimum, one of the following preventive systems or its equivalent shall be used:

(a) Curbing, culverting, gutters, sewers, or other forms of drainage control to prevent or minimize the potential for storm water runon to come into contact with significant sources of pollutants; or

(b) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water and wind.

(2) In addition to the minimum standards listed under **Part B.5.a.(1)**, and except as otherwise exempted under **Part B.5.a.(3)**, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with other effective storm water pollution prevention procedures, and applicable state rules, regulations, and guidelines.

(a) Liquid Storage Areas Where Storm Water Comes Into Contact With Any Equipment, Tank, Container, or Other Vessel Used for Section 313 Water Priority Chemicals.

i. No tank or container shall be used for the storage of a Section 313 water priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

ii. Liquid storage areas for Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures.

(b) Material Storage Areas for Section 313 Water Priority Chemicals Other Than Liquids. Material storage areas for Section 313 water priority chemicals other than liquids that are subject to runoff, leaching, or wind shall incorporate drainage or other control features that will minimize

the discharge of Section 313 water priority chemicals by reducing storm water contact with those chemicals.

(c) Truck and Rail Car Loading and Unloading Areas for Liquid Section 313 Water Priority Chemicals. Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals shall be operated to minimize discharges of those chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. Appropriate measures to minimize discharges of Section 313 chemicals may include: the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels and filler nozzles) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(d) Areas Where Section 313 Water Priority Chemicals Are Transferred, Processed, or Otherwise Handled. Processing equipment and materials handling equipment shall be operated so as to minimize discharges of Section 313 water priority chemicals. Materials used in piping and equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall minimize storm water contact with Section 313 water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(e) Discharges From Areas Covered by Paragraphs (a), (b), (c), or (d) of **Part B.5.a.(2)**.

i. Drainage from areas covered by paragraphs (a), (b), (c), or (d) of **Part B.5.a.(2)** should be restrained by valves or other positive means to prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these shall be manually activated.

ii. Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design.

iii. If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material to the facility.

iv. Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

(f) Facility Site Runoff Other Than From Areas Covered By paragraphs (a), (b), (c), or (d) of **Part B.5.a.(2)**. Other areas of the facility (those not addressed in paragraphs (a), (b), (c), or (d) of **Part B.5.a.(2)**, from which runoff that may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(g) Preventive Maintenance and Housekeeping. All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures that could cause a discharge. Inspection shall include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or noncontainment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered that may result in significant releases of Section 313 water priority chemicals to waters of the United States, action to stop the leak or otherwise prevent the significant

release of Section 313 water priority chemicals to waters of the United States shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or noncontainment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(h) Facility Security. Facilities shall have the necessary security systems to prevent accidental or intentional entry that could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(i) Training. Facility employees and contractor personnel that work in areas where Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year. Training shall address pollution control laws and regulations, the storm water pollution prevention plan and the particular features of the facility and its operation that are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of those chemicals can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

(3) Facilities subject to reporting requirements under EPCRA Section 313 for chemicals that are classified as Section 313 water priority chemicals that are handled and stored onsite only in gaseous or nonsoluble liquid or solid (at atmospheric pressure and temperature) forms may provide a certification as such in the pollution prevention plan in lieu of the additional requirements in **Part B.5.a**. Such certification shall include a narrative description of all water priority chemicals and the form in which they are handled and stored, and shall be signed in accordance with **Part II.K**.

(4) The storm water pollution prevention plan shall be certified in accordance with **Part II.K.**

b. Additional Requirements for Salt Storage. Storage piles of salt used for deicing or other commercial or industrial purposes and that generate a storm water discharge associated with industrial activity that is discharged to surface waters shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. Permittees shall demonstrate compliance with this provision as expeditiously as practicable, but in no event later than 3 years after the effective date of this permit. Permittees with previous coverage under a VPDES permit that included this requirement shall be compliant with this provision upon submittal of the permit application. Piles do not need to be enclosed or covered where storm water from the pile is not discharged to surface waters.

* * * * *

5. Sector-Specific Storm Water Requirements

The following requirements should be included in the permit where the industrial sector contributes storm water associated with industrial activity to the outfall. 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.

Sector A – Timber Products Facilities

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from the following activities: establishments generally classified under Standard Industrial Classification (SIC) Major Group 24 that are engaged in cutting timber and pulpwood, merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood and veneer mills engaged in producing lumber and wood basic materials; and establishments engaged in wood

preserving or in manufacturing finished articles made entirely of wood or related materials, except for wood kitchen cabinet manufacturers (SIC Code 2434), which are addressed under Wood and Metal Furniture.

(1) Effluent Limitations Timber Products log storage area runoff:

pH range of 6.0-9.0

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. and .

(2) Analytical monitoring

General Sawmills and Planing Mills SIC 2421	TSS, Zn
Wood Preserving Facilities SIC 2491	As, Cu, Cr
Log Storage and Handling Facilities SIC 2411	TSS
Hardwood Dimension, Flooring and Special Products Mills SIC 2426, 2429, 2431-2439 except 2434, 2448, 2449, 2451, 2452, 2593, and 2499	TSS

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. A site map indicating the location of 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) Where information is available, facilities that have used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or wood preserving activities onsite in the past should identify in the inventory the following: areas where contaminated soils, treatment equipment, and stored materials still remain and management practices employed to minimize the contact of these materials with storm water runoff.

b. Measures and 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 should address specific BMPs for wood surface protection and preserving activities. The pollution prevention plan should address the following minimum components, including a schedule for implementing such controls:

(1) Good Housekeeping. Good housekeeping measures in storage areas, loading and unloading areas, and material handling areas should 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) Preventive Maintenance. Periodic removal of debris from ditches, swales, diversions, containment basins, sediment ponds and infiltration measures should be performed to limit discharges of solids and to maintain the effectiveness of the controls.

(3) Spill Prevention and Response Procedures. Response schedules should be developed to limit tracking of spilled materials to other areas of the site. Leaks or spills of wood surface protection or preservation chemicals shall be cleaned up immediately in accordance with applicable RCRA regulations at 40 CFR Part 264 (1998) and 40 CFR Part 265 (1998).

(4) Inspections. Permittees are required to conduct quarterly visual inspections of BMPs. Material handling, and unloading and loading areas should be inspected daily whenever industrial activities occur in those areas. If no activities are occurring, no inspection is required. Inspections at processing areas, transport areas, and treated wood storage areas of facilities performing wood surface protection and preservation activities should be performed monthly to assess the usefulness of practices in

minimizing drippage of treatment chemicals on unprotected soils and in areas that will come in contact with storm water discharges. The inspections shall include:

(a) an assessment of the integrity of storm water discharge diversions, conveyance systems, sediment control and collection systems, and containment structures;

(b) visual inspection of sediment and erosion BMPs to determine if soil erosion has occurred; and

(c) visual inspections of storage areas and other potential sources of pollution for evidence of actual or potential pollutant discharges of contaminated storm water.

(5) Sediment and Erosion Control. When developing the plan, the following areas of the site should be considered: loading and unloading areas, access roads, material handling areas, storage areas, and any other areas where heavy equipment and vehicle use is prevalent. The following erosion and sediment controls shall be considered to minimize the discharge of sediments from the site: stabilization measures such as seeding, mulching, contouring, porous pavement, paving and sodding or its equivalent and structural measures such as sediment traps and silt fences or other equivalent measures.

Comprehensive Site Compliance Evaluation. Such evaluations shall include areas contributing to a storm water discharge associated with industrial activity such as locations used for the treatment, storage or disposal of wastes, liquid storage tanks, 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 shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system.

Sector B - Paper and Allied Products Manufacturing Facilities (Major Group 26):

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from the following activities: facilities engaged in 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 establishments primarily engaged in manufacturing bags of plastic film and sheet. These facilities are commonly identified by Standard Industrial Classification (SIC) Major Group 26.

(1) Effluent Limitations None

(2) Analytical monitoring

Paperboard Mills SIC 2631 BOD_5

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Good Housekeeping. The plan shall describe procedures performed to minimize contact of materials with storm water runoff. Examples include cleaning of lots and roofs that collect debris; and routine cleaning of wastewater treatment and other waste disposal (such as sludge handling) locations.

b. Management of Runoff. Appropriate measures may include: screens or fences used to protect dust and particulate collection activities from wind or to minimize the effects of wind on material loading and storage; processing activities to eliminate or reduce wind blown or airborne pollutants; secondary containment of storage areas such as berms and dikes; diversionary structures to direct storm water away from areas of potential contamination; and tarpaulins, roofs, or other coverings of outdoor storage or industrial activities or other equivalent measures.

Sector C - Chemical and Allied Products Manufacturing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with industrial activity from a facility engaged in manufacturing the following products and generally described by the SIC code shown:

Basic industrial inorganic chemicals (including SIC 281);

Plastic materials and synthetic resins, synthetic rubbers, and cellulosic and other humanmade fibers, except glass (including SIC 282);

Soap and other detergents and in 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 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 285);

Industrial organic chemicals (including SIC 286);

Nitrogenous and phosphatic basic fertilizers, mixed fertilizer, pesticides, and other agricultural chemicals (including SIC 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 ink, and lithographic; miscellaneous chemical preparations, such as fatty acids, essential oils, gelatin (except vegetable), sizes, bluing, laundry sours, writing and stamp pad ink, industrial compounds, such as boiler and heat insulating compounds, metal, oil, and water treatment compounds, waterproofing compounds, and chemical supplies for foundries (including facilities with SIC 289);

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 3952, limited to those listed; for others in SIC 3952 not listed above see Printing and Publishing); and

Medicinal chemicals and pharmaceutical products, including the grading, grinding and milling of botanicals (including SIC 283).

(1) Effluent Limitations Phosphate fertilizer manufacturers

Total Phosphorus (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 monitoring:

Agricultural Chemical Manufacturing Facilities SIC 2873-2879	NO_2+NO_3, TKN, Fe, Zn, P
Inorganic Chemical Manufacturing Facilities SIC 2812-2819	Al, Fe, TKN, NO_2+NO_3
Soaps, Detergents, Cosmetics and Perfume Manufacturing Facilities SIC 2841-2844	TKN, NO_2+NO_3, Zn
Plastics, Synthetics and Resins Manufacturing SIC 2821-2824	Zn

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. The site map developed for the facility shall include access roads, rail cars and tracks; the location of transfer of substances in bulk; and machinery.

(2) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following: access roads, rail cars and tracks; the location of transfer of substances in bulk; and machinery.

b. Measures and Controls.

(1) Good Housekeeping. At a minimum, the permittee shall:

(a) Schedule regular pickup and disposal of garbage and waste materials, or use other appropriate measures to reduce the potential for the discharge of storm water that has come into contact with garbage or waste materials. This schedule shall be included in the plan. Individuals responsible for waste management and disposal shall be informed of the procedures established under the plan;

(b) Routinely inspect for leaks and the condition of drums, tanks and containers. Ensure that spill cleanup procedures are understood by employees;

(c) Keep an up-to-date inventory of all materials present at the facility. While preparing the inventory, all containers should be clearly labeled. Hazardous containers that requires special handling, storage, use and disposal shall be clearly marked; and

(d) Maintain clean ground surfaces.

(2) Inspections.

All areas exposed to precipitation at the facilities shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented or whether additional control measures are needed. Structural storm water management measures (diking, berming, curbing, sediment and erosion control measures, stabilization controls, etc.) required under this section shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

(3) Facility Security. Facilities shall have the necessary security systems to prevent accidental or intentional entry that could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(4) Structural Practices. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity shall be considered when determining reasonable and appropriate structural measures. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained.

(5) Practices for Material Handling and Storage Areas. Permittees shall ensure the implementation of practices that conform with the following:

(a) In areas where liquid or powdered materials are stored, facilities shall provide either diking, curbing, berms, or other appropriate measures to reduce the potential of discharge of liquid or powdered materials in storm water;

(b) In all other outside storage areas including storage of used containers, machinery, scrap and construction materials, and pallets, facilities shall prevent or minimize storm water runon to the storage area by using curbing, culverting, gutters, sewers or other forms of drainage control;

(c) In all storage areas, roofs, covers or other forms of appropriate protection shall be used to prevent storage areas from exposure to storm water and wind. For the purpose of this paragraph, tanks would be considered to be appropriate protection;

(d) In areas where liquid or powdered materials are transferred in bulk from truck or rail cars, permittees shall provide appropriate measures to minimize contact of material with precipitation. Permittees shall consider providing for hose connection points at storage containers to be inside containment areas, and providing drip pans to be used in areas that are not in a containment area, where spillage may occur (e.g., hose reels, connection points with rail cars or trucks) or equivalent measures;

(e) In areas of transfer of contained or packaged materials and loading/unloading areas, permittee shall consider providing appropriate protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks or an equivalent;

(f) Drainage from areas covered by this section should be restrained by valves or other positive means to prevent the discharge of a spill or leak. Containment units may be emptied by pumps or ejectors; however, these shall be manually activated;

(g) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-or-closed design; and

(h) If facility drainage is not engineered as above, the final discharge point of all in-facility sewers should be equipped to prevent or divert the discharge, in the event of an uncontrolled spill of materials, return the spilled material to the facility.

(6) Sediment and Erosion Control. The plan shall describe permanent stabilization practices and shall ensure that disturbed portions of the site are stabilized. Stabilization practices may include: permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures.

Sector D - Asphalt Paving and Roofing Materials and Lubricant Manufacturers.

Discharges Covered Under This Section. This section of the permit describes requirements for all existing point source discharges of storm water associated with industrial activity to surface waters from: facilities engaged in manufacturing asphalt paving and roofing materials, including those facilities commonly identified by Standard Industrial Classification (SIC) codes 2951 and 2952; portable asphalt plant facilities (also commonly identified by SIC code 2951); and facilities engaged in manufacturing lubricating oils and greases, including those facilities classified as SIC code 2992.

(1) Effluent Limitations Asphalt Paving and Roofing Emulsions Manufacturers (SIC 2951 and 2952 in part)

Total Suspended Solids (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 within the range 6.0 to 9.0 s.u..

(2) Analytical monitoring:

Asphalt Paving and Roofing Materials Manufacturing Facilities SIC 2951 and 2952 TSS

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Measures and Controls.

(1) 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.

b. Comprehensive Site Compliance Evaluation. Areas contributing to a storm water discharge associated with industrial activity including; 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, and areas where aggregate is stockpiled outdoors shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system.

Sector E - Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from the following activities: manufacturing flat, pressed, or blown glass or glass containers; manufacturing hydraulic cement; manufacturing clay product including tile and brick; manufacturing of pottery and porcelain electrical supplies; manufacturing concrete products; manufacturing gypsum products; nonclay refractories; and grinding or otherwise treating minerals and earths. This section generally includes the following types of manufacturing operations: flat glass, (SIC code 3211); glass containers, (SIC code 3221); pressed and blown glass, not elsewhere classified, (SIC code 3229); glass products made of purchased glass (SIC code 3231) where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water, hydraulic cement, (SIC code 3241); brick and structural

clay tile, (SIC code 3251); ceramic wall and floor tile, (SIC code 3253); clay refractories, (SIC code 3255); structural clay products not elsewhere classified (SIC code 3259); vitreous china plumbing fixtures, and china and earthen ware fittings and bathroom accessories (SIC code 3261); vitreous china table and kitchen articles (SIC code 3262); fine earthen ware table and kitchen articles (SIC code 3263); porcelain electrical supplies, (SIC code 3264); pattern products, (SIC code 3269); concrete block and brick, (SIC code 3271); concrete products, except block and brick (SIC code 3272); lime (SIC code 3274); gypsum products, (SIC code 3275); cut stone and stone products (SIC code 3281); abrasive products (SIC code 3291); asbestos products (SIC code 3292); minerals and earths, ground or otherwise treated, (SIC code 3295); mineral wool (SIC code 3296); nonclay refractories (SIC code 3297); and nonmetallic mineral products not elsewhere classified (SIC code 3299).

This section does not apply to facilities engaged in the following activities: lime manufacturing (SIC 3274); cut stone and stone products (SIC 3281); abrasive products (SIC 3291); asbestos products (SIC 3292); mineral wool and mineral wool insulation products (SIC 3296).

(1) Effluent Limitations Runoff from material storage piles at Cement Manufacturers (SIC 3241)

Total Suspended Solids (50 mg/l daily maximum)
pH within the range 6.0 to 9.0 s.u..

(2) Analytical monitoring:

Clay Products Manufacturing Facilities SIC 3255-3259, 3261-3269	Al
Concrete and Gypsum Product Manufacturing Facilities SIC 3271-3275	TSS, pH, Fe

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. Facilities shall also identify, on the site map, the location of any: 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. Measures and 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 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 other 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 when cement, aggregate, kiln dust or fly ash are being handled or otherwise processed in the area.

(b) Facilities shall prevent the exposure of fine granular solids such as cement and kiln dust to storm water. Where practicable, these materials shall be stored in enclosed silos, hoppers or buildings, in covered areas, or under covering.

(2) Inspections. The inspection shall take place while the facility is in operation and shall at a minimum include all of the following areas that are exposed to storm water at the site: material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down and equipment cleaning areas.

(3) Employee Training. Training should address topics such as spill response, good housekeeping, truck wash out procedures, equipment wash down procedures and material management practices.

(4) Nonstorm Water Discharges. Facilities engaged in production of ready-mix concrete,

concrete block, brick or other products shall include in the certification a description of measures that ensure that process wastewater that results from washing of trucks, mixers, transport buckets, forms or other equipment are discharged in accordance with separate requirements in this VPDES permit or are recycled. Facilities with wash water recycle ponds shall include an estimate of the amount of rainfall (in inches) required to cause the recycle pond to overflow in a 24-hour period.

Sector F - Primary Metals Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from the primary metal industry, which includes the following types of facilities.

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 (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 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	Zn, Cu

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. A site map indicating locations used for the treatment, storage or disposal of wastes such as spent solvents or baths, sand, slag or dross, liquid storage tanks or drums, processing areas including pollution control equipment such as baghouses, and storage areas of raw materials such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. The map shall also indicate areas of the facility where accumulation of significant amounts of particulate matter from operations such as furnace or oven emissions or losses from coal/coke handling operations, etc., is likely, and could result in a discharge of pollutants to surface waters.

b. Measures and Controls.

(1) Good Housekeeping. The pollution prevention plan should consider implementation of the following measures, or equivalent measures, where applicable.

(a) Establish a cleaning or maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, particularly areas of material loading/unloading, material storage and handling, and processing.

(b) Pave areas of vehicle traffic or material storage where vegetative or other stabilization methods are not practical. Institute sweeping programs in these areas as well.

(c) For unstabilized areas of the facility where sweeping is not practical, 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 should be considered.

(2) Source Controls. The permittee shall consider preventive measures to minimize the potential exposure of all significant materials to precipitation and storm water runoff. The permittee should consider the implementation of the following measures, or equivalent measures, to reduce the exposure of all materials to storm water.

(a) Relocating all materials, including raw materials, intermediate products, material handling equipment, obsolete equipment, and wastes currently stored outside to inside locations.

(b) Establishment of a schedule for removal of wastes and obsolete equipment to minimize the volume of these materials stored onsite that may be exposed to storm water.

(c) Substitution of less hazardous materials, or materials less likely to contaminate storm water, or substitution of recyclable materials for nonrecyclables wherever possible.

(d) Constructing permanent or semipermanent covers, or other similar forms of protection over stockpiled materials, material handling and processing equipment. Options include roofs, tarps, and other covers. This may also include the use of containment bins or covered dumpsters for raw materials, waste materials and nonrecyclable waste materials.

(e) Dikes, berms, curbs, trenches, or other equivalent measures to divert runon from material storage, processing, or waste disposal areas.

(3) Preventive Maintenance.

(a) A schedule for inspection and maintenance of all particulate emissions control equipment should be established to ensure proper operation. Detection of any leaks or defects that could lead to excessive emissions shall be repaired as soon as practicable. Where significant settling or deposition from process emissions are observed during proper operation of existing equipment, the permittee shall consider ways to reduce these emissions including but not limited to: upgrading or replacing existing equipment; collecting runoff from areas of deposition for treatment or recycling; or changes in materials or processes to reduce the generation of particulate matter.

(b) Structural Best Management Practices (BMPs) will be visually inspected for signs of washout, excessive sedimentation, deterioration, damage, or overflowing, and shall be repaired or maintained as soon as practicable.

(4) Inspections. Inspections shall address, at a minimum, the following areas where applicable:

(a) Air pollution control equipment such as baghouses, electrostatic precipitators, scrubbers, and cyclones, should be inspected on a routine basis for any signs of disrepair such as leaks, corrosion, or improper operation that could limit their efficiency and lead to excessive emissions. The permittee should consider monitoring air flow at inlets and outlets, or equivalent measures, to check for leaks or blockage in ducts. Visual inspections shall be made for corrosion, leaks, or signs of particulate deposition or visible emissions that could indicate leaks;

(b) All process or material handling equipment such as conveyors, cranes, and vehicles should be inspected for leaks, drips, etc. or for the potential loss of materials; and

(c) Material storage areas such as piles, bins or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks or drums, should be examined for signs of material losses due to wind or storm water runoff.

(5) Sediment and Erosion Control. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water

runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures which the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity shall be considered when determining reasonable and appropriate measures.

(6) Management of Runoff. Permittees shall consider implementation of the following storm water management practices or other equivalent measures to address pollutants of concern:

(a) Vegetative buffer strips, filter fabric fence, sediment filtering boom, or other equivalent measures, that effectively trap or remove sediment prior to discharge through an inlet or catch basin;

(b) Media filtration such as catch basin filters and sand filters;

(c) Oil/water separators or the equivalent; and

(d) Structural BMPs such as settling basins, sediment traps, retention or detention ponds, recycling ponds or other equivalent measures.

Sector G - Metal Mining (Ore Mining and Dressing) Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from active and inactive metal mining and ore dressing facilities (Standard Industrial Classification (SIC) Major Group 10) if the storm water 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, developing mines, or exploring for metallic minerals (ores) and also includes all ore dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately. For the purposes of this section, the term "metal mining" includes all ore mining and/or dressing and beneficiating operations, whether performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately. All storm water discharges from inactive metal mining facilities and storm water discharges from the following areas of active, and temporarily inactive, metal mining facilities are the only discharges covered by this requirement: waste rock/overburden piles outside the active mining area; topsoil piles; offsite haul/access roads if outside of the active mining area; haul/access roads constructed of waste rock/overburden if outside of the active mining area; onsite haul/access roads not constructed of waste rock/overburden/ spent ore except if mine water 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 outside the active mining area; 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 except if excessive contact with waste product; explosive storage; fuel storage; vehicle/equipment maintenance area/building; parking areas (if necessary); power plant; truck wash areas except when excessive contact with waste product; 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 bond. Note: Discharges from overburden/waste rock and overburden/waste rock-related areas are subject to 40 CFR Part 440 if the source of the drainage flows is within the "active mining area" and the resulting storm water flows drain to a point source. For such sources outside the active mining area, they are not subject to 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. With respect to surface mines, an "active metal mining facility" does not include any area of land on or in which grading has been completed to return the earth to a desired contour and reclamation work has begun.

"Inactive Metal Mining Facility" means a site or portion of a site where metal mining and/or milling activities occurred in the past but is not an active metal mining facility, as defined in this permit and that portion of the facility does not have an active mining permit issued by the applicable (federal or state) governmental agency.

"Temporarily Inactive Metal Mining Facility" means a site or portion of a site where metal mining and/or milling activities occurred in the past, but currently are not being actively undertaken, and the facility has an active mining permit issued by the applicable (federal or state) government agency that authorizes mining at the site.

(1) Effluent Limitations: NONE

(2) Analytical monitoring:

Active Copper Mines SIC 1021	TSS

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Mining Activities. A description of the mining and associated activities taking place at the site that affect or may affect storm water runoff intended to be covered by this permit. The description shall report the total acreage within the mine site, an estimate of the number of acres of disturbed land and an estimate of the total amount of land proposed to be disturbed throughout the life of the mine. A general description of the location of the mining site relative to major transportation routes and communities shall also be provided.

b. Description of Potential Pollutant Sources.

(1) Drainage. A site topographic map that indicates: 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 or any other process water; springs, streams, wetlands and other surface waters; and boundary of tributary areas that are subject to effluent limitations guidelines. Factors to consider include the mineralogy of the ore and waste rock (e.g., acid forming).

(2) Inventory of Exposed Materials. A summary of any existing ore or waste rock/overburden characterization data, including results of testing for acid rock generation potential. If the ore or waste rock/overburden characterization data are updated due to a change in the ore type being mined, the storm water pollution prevention plan shall be updated with the new data.

c. Measures and Controls.

(1) Inspections. Provisions for qualified personnel to inspect designated equipment and mine areas at least on a quarterly basis for active sites. For temporarily inactive sites, the inspections should be quarterly; however, inspections are not required when adverse weather conditions (e.g., snow) make the site inaccessible. All material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion control systems and sediment control devices shall also be inspected to determine if they are working properly. The use of a checklist developed by the facility is encouraged.

(2) Sediment and Erosion Control. The measures to consider include diversion of flow away from areas susceptible to erosion (such as interceptor dikes and swales; diversion dikes curbs and berms; pipe slope drains; subsurface drains; and 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), 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).

(3) Capping. Where capping of a contaminant source is necessary, the source being capped and materials and procedures used to cap the contaminant source must be identified. In some cases, the elimination of a pollution source through capping contaminant sources may be the most effective control measure for discharges from inactive ore mining and dressing facilities.

(4) Treatment. A description of how storm water will be treated prior to discharging to surface waters if treatment of a storm water discharge is necessary. Storm water treatments include the following: chemical/physical treatment; oil/water separators; and artificial wetlands.

(5) Storm Water Diversion. For inactive metal mining facilities, a description of how and where storm water will be diverted away from potential pollutant sources to prevent storm water contamination. Storm water diversions 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.

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 25-151-10. In rare instances, individual permits might be written for these discharges by DEQ. The requirements listed under this section apply to storm water discharges from coal mining-related areas (SIC Major Group 12) if: (i) they are not subject to effluent limitations guidelines under 40 CFR Part 434 (1998); or (ii) they are not subject to the standards of the Surface Mining Control and Reclamation Act of 1977 (SMCRA) (91 USC 445 et seq.) and the Virginia Department of Mines, Minerals and Energy's individual permit requirements. The requirements of this section only 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 monitoring:

Coal Mines and Coal Mine-Related Facilities SIC Major group 12 (**should be permitted by DMME or under general VPDES**)	Al, Fe, TSS

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include at a minimum, the following items.

a. <u>Description of Potential Pollutant Sources.</u>

(1) Drainage. A site map that indicate drainage areas and storm water outfalls. These shall include but not be limited to the following:

(a) Drainage direction and discharge points from all applicable mining-related areas, including culvert and sump discharges from roads and rail beds and also from equipment and maintenance areas subject to storm runoff of fuel, lubricants and other potentially harmful liquids;

(b) Locations exposed to precipitation that contain acidic spoil, refuse or unreclaimed disturbed areas; and

(c) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

(2) Risk Identification and Summary of Potential Pollutant Sources. A narrative 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 or spoil. Specific potential pollutants shall be identified, where known.

b. Measures and Controls.

(1) Good Housekeeping. Good housekeeping requires the maintenance of areas that may contribute pollutants to storm water discharges in a clean, orderly manner. These would be practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff; conservation of vegetation where possible to minimize erosion; watering of haul roads to minimize dust generation; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; or other equivalent measures.

(2) Preventive Maintenance. Where applicable, such measures would include the following: removal and proper disposal of settled solids in catch basins to allow sufficient retention capacity; periodic replacement of siltation control measures subject to deterioration such as straw bales; 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.

(3) Sediment and Erosion Control. The following sediment and erosion control measures or other equivalent measures, should be included in the plan where reasonable and appropriate for all areas subject to storm water runoff.

(a) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic road surfacing material; and protective trees.

(b) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

(c) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

Sector I - Oil and Gas Extraction Facilities and Petroleum Refineries.

Discharges Covered Under This Section. This permit condition covers all existing point source discharges of storm water associated with industrial activity to surface waters from oil and gas facilities listed under Standard Industrial Classification (SIC) Major Group 13 which have had a discharge of a reportable quantity of oil or a hazardous substance for which notification is required under either 40 CFR 110.6, 40 CFR 117.21 or 40 CFR 302.6 (1998). 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 that are subject to nationally established BAT or BPT guidelines found at 40 CFR Part 419 (1998) and 40 CFR Part 435 (1998) respectively are not included. Note that areas eligible for coverage at petroleum refineries will be very limited because the term "contaminated runoff", as defined under 40 CFR 419.11 (1998), includes "... runoff which comes into contact with any raw material, intermediate product, finished product, by-product or waste product located on petroleum refinery property." Areas at petroleum refineries which may be eligible for permit coverage, provided discharges from these areas are not co-mingled with "contaminated runoff", include: vehicle and equipment storage, maintenance and refueling areas. Most areas at refineries will not be eligible for coverage including: raw material, intermediate product, finished product, by-product, waste material, chemical, and material storage areas; loading and unloading areas; transmission pipelines, and, processing areas.

(1) Effluent Limitations: NONE

(2) Analytical Monitoring: NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. The site map will indicate all areas subject to the effluent guidelines requirement of "No Discharge" in accordance with 40 CFR Part 435.32 (1998) and the existing structural controls to achieve compliance with the "No Discharge" requirement.

(2) Risk Identification and Summary of Potential Pollutant Sources.

(a) The plan shall include a narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; chemical, cement, mud or gel mixing activities; outdoor manufacturing or processing activities; drilling or mining activities; significant dust or particulate generating processes; and onsite waste disposal practices, equipment cleaning and rehabilitation activities. List any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, etc.) of concern shall be identified.

(b) In its description of potential pollutant sources, the plan must include information about the reportable quantities release which triggered the permit application requirements. Such information must include: 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 as well as lack of containment in area); area affected by release, including land and waters; procedure to cleanup release; actions or procedures implemented to prevent or better respond to a release; and remaining potential contamination of storm water from release. The analysis shall take into account human health risks, the control of drinking water intakes, and the designated uses of the receiving stream.

b. Measures and Controls.

(1) Inspections. Equipment and vehicles which store, mix or transport hazardous materials will be inspected routinely, but not less than quarterly. 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. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.

(2) Sediment and Erosion Control. Unless covered by another VPDES permit, the additional erosion control requirement for well drillings oil, sand, and 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, the location of major control structures identified in the plan, and surface waters; and v) The name of the receiving water(s) and the ultimate receiving water(s) of the runoff.

(b) Controls. The pollution prevention plan shall include a description of controls appropriate for the activity and implement such controls. The description of controls shall address the following minimum components: i) 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 seeding, permanent seeding, mulching, sod stabilization, vegetative buffer strips, protection of trees, or other equivalent measures. The permittee shall initiate appropriate vegetative practices on all disturbed areas within 14 calendar days of the last activity at that area; ii) A description of structural practices that, to the degree attainable, divert flows from exposed soils, store flows or otherwise limit runoff from exposed areas of the site. Such practices may include straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders storm drain inlet protection, rock outlet protection, sediment traps, temporary sediment basins, or other equivalent measures; iii) Offsite vehicle tracking of sediments shall be minimized; iv) Procedures in a plan shall provide that all erosion controls on the site are inspected at least once every 7 calendar days. Weekly inspections are necessary to ensure erosion controls continue to effectively reduce the amount of sediment carried offsite. A silt fence or silt trap is no longer effective when filled with silt.

(3) Reportable Quantity (RQ) Release. The permittee must describe the measures taken to clean up RQ releases or related spills of materials, as well as measures proposed to avoid future releases of RQs. Such measures may include, among others: improved handling or storage techniques; containment around handling areas of liquid materials; and use of improved spill cleanup materials and techniques.

(4) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting or having completed maintenance must be confined to designated areas (delineated on the site map). The plan must describe measures that prevent or minimize contamination of the storm water runoff from these areas. The plan may consider the use of drip pans under vehicles and equipment, indoor storage of the vehicles and equipment, installation of berming and diking of this area, or other equivalent measures.

(5) Vehicle and Equipment Cleaning and Maintenance Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment cleaning. The plan may consider performing all cleaning operations indoors, covering the cleaning operation, ensuring that all washwaters drain to a sanitary sewer, and/or collecting the storm water runoff from the cleaning area and providing treatment or recycling. The discharge of vehicle and equipment wash waters, including tank cleaning operations, are not authorized by this permit and must be authorized under separate requirements in this VPDES permit or discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.

The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment maintenance and rehabilitation. The plan may consider performing all maintenance activities indoors, using drip pans, 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 where the practice would result in the exposure of pollutants to storm water, using dry cleanup methods, collecting the storm water runoff from the maintenance area and providing treatment or recycling, or other equivalent measures.

(6) Materials and Chemical Storage Areas. Storage units of all chemicals and materials (e.g., fuels, oils, used filters, spent solvents, paint wastes, radiator fluids, transmission fluids, hydraulic fluids, detergents drilling mud components, acids, organic additives) must be maintained in good condition so as

to prevent contamination of storm water. Hazardous materials must be plainly labeled. The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The plan may consider indoor storage of the materials and/or installation of berming and diking at the area.

(7) Chemical Mixing Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from chemical mixing areas. The plan may consider covering the mixing area, using spill and overflow protection, minimizing runon of storm water to the mixing area, using dry cleanup methods, and/or collecting the storm water runoff and providing treatment or recycling. The plan may consider installation of berming and diking of the area.

Sector J - Hazardous Waste Treatment, Storage or Disposal Facilities

Discharges Covered Under This Section. This permit condition covers all existing point source discharges of storm water associated with hazardous waste treatment, storage and disposal facilities as listed in SIC 4953 or as defined under RCRA Subtitle C.

(1) Effluent Limitations: Runoff from landfills subject to 40 CFR Parts 264 or 265

BOD5	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 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) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS NONE

Sector K - Landfills, Land Application Sites and Open Dumps .

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. Open dumps are solid waste disposal units that are not in compliance with Sate/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. Storm water discharges associated with industrial activities from inactive landfills, land application sites, and open dumps occurring on Federal lands where an owner cannot be identified are ineligible for coverage under this permit.

(1) Effluent Limitations: Runoff from landfills subject to 40 CFR Parts 257 or 258

BOD5	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.	

(2) Analytical monitoring:

All Landfills, Land Application Sites and Open Dumps SIC 4953 or RCRA subtitle D TSS

All Landfills, Land Application Sites and Open Dumps, <u>except</u> areas closed in accordance with Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq. Fe

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements in **Part B**, the plan shall include, at a minimum, the following items.

a. <u>Description of Potential Pollutant Sources</u>.

(1) Drainage. A site map indicating locations of active and closed landfill cells or trenches, locations of 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 locations of any leachate collection and handling systems.

(2) Risk Identification and Summary of Potential Pollutant Sources. Include a narrative description of potential pollutant sources associated with any of the following, 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, land application, or open dumping areas; uncontrolled leachate flows; failure or leaks from leachate collection and treatment systems; haul roads; and vehicle tracking of sediments.

b. <u>Measures and Controls.</u>

(1) Preventive Maintenance. Where applicable, permittees addressed by this section shall also: i) maintain containers used for outdoor chemical and significant materials storage to prevent leaking or rupture; ii) maintain all elements of leachate collection and treatment systems to prevent commingling of leachate with storm water; and iii) maintain 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) Inspections.

(a) For operating landfills, open dumps, and land application sites, qualified personnel shall inspect areas of landfills and open dumps 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.

(b) For inactive landfills, open dumps, and land application sites, 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.

(3) 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.

(4) Sediment and Erosion Control. 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.

Sector L - Automobile Salvage Yards.

Discharges Covered Under This Section. The requirements of this section apply to point source discharges of storm water associated with industrial activity from facilities engaged in dismantling or wrecking used motor vehicles for parts recycling or resale and for scrap (Standard Industrial Classification (SIC) Code 5015).

(1) Effluent Limitations: NONE

(2) Analytical monitoring:

Automobile Salvage Yards SIC 5015	TSS, Al, Fe, Pb

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items:

a. Description of Potential Pollutant Sources.

(1) Drainage. The map must include an estimation (in acres) of the total area used for industrial activity including, but not limited to, dismantling, storage, and maintenance of used motor vehicles and motor vehicle parts. The map must also indicate the location of the following activities where such activities are exposed to precipitation: vehicle storage areas; dismantling areas; parts storage areas, including engine blocks, tires, hub caps, batteries, hoods, and mufflers; fueling stations; vehicle and equipment maintenance areas; cleaning areas (parts, vehicles, and/or equipment); loading and unloading areas; locations used for the treatment, storage, and disposal of wastes; and liquid storage tanks and drums for fuel and other fluids.

(2) Summary of Potential Pollutant Sources. In conducting the assessment, the permittee must consider the potential for the following activities to contribute pollutants: vehicle storage areas; dismantling areas; parts storage areas, including engine blocks, tires, hub caps, batteries, and hoods; fueling stations; vehicle and equipment maintenance areas; cleaning areas (parts and vehicles and/or equipment); loading/unloading areas; locations used for the treatment, storage, and disposal of wastes; and liquid storage tanks and drums for fuel and other fluids.

b. Measures and Controls. The pollution prevention plan must discuss the reasons each selected control or practice is appropriate for the facility and how each will address the potential sources of storm water pollution. The plan also must include a schedule specifying the time or times during

which each control or practice will be implemented. In addition, the plan should discuss ways in which the controls and practices relate to one another and, when taken as a whole, produce an integrated and consistent approach for preventing or controlling potential storm water contamination problems.

(1) Preventive Maintenance. The maintenance program shall include periodic removal of debris from discharge diversions, conveyance systems, and impoundments/ponds. These activities should be conducted in the spring, after snow melt, and during the fall season. Maintenance schedules for sedimentation/impoundments must be provided in the pollution prevention plan.

(2) Spill and Leak Prevention and Response Procedures. After clean up from a spill, absorbants must be promptly placed in containers for proper disposal. 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 must be taken to prevent leaks or spills of fluids including motor oil, transmission fluid, fuel and antifreeze.

(3) Inspections. Upon arrival at the site, or as soon as feasible thereafter, vehicles must be inspected for leaks. Any equipment containing oily parts, hydraulic fluids, or any other types of fluids shall be inspected at least quarterly (four times per year) for signs of leaks. Any outdoor storage of fluids including, but not limited to, brake fluid, transmission fluid, radiator water, and antifreeze, must be inspected at least quarterly for leaks. All outdoor liquid storage containers (e.g., tanks, drums) must be inspected at least quarterly for leaks.

Qualified facility personnel are required to conduct quarterly visual inspections of BMPs. The inspections shall include: 1) an assessment of the integrity of storm water flow diversion and source minimization systems; 2) visual inspections of dismantling areas, vehicle and equipment maintenance areas, vehicle, equipment, and parts cleaning and storage areas, and other potential sources of pollution for evidence of actual or potential pollutant discharges of contaminated storm water.

(4) Employee Training. Employee training must, 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, and solvents; spill prevention and response; fueling procedures; good housekeeping practices; and used battery management.

(5) Management of Runoff. The plan must consider management practices, such as berms or drainage ditches on the property line, that may be used to prevent runon from neighboring properties. Berms must be considered for uncovered outdoor storage of oily parts, engine blocks, and above ground liquid storage. The installation of detention ponds must also be considered. The permittee shall consider the installation of a filtering device to receive runoff from industrial areas. The installation of oil/water separators must also be considered.

Sector M - Scrap Recycling and Waste Recycling Facilities.

Discharges Covered Under This Section. The requirements listed under this section are applicable to storm water discharges from the following activities: 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). 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) are also covered under this section. Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from nonindustrial and residential sources (also identified as SIC 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).

(1) Effluent Limitations: NONE

(2) Analytical monitoring:

Scrap Recycling and Waste and Recycling Facilities SIC 5093 TSS, Al, Cu, Cd, Cr, Fe, Pb, Zn

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the following general requirements for the storm water pollution prevention plan are applicable to activities which reclaim and recycle either recyclable nonliquid and liquid waste materials. In addition to the general requirements, **Part C 3 b (1)** identifies special requirements for scrap recycling and waste recycling facilities (nonsource-separated facilities) that handle nonliquid wastes. **Part C 3 b (2)** identifies special requirements for waste recycling facilities that handle only liquid wastes. **Part C 3 b (3)** identifies special requirements for recycling facilities, including MRFs, that receive only source-separated recyclable materials primarily from nonindustrial and residential sources. The plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Drainage. A site map indicating locations where significant materials are exposed to precipitation including scrap and waste material storage and outdoor scrap and waste processing equipment. Scrap recycling facilities that handle turnings that have been previously exposed to cutting fluids will delineate these containment areas as required in **Part C 3 b (1) (c).**

b. Measures and Controls.

(1) Scrap and Waste Recycling Facilities (nonsource-separated, nonliquid recyclable wastes). The following special conditions have been established for the pollution prevention plan for those scrap and waste recycling facilities that receive, process and provide wholesale distribution of nonliquid recyclable wastes, (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). This section of the permit is intended to distinguish waste recycling facilities that receive both nonrecyclable and recyclable materials from those recycling facilities that only accept recyclable materials primarily from nonindustrial and residential sources. Under the description of measures and controls in the storm water pollution prevention plan, the plan will address all areas that have a reasonable potential to contribute pollutants to storm water discharges and will be maintained in a clean and orderly manner. At a minimum, the plan will address the following activities and areas within the plan.

(a) 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. At a minimum, the plan shall address the following: i) Provision of information/education flyers, brochures and pamphlets to encourage suppliers of scrap and recyclable waste materials to drain residual fluids, whenever applicable, prior to its arrival at the facility. This includes vehicles and equipment engines, radiators, and transmissions, oil-filled transformers, and individual containers or drums; ii) Activities which accept scrap and materials that may contain residual fluids (e.g., automotive engines containing used oil, transmission fluids, etc.), shall describe procedures to minimize the potential for these fluids from coming in contact with either precipitation or runoff. The description shall also identify measures or procedures to properly store, handle and dispose of these residual fluids; iii) Procedures pertaining to the acceptance of scrap lead-acid batteries. Additional requirements for the handling, storage and disposal or recycling of batteries shall be in conformance with conditions for a scrap lead-acid battery program; iv) A description of training requirements for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and v) Liquid wastes, including used oil, shall be stored in materially compatible and nonleaking containers and disposed or recycled in accordance with all requirements under the Resource Recovery and Conservation Act (RCRA), and other state or local requirements.

(b) Scrap and Waste Material Stockpiles/Storage (outdoors). The plan shall address areas where significant materials are exposed to either storm water runoff or precipitation. The plan must describe those measures and controls used to minimize contact of storm water runoff with stockpiled materials, processed materials and nonrecyclable wastes. The plan should include measures to minimize the extent of storm water contamination from these areas. The permittee may consider the use of permanent or semipermanent covers, or other similar forms of protection over stockpiled materials where

the permittee determines that such measures are reasonable and appropriate. The permittee may consider the use of sediment traps, vegetated swales and strips, to facilitate settling or filtering out of pollutants.

The permittee shall consider within the plan the use of the following BMPs (either individually or in combination) or their equivalent to minimize contact with storm water runoff: i) Promoting the diversion of runoff away from these areas through such practices as dikes, berms, containment trenches, culverts and/or surface grading; ii) Media filtration such as catch basin filters and sand filters; iii) Silt fencing; and iv) Oil/water separators, sumps and dry adsorbents in stockpile areas that are potential sources of residual fluids (e.g., automotive engine storage areas).

(c) Stockpiling of Turnings Previously Exposed to Cutting Fluids (outdoors). The plan shall address all areas where stockpiling of industrial turnings previously exposed to cutting fluids occurs. The plan shall implement those measures necessary to minimize contact of surface runoff with residual cutting fluids. The permittee shall consider implementation of either of the following two alternatives or a combination of both or equivalent measures: i) Alternative 1: Storage of all turnings previously exposed to cutting fluids under some form of permanent or semi-permanent cover. Discharges of residual fluids from these areas to the storm sewer system in the absence of a storm event is prohibited. Discharges to the storm sewer system as a consequence of a storm event is permitted provided the discharge is first directed through 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; or ii) Alternative 2: Establish dedicated containment areas for all turnings that have been exposed to cutting fluids where runoff from these areas is directed to a storm sewer system, providing the following: i) containment areas constructed of either concrete, asphalt or other equivalent type of impermeable material; ii) a perimeter around containment areas to prevent runoff from moving across these areas. This would include the use of shallow berms, curbing, or constructing an elevated pad or other equivalent measure; iii) a suitable drainage collection system to collect all runoff generated from within containment areas. At a minimum, the drainage system shall include a plate-type oil/water separator or its equivalent. The oil/water separator or its equivalent shall be installed according to the manufacturer's recommended specifications, whenever available, specifications will be kept with the plan; iv) a schedule to maintain the oil/water separator (or its equivalent) to prevent the accumulation of appreciable amounts of fluids. In the absence of a storm event, no discharge from containment areas to the storm sewer system are allowed unless covered by separate requirements in this VPDES permit; and v) identify procedures for the proper disposal or recycling of collected residual fluids.

(d) Scrap and Waste Material Stockpiles/Storage (covered or indoor storage). The plan shall address measures and controls to minimize residual liquids and accumulated particulate matter, originating from scrap and recyclable waste materials stored indoors or under cover, from coming in contact with surface runoff. The permittee shall consider including in the plan the following or equivalent measures: i) Good housekeeping measures, including the use of dry absorbent or wet vacuum clean up methods, to collect, handle, store and dispose or recycle residual liquids originating from recyclable containers (e.g., beverage containers, paint cans, household cleaning products containers, etc.); ii) Prohibiting the practice of allowing washwater from tipping floors or other processing areas from discharging to any portion of a storm sewer system; and iii) Disconnecting or sealing off all existing floor drains connected to any portion of the storm sewer system.

(e) Scrap and Recyclable Waste Processing Areas. The plan shall address areas where scrap and waste processing equipment are sited. This includes 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 good housekeeping and preventive maintenance measures to minimize contact of runoff with residual fluids and accumulated particulate matter. At a minimum, the permittee shall consider including in the plan the following or other equivalent measures: i) A schedule of periodic inspections of equipment for leaks, spills, malfunctioning, worn or corroded parts or equipment; ii) Preventive maintenance program to repair and/or maintain processing equipment; iii) Measures to minimize shredder fluff from coming in contact with surface runoff; iv) Use of dry-absorbents or other cleanup practices to collect and to dispose or recycle spilled or leaking fluids; v) 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.

The permittee shall consider employing the following additional BMPs or equivalent measures: diversion structures such as dikes, berms, culverts, containment trenches, elevated concrete pads, grading to minimize contact of storm water runoff with outdoor processing equipment; oil/water separators, sumps or equivalent, in processing areas that are potential sources of residual fluids and grease; permanent or semipermanent covers, or other similar measures; retention and detention basins or ponds, sediment traps or vegetated swales and strips, to facilitate settling or filtering out of pollutants in runoff from processing areas; or media filtration such as catch basin filters and sand filters.

(f) Scrap Lead-Acid Battery Program. The plan shall address measures and controls for the proper handling, storage and disposition of scrap lead-acid batteries (note. this permit does apply to the reclaiming of scrap lead-acid batteries, i.e., breaking up battery casings to recover lead). The permittee shall consider including in the plan the following or equivalent measures: i) Segregating all scrap lead-acid batteries from other scrap materials; ii) A description of procedures and/or measures for the handling, storage and proper disposal of cracked or broken batteries; iii) A description of measures to collect and dispose of leaking battery fluid (lead-acid); iv) A description of measures to minimize and, whenever possible, eliminate exposure of scrap lead-acid batteries to precipitation or runoff; and v) A description of employee training for the management of scrap batteries.

(g) Erosion and Sediment Control. The plan shall identify all areas associated with industrial activity that have a high potential for soil erosion and suspended solids loadings (i.e., areas that tend to accumulate significant particulate matter). Appropriate source control, stabilization measures, nonstructural, structural controls or an equivalent shall be provided in these areas. The plan shall also contain a narrative discussion of the reason(s) for selected erosion and sediment controls. At a minimum, the permittee shall consider in the plan, either individually or in combination, the following erosion and sediment control measures: i) Filtering or diversion practices, such as filter fabric fence, sediment filter boom, earthen or gravel berms, curbing or other equivalent measure; ii) Catch basin filters, filter fabric fence, or equivalent measure, place in or around inlets or catch basins that receive runoff from scrap and waste storage areas, and processing equipment; or iii) Sediment traps, vegetative buffer strips, or equivalent, to remove sediment prior to discharge through an inlet or catch basin.

(h) Structural Controls for Sediment and Erosion Control. In instances where significant erosion and suspended solids loadings continue after installation of one or more BMPs, the permittee shall consider providing in the plan for a detention or retention basin or other equivalent structural control. All structural controls shall be designed using good engineering practice. All structural controls and outlets that are likely to receive discharges containing oil and grease must include appropriate measures to minimize the discharge of oil and grease through the outlet. This may include the use of an absorbent boom or other equivalent measures.

Where space limitations (e.g., obstructions caused by permanent structures such as buildings and permanently-sited processing equipment and limitations caused by a restrictive property boundary) prevent the siting of a structural control (e.g., retention basin), such a determination will be noted in the plan. The permittee will identify in the plan what existing practices shall be modified or additional measures shall be undertaken to minimize erosion and suspended sediment loadings in lieu of a structural BMP.

(i) Spill Prevention and Response Procedures. To prevent or minimize storm water contamination at loading and unloading areas, and from equipment or container failures, the permittee shall consider including in the plan the following practices: i) Description of spill prevention and response measures to address areas that are potential sources of leaks or spills of fluids; ii) Leaks and spills should be contained and cleaned up as soon as possible. If malfunctioning equipment is responsible for the spill or leak, repairs should also be conducted as soon as possible; iii) Cleanup procedures should be identified in the plan, including the use of dry absorbent materials or other cleanup methods. Where dry absorbent cleanup methods are used, an adequate supply of dry absorbent material should be maintained onsite. Used absorbent material should be disposed of properly; iv) Drums containing liquids, including oil and lubricants, should be stored indoors; or in a bermed area; or in overpack containers or spill pallets; or in

similar containment devices; v) Overfill prevention devices should be installed on all fuel pumps or tanks; vi) Drip pans or equivalent measures should be placed under any leaking piece of stationary equipment until the leak is repaired. The drip pans should be inspected for leaks and checked for potential overflow and emptied regularly to prevent overflow and all liquids will be disposed of in accordance with all requirements under RCRA; and vii) An alarm and/or pump shut off system should be installed and maintained on all outside equipment with hydraulic reservoirs exceeding 150 gallons (only those reservoirs not directly visible by the operator of the equipment) 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. Leaking hydraulic fluids should be disposed of in accordance with all requirements under RCRA.

(j) Quarterly Inspection Program. A quarterly inspection shall include all designated areas of the facility and equipment identified in the plan. The inspection shall include a means of tracking and conducting follow up actions based on the results of the inspection. The inspections shall be conducted by members of the Storm Water Pollution Prevention team. At a minimum, quarterly inspections shall include the following areas: all outdoor scrap processing areas; all material unloading and loading areas (including rail sidings) that are exposed to either precipitation or storm water runoff; areas where structural BMPs have been installed; all erosion and sediment BMPs; outdoor vehicle and equipment maintenance areas; vehicle and equipment fueling areas; and all areas where waste is generated, received, stored, treated, or disposed and which are exposed to either precipitation or storm water runoff.

The objective of the inspection shall be to identify any corroded or leaking containers, corroded or leaking pipes, leaking or improperly closed valves and valve fittings, leaking pumps and/or hose connections, and deterioration in diversionary or containment structures that are exposed to precipitation or storm water runoff. Spills or leaks identified during the visual inspection shall be immediately addressed. Structural BMPs shall be visually inspected for signs of washout, breakage, deterioration, damage, or overflowing and breaks shall be repaired or replaced as expeditiously as possible.

(k) Employee Training. At a minimum, storm water control training appropriate to their job function shall be provided for truck drivers, scale operators, supervisors, buyers and other operating personnel. The plan shall include a proposed schedule for the training. The employee training program shall address at a minimum: BMPs and other requirements of the plan; proper scrap inspection, handling and storage procedures; procedures to follow in the event of a spill, leak, or break in any structural BMP. A training and education program shall be developed for employees and for suppliers for implementing appropriate activities identified in the storm water pollution prevention plan.

(l) Supplier Notification. The plan shall include a supplier notification program that will be applicable to major suppliers and shall include: description of scrap materials that will not be accepted at the facility or that are accepted only under certain conditions.

(2) Waste Recycling Facilities (liquid recyclable wastes). The following special conditions have been established for the pollution prevention plan for those facilities that reclaim and recycle liquid wastes (e.g., used oil, antifreeze, mineral spirits, and industrial solvents). For these facilities, the storm water pollution prevention plan shall address all areas that have a reasonable potential to contribute pollutants to storm water discharges and will be maintained in a clean and orderly manner. At a minimum, the plan shall address the following activities and areas within the plan.

(a) Waste Material Storage (indoors). The plan shall address measures and controls to minimize/eliminate residual liquids from waste materials stored indoors from coming in contact with surface runoff. The plan may refer to applicable portions of other existing plans such as SPCC plans required under 40 CFR Part 112 (1998). At a minimum, the permittee shall consider including in the plan the following: i) Procedures for material handling (including labeling and marking); ii) A sufficient supply of dry-absorbent materials or a wet vacuum system to collect spilled or leaked materials; iii) An appropriate containment structure, such as trenches, curbing, gutters or other equivalent measures; and (iv) A drainage system to handle discharges from diked or bermed areas. The drainage system should include appurtenances, (e.g., pumps or ejectors, manually operated valves). Drainage should be

discharged to an appropriate treatment facility, sanitary sewer system, or otherwise disposed of properly. Discharges from these areas shall be covered by separate requirements in this VPDES permit or industrial user permit under the pretreatment program.

(b) Waste Material Storage (outdoors). The plan shall address areas where waste materials are exposed to either storm water runoff or precipitation. The plan shall include measures to provide appropriate containment, drainage control and other appropriate diversionary structures. The plan may refer to applicable portions of other existing plans such as SPCC plans required under 40 CFR Part 112. At a minimum, the plan shall describe those measures and controls used to minimize contact of storm water runoff with stored materials. The permittee shall consider including in the plan the following preventative measures, or an equivalent: i) An appropriate containment structure such as dikes, berms, curbing or pits, or other equivalent measures. The containment should be sufficient to store the volume of the largest single tank and should include sufficient freeboard for precipitation; ii) A sufficient supply of dry-absorbent materials or a wet vacuum system, or other equivalent measure, to collect liquids from minor spills and leaks in contained areas; and iii) Discharges of precipitation from containment areas containing used oil shall be in accordance with applicable sections of 40 CFR Part 112.

(c) Truck and Rail Car Waste Transfer Areas. The plan shall describe measures and controls for truck and rail car loading and unloading areas. This includes appropriate containment and diversionary structures to minimize contact with precipitation or storm water runoff. The plan shall also address measures to clean up minor spills and/or leaks originating from the transfer of liquid wastes. This may include the use of dry-clean up methods, roof coverings, runoff controls, or other equivalent measures.

(d) Erosion and Sediment Control. The plan shall identify all areas associated with industrial activity that have a high potential for soil erosion. Appropriate stabilization measures, nonstructural and structural controls shall be provided in these areas. The plan shall contain a narrative consideration of the appropriateness for selected erosion and sediment controls. Where applicable, the plan shall consider the use of the following types of preventive measures: sediment traps; vegetative buffer strips; filter fabric fence; sediment filtering boom; gravel outlet protection; or other equivalent measures that effectively trap or remove sediment prior to discharge through an inlet or catch basin.

(e) Spill Prevention and Response Procedures. The plan shall address measures and procedures to address potential spill scenarios that could occur at the facility. This includes all applicable handling and storage procedures, containment and/or diversion equipment, and clean-up procedures. The plan shall specifically address all outdoor and indoor storage areas, waste transfer areas, material receiving areas (loading and unloading), and waste disposal areas.

(f) Quarterly Inspections. Quarterly visual inspections shall be conducted by a member, or members, of the storm water pollution prevention team. The quarterly inspection shall include all designated areas of the facility and equipment identified in the plan. The inspection shall include a means of tracking and conducting follow up actions based on the results of the inspection. At a minimum, the inspections shall include the following areas: material storage areas; material unloading and loading areas (including rail sidings) that are exposed to either precipitation or storm water runoff; areas where structural BMPs have been installed; all erosion and sediment BMPs; outdoor vehicle and equipment maintenance areas (if applicable); vehicle and equipment fueling areas (if applicable); and all areas where waste is generated, received, stored, treated, or disposed and which are exposed to either precipitation or storm water runoff.

The inspection shall identify the presence of any corroded or leaking containers, corroded or leaking pipes, leaking or improperly closed valves and valve fittings, leaking pumps and/or hose connections, and deterioration in diversionary or containment structures that are exposed to precipitation or storm water runoff. Spills or leaks shall be immediately addressed according to the facility's spill prevention and response procedures.

(3) Recycling Facilities (source separated materials). The following special conditions have been established for the pollution prevention plan for recycling facilities, including MRFs, that receive only source-separated recyclable materials primarily from nonindustrial and residential sources.

(a) Inbound Recyclable Material Control Program. The plan shall include a recyclable material inspection program to minimize the likelihood of receiving nonrecyclable materials (e.g., hazardous materials) that may be a significant source of pollutants in surface runoff. At a minimum, the permittee shall consider addressing in the plan the following: i) A description of information and education measures to educate the appropriate suppliers of recyclable materials on the types of recyclable materials that are acceptable and those that are not acceptable (e.g., household hazardous wastes); ii) A description of training requirements for drivers responsible for pickup of recyclable materials; iii) Clearly mark public drop-off containers as to what materials can be accepted; iv) Rejecting nonrecyclable wastes or household hazardous wastes at the source; and v) A description of procedures for the handling and disposal of nonrecyclable materials.

(b) Outdoor Storage. The plan shall include BMPs to minimize or reduce the exposure of recyclable materials to surface runoff and precipitation. The plan, at a minimum, shall include good housekeeping measures to prevent the accumulation of visible quantities of residual particulate matter and fluids, particularly in high traffic areas. The plan shall consider tarpaulins or their equivalent to be used to cover exposed bales of recyclable waste paper. The permittee shall consider within the plan the use of the following types of BMPs (individually or in combination) or their equivalent, where practicable: i) Provide totally-enclosed drop-off containers for public; ii) Provide a sump and sump pump with each containment pit. Discharge collected fluids to sanitary sewer system. Prevent discharging to the storm sewer system; iii) Provide dikes and curbs for secondary containment (i.e., around bales of recyclable waste paper); iv) Divert surface runoff away from outside material storage areas; v) Provide covers over containment bins, dumpsters, roll-off boxes; and vi) Store the equivalent one day's volume of recyclable materials indoors.

(c) Indoor Storage and Material Processing. The plan shall address BMPs to minimize the release of pollutants from indoor storage and processing areas to the storm sewer system. The plan shall establish specific measures to ensure that all floor drains do not discharge to the storm sewer system. The following BMPs shall be considered for inclusion in the plan: i) Schedule routine good housekeeping measures for all storage and processing areas; ii) Prohibit a practice of allowing tipping floor washwaters from draining to any portion of the storm sewer system; and iii) Provide employee training on pollution prevention practices.

(d) Vehicle and Equipment Maintenance. The plan shall also provide for BMPs in those areas where vehicle and equipment maintenance is occurring outdoors. At a minimum, the following BMPs or equivalent measures shall be considered for inclusion in the plan: i) Prohibit vehicle and equipment washwater from discharging to the storm sewer system; ii) Minimize or eliminate outdoor maintenance areas, wherever possible; iii) Establish spill prevention and clean-up procedures in fueling areas; iv) Provide employee training on avoiding topping off fuel tanks; v) Divert runoff from fueling areas; vi) Store lubricants and hydraulic fluids indoors; and vii) Provide employee training on proper, handling, storage of hydraulic fluids and lubricants.

(4) Recordkeeping and Internal Reporting Procedures. The plan must address spills, monitoring, and BMP inspection and maintenance activities. BMPs which are ineffective must be reported and the date of their corrective action noted. Employees must report incidents of leaking fluids to facility management and these reports must be incorporated into the plan.

Sector N - Steam Electric Power Generating Facilities, Including Coal Handling Areas.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from steam electric power generating facilities, including coal handling areas. Nonstorm water discharges subject to effluent limitations guidelines are not covered by this permit. Storm water discharges from coal pile runoff subject to numeric 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 such as 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 co-generation

facilities are 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	50 mg/l daily maximum
pH	within the range 6.0 to 9.0 s.u.

(2) Analytical monitoring:

Steam Electric Power Generating Facilities SIC 4911 in part Fe

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Drainage. A site map which clearly outlines the locations of the following, as they apply to the facility: processing areas and buildings; treatment ponds; location of 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, fertilizers, and pesticides); landfills; location of construction sites; and locations of stock pile areas (such as coal piles and limestone piles).

b. Measures and Controls.

(1) Good Housekeeping. The following areas must be specifically addressed.

(a) Fugitive Dust Emissions. The plan must describe measures that prevent or minimize fugitive dust emissions from coal handling areas. The permittee shall consider establishing procedures to minimize offsite tracking of coal dust. To prevent offsite tracking the facility may consider 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 must describe measures that prevent or minimize contamination of storm water runoff from delivery vehicles arriving on the plant site. At a minimum the permittee should 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 or spillage from vehicles or containers, and ensure that proper protective measures are available for personnel and environment.

(c) Fuel Oil Unloading Areas. The plan must describe measures that prevent or minimize contamination of storm water runoff from fuel oil unloading areas. At a minimum the permittee must consider using the following measures, or an equivalent: i) Use containment curbs in unloading areas; ii) During deliveries station personnel familiar with spill prevention and response procedures must be present to ensure that any leaks or spills are immediately contained and cleaned up; and iii) Use spill and overflow protection (drip pans, drip diapers, and/or other containment devices shall be placed beneath fuel oil connectors to contain any spillage that may occur during deliveries or due to leaks at such connectors).

(d) Chemical Loading/Unloading Areas. The plan must describe measures that prevent or minimize the contamination of storm water runoff from chemical loading/unloading areas. Where practicable, chemical loading/unloading areas should be covered, and chemicals should be stored indoors. At a minimum the permittee must consider using the following measures or an equivalent: i) Use containment curbs at chemical loading/unloading areas to contain spills; and ii) During deliveries station personnel familiar with spill prevention and response procedures must be present to ensure that any leaks or spills are immediately contained and cleaned up.

(e) Miscellaneous Loading/Unloading Areas. The plan must describe measures that prevent or minimizes the contamination of storm water runoff from loading and unloading areas. The

plan may consider covering the loading area, minimizing storm water runon to the loading area by grading, berming, or curbing the area around the loading area to direct storm water away from the area, or locate the loading/unloading equipment and vehicles so that leaks can be contained in existing containment and flow diversion systems.

(f) Liquid Storage Tanks. The plan must describe measures that prevent or minimize contamination of storm water runoff from above ground liquid storage tanks. At a minimum the permittee must consider employing the following measures or an equivalent: i) Use protective guards around tanks; ii) Use containment curbs; iii) Use spill and overflow protection (drip pans, drip diapers, and/or other containment devices shall be placed beneath chemical connectors to contain any spillage that may occur during deliveries or due to leaks at such connectors); and iv) Use dry cleanup methods.

(g) Large Bulk Fuel Storage Tanks. The plan must describe measures that prevent or minimize contamination of storm water runoff from liquid storage tanks. At a minimum the permittee must consider employing the following measures, or an equivalent: i) Comply with applicable State and Federal laws, including Spill Prevention Control and Countermeasures (SPCC); and ii) Containment berms.

(h) The plan must describe measures to reduce the potential for an oil spill, or a chemical spill, or reference the appropriate section of their SPCC plan. At a minimum the structural integrity of all above ground 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 plan must describe measures to reduce the potential for storm water contamination from oil bearing equipment in switchyard areas. The permittee may consider level grades and gravel surfaces to retard flows and limit the spread of spills; 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 body or container. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds must be repaired as soon as practicable.

(k) Ash Loading Areas. Plant procedures shall be established to reduce and/or control the tracking of ash or residue from ash loading areas for example, where practicable, requirements to clear the ash building floor and immediately adjacent roadways of spillage, debris and excess water.

(l) Areas Adjacent to Disposal Ponds or Landfills. The plan must describe measures that prevent or minimize contamination of storm water runoff from areas adjacent to disposal ponds or landfills. The permittee must 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 must address landfills, scrapyards, surface impoundments, open dumps and general refuse sites.

(n) Maintenance Activities. For vehicle maintenance activities performed on the plant site, the permittee shall use the following BMPs where applicable: (i) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks must be confined to designated areas (delineated on the site map). The plan must describe measures that prevent or minimize contamination of the storm water runoff from these areas. The permittee shall consider the use of drip pans under vehicles and equipment, indoor storage of the vehicles and equipment, installation of berming and diking of this area, use of absorbents, roofing or covering storage areas, cleaning pavement surface to remove oil and grease, or other equivalent methods; (ii) Fueling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider covering the fueling area, using spill and overflow protection and cleanup equipment, minimizing runon/runoff of storm water to the fueling area, using dry cleanup methods, collecting the storm water runoff and providing treatment or recycling, or other equivalent

measures; (iii) Material Storage Areas. Storage units of all materials (e.g., used oil, used oil filters, spent solvents, paint wastes, radiator fluids, transmission fluids, hydraulic fluids) must be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil," "spent solvents," etc.). The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The permittee shall consider indoor storage of the materials, installation of berming and diking of the area, minimizing runon/runoff of storm water to the areas, using dry cleanup methods, collecting the storm water runoff and providing treatment, or other equivalent methods; (iv) Vehicle and Equipment Cleaning Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment cleaning. The permittee shall consider performing all cleaning operations indoors, covering the cleaning operation, ensuring that all washwaters drain to the intended collection system (i.e., not the storm water drainage system unless VPDES permitted), collecting the storm water runoff from the cleaning area and providing treatment or recycling, or other equivalent measures. The discharge of vehicle and equipment wash waters, including tank cleaning operations, are not covered under this section; and (v) Vehicle and Equipment Maintenance Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment maintenance. The permittee shall consider performing all maintenance activities indoors, using drip pans, maintaining 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, collecting the storm water runoff from the maintenance area and providing treatment or recycling, minimizing runon/runoff of storm water areas or other equivalent measures.

(o) Material Storage Areas. The plan must describe measures that prevent or minimize contamination of storm water from material storage areas (including areas used for temporary storage of miscellaneous products, and construction materials stored in lay down areas). The permittee may consider 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 the materials indoors, covering the material with a temporary covering made of polyethylene, polyurethane, polypropylene, or hypalon. Storm water runon may be minimized by constructing an enclosure or building a berm around the area.

(2) Inspections. Qualified facility personnel shall be identified to inspect the following areas: 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.

(3) Employee Training. Training should address topics such as goals of the pollution prevention plan, spill prevention and control, proper handling procedures for hazardous wastes, good housekeeping and material management practices, and storm water sampling techniques. The pollution prevention plan shall identify periodic dates for such training, but in all cases training must be held at least annually.

Sector O - Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and United States Postal Service Transportation Facilities.

Discharges Covered Under This Section. Storm water discharges from ground transportation facilities and rail transportation facilities (generally identified by Standard Industrial Classification (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 are covered by this section. Also covered under this section are facilities found under SIC code 4221 - 4225 (public warehousing and storage) that do not have vehicle and equipment maintenance shops and/or equipment cleaning operations but have areas (exclusive of access roads and rail lines)

where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products or industrial machinery are exposed to storm water.

(1) Effluent Limitations: NONE
(2) Analytical Monitoring: NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Measures and Controls.

(1) Good Housekeeping. All areas that may contribute pollutants to storm water discharges shall be maintained in a clean, orderly manner. The following areas must be specifically addressed.

(a) Vehicle and Equipment Storage Areas. The storage of vehicles and equipment awaiting maintenance with actual or potential fluid leaks must be confined to designated areas (delineated on the site map). The plan must describe measures that prevent or minimize contamination of the storm water runoff from these areas. The permittee shall consider the use of drip pans under vehicles and equipment, indoor storage of the vehicles and equipment, installation of berming and diking of this area, use of absorbents, roofing or covering storage areas, cleaning pavement surface to remove oil and grease, or other equivalent methods.

(b) Fueling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee shall consider covering the fueling area, using spill and overflow protection and cleanup equipment, minimizing runon/runoff of storm water to the fueling area, using dry cleanup methods, collecting the storm water runoff and providing treatment or recycling, or other equivalent measures.

(c) Material Storage Areas. Storage units of all materials (e.g., used oil, used oil filters, spent solvents, paint wastes, radiator fluids, transmission fluids, hydraulic fluids) must be maintained in good condition, so as to prevent contamination of storm water, and plainly labeled (e.g., "used oil," "spent solvents," etc.). The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The permittee shall consider indoor storage of the materials, installation of berming and diking of the area, minimizing runon/runoff of storm water to the areas, using dry cleanup methods, collecting the storm water runoff and providing treatment, or other equivalent methods.

(d) Vehicle and Equipment Cleaning Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment cleaning. The permittee shall consider performing all cleaning operations indoors, covering the cleaning operation, ensuring that all washwaters drain to the intended collection system (i.e., not the storm water drainage system unless VPDES permitted), collecting the storm water runoff from the cleaning area and providing treatment or recycling, or other equivalent measures. The discharge of vehicle and equipment wash waters, including tank cleaning operations, are not covered under this section.

(e) Vehicle and Equipment Maintenance Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for vehicle and equipment maintenance. The permittee shall consider performing all maintenance activities indoors, using drip pans, maintaining 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, collecting the storm water runoff from the maintenance area and providing treatment or recycling, minimizing runon/runoff of storm water areas or other equivalent measures.

(f) Locomotive Sanding (loading sand for traction) Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from areas used for locomotive sanding. The permittee shall consider covering sanding areas, minimizing storm water

runon/runoff, appropriate sediment removal practices to minimize the offsite transport of sanding material by storm water, or other equivalent measures.

(2) Inspections. The following areas shall be included in all inspections: storage area for vehicles and equipment awaiting maintenance, fueling areas, vehicle and equipment maintenance areas (both indoors and outdoors), material storage areas, vehicle and equipment cleaning areas, and loading and unloading areas. Follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained. The use of a checklist should be considered by the permittee.

(3) Employee Training. The pollution prevention plan shall identify how often training will take place; at a minimum, training must be held annually (once per calendar year). Employee training must, at a minimum, address the following areas when applicable to a facility: summary of the facility's pollution prevention plan requirements; used oil management; spent solvent management; spill prevention, response and control; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

Sector P - Water Transportation Facilities That Have Vehicle Maintenance Shops and/or Equipment Cleaning Operations.

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 monitoring:

Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities SIC Major Group 4412-4499	Al, Fe, Zn

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Drainage. A site map indicating the locations of the following activities where such activities are exposed to precipitation: fueling, engine maintenance and repair, vessel maintenance and 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).

b. Measures and Controls.

(1) Good Housekeeping. The following areas must be specifically addressed, when applicable at a facility.

(a) Pressure Washing Area. When pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by separate requirements in this VPDES permit. The pollution prevention plan must describe the measures to collect or contain the discharge from the pressure washing area, detail the method for the removal of the visible solids, describe the method of disposal of the collected solids, and identify where the discharge will be released (i.e., the receiving waterbody, storm sewer system, sanitary sewer system).

(b) Blasting and Painting Areas. The permittee must consider containing all blasting and painting activities to prevent abrasives, paint chips, and overspray from reaching the receiving water or the storm sewer system. The plan must describe measures taken at the facility to prevent or minimize the discharge of spent abrasive, paint chips, and paint into the receiving waterbody and storm sewer system. The permittee may consider hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris. Where required, a schedule for cleaning storm water conveyances to remove deposits of abrasive blasting debris and paint chips should be addressed within the plan. The plan should include any standard operating practices with regard to blasting and painting activities. Such included items may be the prohibition of performing uncontained blasting and painting over open water or blasting and painting during windy conditions which can render containment ineffective.

(c) Material Storage Areas. All stored and containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) must be stored in a protected, secure location away from drains and plainly labeled. The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The plan must specify which materials are stored indoors and consider containment or enclosure for materials that are stored outdoors. Above ground storage tanks, drums, and barrels permanently stored outside must be delineated on the site map with a description of the containment measures in place to prevent leaks and spills. The permittee must consider implementing an inventory control plan to prevent excessive purchasing, storage, and handling of potentially hazardous materials. Where abrasive blasting is performed, the plan must specifically include a discussion on the storage and disposal of spent abrasive materials generated at the facility.

(d) Engine Maintenance and Repair Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for engine maintenance and repair. The permittee may consider 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/or collecting the storm water runoff from the maintenance area and providing treatment or recycling.

(e) Material Handling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). The permittee may consider covering fueling areas; using spill and overflow protection; mixing paints and solvents in a designated area, preferably indoors or under a shed; and minimizing runon of storm water to material handling areas or other equivalent measures. Where applicable, the plan must address the replacement or repair of leaking connections, valves, pipes, hoses, and soil chutes carrying wastewater from vessels.

(f) Drydock Activities. The plan must address the routine maintenance and cleaning of the drydock to minimize the potential for pollutants in the storm water runoff. The plan must describe the procedures for cleaning the accessible areas of the drydock 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 drydock must also be included within the plan. The permittee should consider items such as sweeping rather than hosing off debris and spent blasting material from the accessible areas of the drydock prior to flooding and having absorbent materials and oil containment booms readily available to contain and cleanup any spills or other equivalent measures.

(g) General Yard Area. The plan must include a schedule for routine yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., must be routinely removed from the general yard area. The permittee may consider such measures as providing covered trash receptacles in each yard, on each pier, and on board each vessel being repaired.

(2) Inspections. The following areas shall be included in all inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

(3) Employee Training. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify how often training will take place, but in all cases training must be held at least annually (once per calendar year).

Employee training must, at a minimum, address the following areas when applicable to a facility: 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; proper painting and blasting procedures; and used battery management. Employees, independent contractors, and customers must be informed about BMPs and be required to perform in accordance with these practices. The plan must consider posting instructions, easy to read descriptions or graphic depictions of BMPs, spill control/clean-up equipment and emergency phone numbers in the work areas.

Sector Q - Ship and Boat Building or Repairing Yards.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from facilities engaged in ship building and repairing and boat building and repairing (Standard Industrial Classification (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 Monitoring: NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS.

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Drainage. A site map indicating the location of the following activities where such activities are exposed to precipitation: fueling, engine maintenance and repair, vessel maintenance and 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).

b. Measures and Controls.

(1) Good Housekeeping. The following areas must be specifically addressed, when applicable at a facility.

(a) Pressure Washing Area. When pressure washing is used to remove marine growth from vessels, the discharge water must be permitted as a process wastewater by separate requirements in this VPDES permit.

(b) Blasting and Painting Areas. The plan must consider containing all blasting and painting activities to prevent abrasives, paint chips, and overspray from reaching the receiving water or the storm sewer system. The plan must describe measures taken at the facility to prevent or minimize the discharge of spent abrasive, paint chips, and paint into the receiving waterbody and storm sewer system. The permittee may consider hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris. Where required, a schedule for cleaning storm systems to remove deposits of abrasive blasting debris and paint chips should be addressed within the plan. The plan should include any standard operating practices with regard to blasting and painting activities. Practices may include the prohibition of performing uncontained blasting and painting over open water or blasting and painting during windy conditions which can render containment ineffective.

(c) Material Storage Areas. All stored and containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) must be stored in a protected, secure location away from drains and plainly labeled. The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The plan must specify which materials are stored indoors and consider containment or enclosure for materials that are stored outdoors. Above ground storage tanks, drums, and barrels permanently stored outside must be delineated on the site map with a description of the containment measures in place to prevent leaks and spills. The permittee must consider implementing an inventory control plan to prevent excessive purchasing, storage, and handling of potentially hazardous

materials. Where abrasive blasting is performed, the plan must specifically include a discussion on the storage and disposal of spent abrasive materials generated at the facility.

(d) Engine Maintenance and Repair Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for engine maintenance and repair. The permittee must consider performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluids prior to disposal, prohibiting wet clean up practice where the practice would result in the exposure of pollutants to storm water, using dry cleanup methods, and/or collecting the storm water runoff from the maintenance area and providing treatment or recycling.

(e) Material Handling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). The permittee must consider covering fueling areas; using spill and overflow protection; mixing paints and solvents in a designated area, preferably indoors or under a shed; and minimizing runon of storm water to material handling areas. Where applicable, the plan must address the replacement or repair of leaking connections, valves, pipes, hoses, and soil chutes carrying wastewater from vessels.

(f) Drydock Activities. The plan must address the routine maintenance and cleaning of the drydock to minimize the potential for pollutants in the storm water runoff. The plan must describe the procedures for cleaning the accessible areas of the drydock 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 drydock must also be included within the plan. The permittee must consider items such as sweeping rather than hosing off debris and spent blasting material from the accessible areas of the drydock prior to flooding and having absorbent materials and oil containment booms readily available to contain and cleanup any spills.

(g) General Yard Area. The plan must include a schedule for routine yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., must be routinely removed from the general yard area. The permittee must consider such measures as providing covered trash receptacles in each yard, on each pier, and on board each vessel being repaired.

(2) Inspections. The following areas shall be included in all inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

(3) Employee Training. Employee training must, at a minimum, address the following areas when applicable to a facility: 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; proper painting and blasting procedures; and used battery management. Employees, independent contractors, and customers must be informed about BMPs and be required to perform in accordance with these practices. The permittee should consider posting easy to read descriptions or graphic depictions of BMPs and emergency phone numbers in the work areas.

Sector R - Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from establishments and/or facilities including airports, air terminals, air carriers, flying fields, and establishments engaged in servicing or maintaining airports and/or aircraft (generally classified under Standard Industrial Classification (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 or establishment 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 monitoring:

Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities SIC Major Group 45 that use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis must monitor outfalls that receive the deicing runoff	BOD_5, TKN, pH

(3) Special Conditions: (*Note these 2 special conditions should be included in the permit for this industrial sector*)

1. **Releases of Reportable Quantities of Hazardous Substances and Oil.** Each individual permittee is required to report spills as described at **Part I B 7**. If an airport authority is the sole permittee, then the sum total of all spills at the airport must 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 must 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 must be the assessed amount for the reportable quantity determination.

2. **Pollutant loading estimates**.

During the period beginning on the effective date and lasting through the expiration date of this permit, 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 shall prepare estimates for annual pollutant loadings resulting from discharges of spent deicing/anti-icing chemicals from the entire airport. The "average annual" usage rate of deicing/anti-icing chemicals is determined by averaging the cumulative amount of deicing/anti-icing chemicals used by all owners at the airport facility in the 3 previous calendar years. The loading estimates shall reflect the amounts of deicing/anti-icing chemicals discharged to separate storm sewer systems or surface waters, prior to and after implementation of the facility's storm water pollution prevention plan. Such estimates shall be reviewed by an environmental professional, and certified by such professional. By means of the certification, the environmental professional, having examined the facility's deicing/anti-icing procedures, and proposed control measures described in the storm water pollution prevention plan, shall attest that the loading estimates have been accurately prepared. Certified loading estimates are to be retained at the airport facility and attached to the storm water pollution prevention plan.

(4) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

Storm water pollution prevention plans 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 companies, fixed based operators and other parties which have contracts with the airport authority to conduct business operations on airport property which result in storm water discharges associated with industrial activity as described in paragraph **Part B 1**. In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. A site map indicating the locations of the following activities where such activities are exposed to precipitation: aircraft and runway deicing/anti-icing operations; fueling stations; aircraft, ground vehicle and equipment maintenance and/or cleaning areas; and storage areas for aircraft, ground vehicles and equipment awaiting maintenance. The site map developed for the entire airport shall

indicate the location of each tenant of the facility that conducts industrial activities as described in **Part B 1,** and incorporate information from the tenants site map (including a description of industrial activities, significant materials exposed, and existing management practices).

(2) Risk Identification and Summary of Potential Pollutant Sources. 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); outdoor storage activities; loading and unloading operations; and onsite waste disposal. 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. 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.

b. Measures and Controls.

(1) Good Housekeeping.

(a) Aircraft, Ground Vehicle and Equipment Maintenance Areas. Permittees should ensure the maintenance of equipment is conducted in designated areas only and clearly identify these areas on the ground and delineate them on the site map. The plan must describe measures that prevent or minimize the contamination of the 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). Management practices or equivalent measures such as 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/or collecting the storm water runoff from the maintenance area and providing treatment or recycling should be considered.

(b) Aircraft, Ground Vehicle and Equipment Cleaning Areas. Permittees should 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 plan must describe measures that prevent or minimize the contamination of the storm water runoff from all areas used for aircraft, ground vehicle and equipment cleaning. Management practices such as performing cleaning operations indoors, and/or collecting the storm water runoff from the cleaning area and providing treatment or recycling should be considered.

(c) Aircraft, Ground Vehicle and Equipment Storage Areas. The storage of aircraft, ground vehicles and equipment awaiting maintenance must be confined to designated areas (delineated on the site map). The plan must describe measures that prevent or minimize the contamination of the storm water runoff from these areas. Management practices such as 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 should be considered.

(d) Material Storage Areas. Storage units of all materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) must 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 plan must describe measures that prevent or minimize contamination of the storm water runoff from storage areas. Management practices or equivalent measures such as indoor storage of materials, centralized storage areas for waste materials, and/or installation of berming and diking around storage areas should be considered for implementation.

(e) Airport Fuel System and Fueling Areas. The plan must describe measures that prevent or minimize the discharge of fuels to the storm sewer resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Where the discharge of fuels into the storm sewer cannot be prevented, the plan shall indicate measures that will be employed to prevent or minimize the discharge of the contaminated runoff into receiving surface waters. Management practices or equivalent measures such as implementing spill and overflow practices (e.g., placing sorptive materials beneath aircraft during fueling operations), using dry cleanup methods, and/or collecting the storm water runoff should be considered.

(2) Source Reduction. Owners who conduct aircraft and/or runway (including taxiways and ramps) deicing/anti-icing operations shall evaluate present operating procedures to consider alternative practices to reduce the overall amount of deicing/anti-icing chemicals used and/or lessen the environmental impact of the pollutant source.

(a) With regard to runway deicing operations, owners at a minimum, shall evaluate: present application rates to ensure against excessive over application; metered application of deicing chemical; 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; the use of substitute deicing compounds such as potassium acetate in lieu of ethylene glycol, propylene glycol and/or urea.

(b) In considering source reduction management practices for aircraft deicing operations, owners, at a minimum, should evaluate current application rates and practices to ensure against excessive over application, and consider pretreating aircraft with hot water prior to the application of a deicing chemical, thus reducing the overall amount of chemical used per operation.

Source reduction measures that the owner determines to be reasonable and appropriate shall be implemented and maintained. The plan shall provide a narrative explanation of the options considered and the reasoning for whether or not to implement them.

(3) Management of Runoff. Owners that conduct aircraft and/or runway deicing/anti-icing operations shall also provide a narrative consideration of management practices to control or manage contaminated runoff from areas where deicing/anti-icing operations occur to reduce the amount of pollutants being discharged from the site. Structural controls such as establishing a centralized aircraft deicing facility, and/or collection of contaminated runoff for treatment or recycling should be considered. Collection and treatment alternatives include, but are not limited to, retention basins, detention basins with metered controlled release, Underground Storage Tanks (USTs) and/or disposal to Publicly Owned Treatment Works (POTW) by way of sanitary sewer or hauling tankers. Runoff management controls that the owner determines to be reasonable and appropriate shall be implemented and maintained. The plan should consider the recovery of deicing/anti-icing materials when these materials are applied during nonprecipitation events to prevent these materials from later becoming a source of storm water contamination. The plan shall provide a narrative explanation of the controls selected and the reasons for their selection.

(4) Inspections. The inspection frequency shall be specified in the plan, but at a minimum be conducted once per month during deicing/anti-icing application periods for areas where deicing/anti-icing operations are being conducted.

(5) Quarterly Visual Examination of storm water quality.

The requirement of [**Part I B 5**] for quarterly visual examination of storm water quality is not applicable to discharges identified in [**Part I B 1**.]

Sector S - Treatment Works

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges 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 an approved pretreatment program under 9 VAC 25-31-730.

(1) Effluent Limitations: NONE
(2) Analytical Monitoring: NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

SECTION IN -- INDUSTRIAL

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Summary of Potential Pollutant Sources - A narrative description of the potential pollutant sources from the following activities associated with treatment works: access roads/rail lines; loading and unloading operations; outdoor storage activities; material handling sites; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., acid, bases, and solvents, etc.) of concern shall be identified.

b. Measures and Controls

(1) Inspections - The following areas shall be included in all inspections: access roads/rail lines, equipment storage and maintenance areas (both indoor and outdoor areas); fueling; material handling areas, residual treatment, storage, and disposal areas; and wastewater treatment areas.

(2) Employee Training - The pollution prevention plan shall identify how often training will take place, but training should be held at least annually (once per calendar year). Employee training must, 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.

(3) Nonstorm Water Discharges - For facilities that discharge vehicle and equipment washwaters to the sanitary sewer system, the operator of the sanitary system and associated treatment plant must be notified. In such cases, a copy of the notification letter must be attached to the plan. If an industrial user permit is issued under a pretreatment program, a reference to that permit must be in the plan. These provisions do not apply if the discharger and the operator of the treatment works receiving the discharge are the same. In all cases, any permit conditions must be considered in the plan. If vehicle and equipment washwaters are handled in another manner (e.g., hauled offsite), the disposal method must be described and all pertinent documentation (e.g., frequency, volume, destination, etc.) must be attached to the plan.

Sector T - Food and Kindred Products Facilities.

Discharges Covered Under This Section. This section covers all storm water discharges from food and kindred products processing facilities (commonly identified by Standard Industrial Classification (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). Sources of storm water include industrial plant yards; material handling sites; refuse sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residential treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; and storage areas for raw material and intermediate and finished products are exposed to storm water and areas where industrial activity has taken place in the past and significant materials remain. For the purposes of this paragraph, material handling activities include the storage, loading, and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product.

(1) Effluent Limitations: NONE

(2) Analytical monitoring:

Grain Mills SIC 2041-2048	TKN, TSS
Fats and Oils Products Facilities SIC 2074-2079	TSS, BOD_5, TKN, NO_2+NO_3

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. A site map indicating the locations of vents and stacks from cooking, drying, and similar operations, dry product vacuum transfer lines; animal holding pens; and 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 must also describe application/storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides, and others) used on plant grounds, including a description of pest control application and chemical storage practices.

b. Measures and Controls.

(1) Inspections. At a minimum, the following areas, where the potential for exposure to storm water exists, must be inspected: 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.

Sector U - Textile Mills, Apparel, and Other Fabric Product Manufacturing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from 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, nonwoven fabrics; miscellaneous textiles, and other apparel products (generally described by SIC codes 22 and 23). This section also covers facilities engaged in manufacturing finished leather and artificial leather products (SIC 31, except 3111).

(1) Effluent Limitations: NONE

(2) Analytical Monitoring NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Risk Identification and Summary of Potential Pollutant Sources. A narrative 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. Measures and Controls.

(1) Good Housekeeping.

(a) Material Storage Areas. All stored and containerized materials (fuels, petroleum products, solvents, dyes, etc.) must be stored in a protected area, away from drains and clearly labeled. The plan must describe measures that prevent or minimize contamination of storm water runoff from such storage areas. The plan should specify which materials are stored indoors and must provide a description of the containment area or enclosure for those materials which are stored outdoors. Above ground storage

tanks, drums, and barrels permanently stored outside must be delineated on the site map with a description of the appropriated containment measures in place to prevent leaks and spills. The permittee may consider an inventory control plan to prevent excessive purchasing, storage, and handling of potentially hazardous substances. In the case of storage of empty chemical drums and containers, permittees should employ practices which ensure that barrels are clean and residuals are not subject to contact with storm water, such practices may include triple-rinsing containers. The discharge waters from such washings must be collected and disposed of properly.

(b) Material Handling Area. The plan must describe measures that prevent or minimize contamination of the storm water runoff from materials handling operations and areas. The permittee may consider the use of spill and overflow protection; covering fueling areas; covering and enclosing areas where the transfer of materials may occur. Where applicable, the plan must address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, dyes, or wastewater.

(c) Fueling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee may consider covering the fueling area, using spill and overflow protection, minimizing runon of storm water to the fueling area, using dry cleanup methods, and/or collecting the storm water runoff and providing treatment or recycling.

(d) Above Ground Storage Tank Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from above ground storage tank areas. The permittee must consider storage tanks and their associated piping and valves. The permittee may consider: regular cleanup of these areas; preparation of a spill prevention control and countermeasure program; spill and overflow protection; minimizing runon of storm water from adjacent areas; restricting access to the area; insertion of filters in adjacent catch basins; absorbent booms in unbermed fueling areas; use of dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

(2) Inspections. Inspections shall include, but not be limited to, the following areas: all containment and storage areas, 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 must, 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. Employees, independent contractors, and customers must be informed about BMPs and be required to perform in accordance with these practices. Copies of BMPs and any specific management plans, including emergency phone numbers, shall be posted in the work areas.

Sector V - 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 activities from facilities involved in the manufacturing of: wood kitchen cabinets (generally described by SIC code 2434); household furniture (generally described by SIC code 251); office furniture (generally described by SIC code 252); public buildings and related furniture (generally described by SIC code 253); partitions, shelving, lockers, and office and store fixtures (generally described by SIC code 254); and miscellaneous furniture and fixtures (generally described by SIC code 259).

(1) Effluent Limitations: NONE
(2) Analytical Monitoring NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

Inspections. Inspections shall be conducted of the following: the integrity of storm water discharge diversions, conveyance systems, sediment control and collection systems, and containment structures; vegetative BMPs to determine if soil erosion has occurred; and material handling and storage areas and other potential sources of pollution for evidence of actual or potential pollutant discharges of contaminated storm water. Information must be maintained onsite and include the inspection date and time and the name of personnel conducting the visual inspection. The pollution prevention plan must be updated based on the results of each inspection.

Sector W - 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 the following types of facilities: newspaper, periodical, and book publishing or publishing and printing (SIC Codes 2711? 2731); book printing (SIC Code 2732); miscellaneous publishing (SIC Code 2741); commercial printing, lithographic (SIC Code 2752); commercial printing, gravure (SIC Code 2754); commercial printing, not elsewhere classified (SIC Code 2759); manifold business forms, greeting cards, bankbooks, looseleaf binders and devices, book binding and related work, and typesetting (SIC Codes 2761? 2791); and, plate making and related services (SIC Code 2796).

(1) Effluent Limitations: NONE
(2) Analytical Monitoring NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

b. Measures and Controls.

(1) Good Housekeeping.

(a) Material Storage Areas. All stored and 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.) should be stored in a protected area, away from drains and properly labeled. The plan should describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The plan should specify which materials are stored indoors and must provide 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, storage, and handling of potentially hazardous substances. The permittee may consider indoor storage of the materials and/or installation of berming and diking of the area.

(b) Material Handling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from materials handling operations and areas (e.g., blanket wash, mixing solvents, loading/unloading materials). The permittee may consider the use of spill and overflow protection; covering fuel areas; covering and enclosing areas where the transfer of materials may occur. Where applicable, the plan must address the replacement or repair of leaking connections, valves, transfer lines and pipes that may carry chemicals, or wastewater.

(c) Fueling Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from fueling areas. The permittee may consider covering the fueling area, using spill and overflow protection, minimizing runon of storm water to the fueling area, using dry cleanup methods, and/or collecting the storm water runoff and providing treatment or recycling.

(d) Above Ground Storage Tank Areas. The plan must describe measures that prevent or minimize contamination of the storm water runoff from above ground storage tanks and their associated piping and valves. The permittee may consider: regular cleanup of these areas; preparation of

a spill prevention control and countermeasure program; spill and overflow protection; minimizing runon of storm water from adjacent facilities and properties; restricting access to the area; insertion of filters in adjacent catch basins; absorbent booms in unbermed fueling areas; use of dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

(2) Inspections. Inspections shall include, but are not limited to the following areas: all containment and material storage areas, fueling areas, loading and unloading areas, equipment cleaning areas.

(3) Employee Training. Employee training must, 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 X - Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

Discharges Covered Under This Section. The requirements listed under this section apply to all 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 Monitoring

Rubber Product Manufacturing Facilities SIC Major Group 3011-3069 Zn

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

b. Measures and Controls. Facilities subject to EPCRA Section 313 should note the special requirements of **Part B 5**. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls. All rubber products manufacturing facilities shall include specific measures and controls to minimize the discharge of zinc in their storm water discharges. The following possible sources of zinc shall be reviewed and the accompanying BMPs shall be included as appropriate in the storm water pollution prevention plan.

(1) Inadequate Housekeeping. All permittees shall review the handling and storage of zinc bags at their facilities and consider the following BMPs for the pollution prevention plan: employee training regarding the handling and storage of zinc bags, indoor storage of zinc bags, thorough 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.

(2) Zinc in Dumpsters. The following BMPs or equivalent measures shall be considered to reduce discharges of zinc from dumpsters: providing a cover for the dumpster; move the dumpster to an indoors location; or provide a lining for the dumpster.

(3) Malfunctioning Dust Collectors or Baghouses. Permittees shall review dust collectors and baghouses as possible sources in zinc in storm water runoff. Improperly operating dust collectors or baghouses shall be replaced or repaired as appropriate. The pollution prevention plan shall also provide for regular maintenance of these facilities.

(4) Grinding Operations. Permittees shall review dust generation from rubber grinding operations at their facility and, as appropriate, install a dust collection system.

(5) Zinc Stearate Coating Operations. Permittees shall include in the pollution prevention plan appropriate measures to prevent and/or clean up drips or spills of zinc stearate slurry which may be released to the storm drain. Alternate compounds to zinc stearate shall also be considered.

Sector Y - Leather Tanning and Finishing Facilities.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges from the following activities: leather tanning, currying and finishing (commonly identified by Standard Industrial Classification (SIC) code 3111). Discharges from facilities that make fertilizer solely from leather scraps and leather dust are also covered under this section.

(1) Effluent Limitations: NONE

(2) Analytical Monitoring

Leather Tanning and Finishing Facilities SIC 3111	TKN

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

(1) Drainage. A site map indicating the locations of processing and storage areas for activities associated with beamhouse, tanyard, retan-wet finishing and dry finishing operations, and haul roads, access roads and rail spurs.

(2) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of potential pollutant sources including but not limited to outdoor storage activities, including but not limited to: temporary or permanent storage of fresh and brine cured hides, chemical drums, bags, containers and above ground tanks, leather dust, scraps, trimmings and shavings, spent solvents, extraneous hide substances and hair, and empty chemical containers and bags; floor sweepings and washings; and refuse and waste piles and sludge.

b. Measures and Controls.

(1) Good Housekeeping.

(a) Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products. Pallets and/or bales of raw, semiprocessed or finished tannery by-products (e.g., splits, trimmings, shavings, etc.) should be stored indoors or protected by polyethylene wrapping, tarpaulins, roofed storage area or other suitable means. Materials should be placed on an impermeable surface, the area should be enclosed or bermed or other equivalent measures should be employed to prevent runon and runoff of storm water.

(b) Material Storage Areas. Label storage units of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials). Maintain such containers and units in good condition. Describe measures that prevent or minimize contact with storm water. The facility must consider indoor storage, installation of berming and diking around the area, and/or other equivalent measures to prevent runon and runoff of storm water.

(c) Buffing/Shaving Areas. The plan must describe 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 plan must describe measures that prevent or minimize contamination of the storm water runoff from receiving, unloading, and storage areas. Exposed receiving, unloading and storage areas for hides and chemical supplies should be protected by a suitable cover, diversion of drainage to the process sewer, grade berming or curbing area to prevent runon of storm water or other appropriate preventive measures. Materials must be plainly labelled and maintained in good condition.

(e) Outdoor Storage of Contaminated Equipment. The plan must describe measures that minimize contact of storm water with contaminated equipment. Equipment should be protected by

suitable cover, diversion of drainage to the process sewer, thorough cleaning prior to storage or other appropriate preventive measures.

(f) Waste Management. The plan must describe measures that prevent contamination of the storm water runoff from waste storage areas. The permittee may consider inspection/maintenance programs or other equivalent measures 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 runon by enclosing the area or building berms around the area.

(2) Inspections. The following areas shall be included in all inspections: leather processing areas, storage areas for chemicals, including but not limited to above ground tanks, fueling areas, vehicle and equipment maintenance areas, material storage areas, loading and unloading areas, waste management areas and other potential sources of pollution for evidence of actual or potential discharges of contaminated storm water. Qualified personnel are required to conduct quarterly inspections of all Best Management Practices (BMPs). The inspections shall include an assessment of the effectiveness and need for maintenance of storm water roofing and covers, dikes and curbs, discharge diversions, sediment control and collection systems and all other BMPs.

(3) Employee Training. Employee training must, at a minimum, address the following areas when applicable to a facility: general good housekeeping practices, spill prevention and control, waste management, inspections, preventive maintenance, detection of nonstorm water discharges and other areas.

(4) Recordkeeping and Internal Reporting Procedures. The plan must address spills, monitoring, and BMP inspection and maintenance activities. BMPs which were ineffective must be reported and the date of their corrective action recorded. Employees must report incidents of leaking fluids to facility management and these reports must be incorporated into the plan.

(5) Management of Runoff. The plan shall consider management practices, such as berms for uncovered storage areas, uncovered loading and unloading areas, above ground liquid storage and waste management areas. The installation of detention ponds must also be considered.

Sector Z - Fabricated Metal Products Industry.

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 34, and jewelry, silverware, and plated ware (SIC Code 391).

(1) Effluent Limitations: NONE

(2) Analytical Monitoring

Fabricated Metal Products Manufacturing except Coating SIC Major Group 3411-3471, 3482-3499, 3911-3915	Al, Fe, Zn
Fabricated Metal Coating and Engraving SIC 3479	Zn

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. <u>Description of Potential Pollutant Sources</u>.

Risk Identification and Summary of Potential Pollutant Sources. A narrative 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; significant dust or particulate generating processes; and onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingots pieces, refuse and waste piles.

b. Measures and Controls.

(1) Good Housekeeping. Permittees should address the following areas in the manner described.

(a) Raw Steel Handling Storage. Include measures controlling or recovering scrap metals, fines, and iron dust, including measures for containing materials within storage handling areas.

(b) Paints and Painting Equipment. Consider control measures to prevent or minimize exposure of paint and painting equipment from exposure to storm water.

(2) Spill Prevention and Response Procedures. The following areas should be addressed in the manner described.

(a) Metal Fabricating Areas. Include measures for maintaining clean, dry, orderly conditions in these areas. Use of dry clean-up techniques should be considered in the plan.

(b) Storage Areas for Raw Metal. Include measures to keep these areas free of conditions that could cause spills or leakage of materials. Storage areas should be maintained for easy access in case spill clean up is necessary. Stored materials should be able to be identified correctly and quickly.

(c) Receiving, Unloading, and Storage Areas. Include 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. Include measures for preparing equipment for storage and the proper method to store equipment including protecting with covers, storing indoors. The plan should include clean-up measures for equipment that will be stored outdoors to remove potential pollutants.

(e) Metal Working Fluid Storage Areas. The plan should include measures that identify controls particularly for storage of metal working fluids.

(f) Cleaners and Rinse Water. The plan should include measures to control and cleanup spills of solvents and other liquid cleaners; control sand buildup and disbursement from sand-blasting operations, prevent exposure of recyclable wastes; and employ substitute cleaners when possible.

(g) Lubricating Oil and Hydraulic Fluid Operations. Consider using devices or monitoring equipment to detect and control leaks and overflows, including the installation of perimeter controls such as dikes, curbs, grass filter strips, or other equivalent measures.

(h) Chemical Storage Areas. Identify proper storage that prevents storm water contamination and prevents accidental spillage. The plan should include a program to inspect containers, and identify proper disposal and spill controls.

(3) 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, fueling and maintenance areas, and waste management areas.

(4) Sediment and Erosion Control. Metal fabricators must include in their plan measures to minimize erosion related to the high volume of traffic from heavy equipment for delivery to and from the facility and for equipment operating at the facility on a daily basis such as forklifts, cranes, etc.

Sector AA - Facilities That Manufacture Transportation Equipment, Industrial, or Commercial Machinery.

Discharges Covered Under This Section. The requirements listed under this section apply to storm water discharges associated with transportation equipment, industrial or commercial machinery manufacturing facilities (commonly described by SIC Major Group 35 except SIC 357, and SIC Major Group 37, except SIC 373). Sources of storm water associated with industrial activity include: industrial plant yards; material handling sites; refuse sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage

areas for raw material and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

(1) Effluent Limitations: NONE
(2) Analytical Monitoring NONE

(3) Part **C**. SECTOR-SPECIFIC STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS:

In addition to the requirements of **Part B**, the plan shall include, at a minimum, the following items.

a. Description of Potential Pollutant Sources.

Drainage. A site map indicating the locations of vents and stacks from metal processing and similar operations.

b. Measures and Controls.

(1) Inspections. At a minimum, the following areas, where the potential for exposure to storm water exists, must be inspected: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; and vents and stacks from industrial activities.

(2) Employee Training. Training should address topics such as spill response, good housekeeping, material management practices, unloading/loading practices, outdoor storage areas, waste management practices, proper handling procedures of hazardous waste, and improper connections to the storm sewer. At a minimum, this training should be provided annually.

Nonstorm Water Discharges. For facilities that discharge wastewater, other than solely domestic wastewater, to the sanitary sewer system, the permittee must notify the operator of the sanitary sewer and associated treatment works of its discharge. In such cases, a copy of a notification letter must be attached to the plan. Any specific permit conditions must be considered in the plan.

H. 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	2	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	^oC	1/Month	Immersion Stabilization
Dissolved Oxygen[a]	3	NA	mg/l	NA	1/Month	Grab
Total Residual Chlorine[a,b,d]	2 or 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) Colonial Pipeline

Colonial Pipeline Co. has numerous facilities scattered throughout the state serving as booster pump stations. They are similarly constructed, have similar sources of waste and similar treatment. Most discharge into a dry ditch or small stream that provides little or no dilution at the discharge point. However, if the facility does not have a discharge, no permit is required.

The 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) are treated by an oil water separator which discharges into a retention basin. Source (c) enters the retention basin untreated. Source (d) receives unspecified treatment and then enters the retention basin. The final discharge of all waters is from the retention basin.

Write these 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 permit is written according to the above guidance, no TMP is needed at this time. If the discharge is such that significant dilution is available then WQS limits may be calculated for BTEX based on that dilution.

(3) 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) Toxics Management Program (TMP): A TMP 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 TMP, 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". OWPP 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 25-90-10 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 emplo y 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.

9. Compliance deadlines.

[*Permit writer: For deadlines below that will have passed on the effective date of the permit reissuance, the BMP requirement(s) are effective upon the date of reissuance. Adjust deadlines accordingly*]

(a) Prepare BMP Plans and certify that the BMP Plan has been prepared in accordance with this permit not later than April 15, 1999;

(b) Implement all BMPs specified in Part I.[**C.]**2. that do not require the construction of containment or diversion structures or the installation of monitoring and alarm systems not later than April 15, 1999.

(c) Establish initial action levels required by Part I.[**C**.]7. (c) not later than April 15, 1999.

(d) Commence operation of any new or upgraded continuous, automatic monitoring systems that the permittee determines to be necessary under Part I.[**C.]**2. (c) other than those associated with construction of containment or diversion structures not later than April 17, 2000.

(e) Complete construction and commence operation of any spent pulping liquor, collection, containment, diversion, or other facilities, including any associated continuous monitoring systems, necessary to fully implement BMPs specified in Part I.[**C.]**2. not later than April 16, 2001.

(f) Establish revised action levels required by Part I.[**C**.]7. (d) as soon as possible after fully implementing the BMPs specified in Part I.[**C**.]2., but not later than January 15, 2002.

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 activites. 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) For vessels in which sanitary waste tanks (holding tanks) are installed, all sewage from the vessels shall be removed and disposed of by a commercial waste disposal company or discharged into the shipyard's sanitary waste system.

(2) For vessels without sanitary waste holding tanks installed, the vessel's sanitary systems shall not be permitted to discharge sewage overboard into the adjacent river. Vessels without holding tanks shall be connected to a holding tank or shoreside system in compliance with Virginia Department of Health Regulations.

(3) The yard 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. 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

Marine railway carriages shall be cleaned before launching

OR

Drydock decks and marine railway carriages shall be cleaned before flooding or launching, respectively, to prevent the discharge of pollutants to the waterway. They shall also be cleaned on a regular basis so as to prevent rain from washing material into receiving waters. **[Select the appropriate one, delete the other two and pick up the rest of the paragraph]**

(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. [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.]

(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.

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) When water blasting, hydroblasting, or water-cone blasting is used to remove paint from surfaces, the resulting water 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.

(9) 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.

(10) Water leakage from graving dock gates must be intercepted to prevent flow across drydock floors.[Use condition 10 only when there are graving docks. If deleted, adjust numbering]

(11) Cleaning procedures shall be employed to remove waste materials in order to prevent their introduction into the storm drainage system.

(12) The sediment traps in the stormwater drainage system(s) for [drydocks, graving docks, areas around marine railways] **and other industrial areas 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 devices 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 and marine railway area] **as soon as possible, and in all cases prior to submersion of the** [drydock or railway carriage]**.**

(16) If required, an SPCC Plan and an oil spill discharge contingency plan must be on

file, maintained current and utilized in the event that an oil spill occurs. If a spill is discovered, designated shipyard personnel should be notified immediately. Such personnel must be familiar with containment and cleanup procedures, and must notify the Coast Guard and the DEQ of all spills that reach State waters, and immediately initiate containment/cleanup efforts. These cleanup procedures apply to hazardous substances kept on site as well. A list of such materials shall be provided to the DEQ for reference if a spill occurs. Included with this list must be an appropriate designated disposal site for each substance. Emulsifiers and dispersants are not suitable cleanup agents for spills in State waters.

(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 waters. 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 rinse-water tanks shall be stored in such a manner so as to prevent introduction of spills into State waters. 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) The mixing of paints and solvents shall be carried out in locations and under conditions such that no spill shall enter State waters.

(20) 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.

(21) Paint and solvent spills shall be treated as oil spills and shall be prevented from reaching storm drains or deck drains and subsequent discharge into the water.

(22) The amount of paint stored [on the drydock, within the marine railway area] **and/or on a lighter floor shall be kept to a minimum.**

(23) Trash receptacles shall be provided on each pier and on board each vessel. These receptacles shall be emptied as necessary to prevent trash from entering State waters.

(24) 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.

(25) Prior to hose testing, spent abrasives, paint residues, and other debris from the area of [drydocks and marine railways] **shall be removed to prevent pollutants from entering the adjacent river.**

(26) 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 drydock floor prior to flooding or sinking and from the marine railway carriage and ramp before launching].

(27) Uncontaminated bilge and ballast or oil contaminated bilge and ballast treated by an onboard oil/water separator system may be discharged to State waters. Any other contaminated bilge and ballast shall not be discharged except as limited by Part I Effluent Limitations.

(28) 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 of the [drydock or marine railway], **unless appropriate precautions are taken to prevent discharge of pollutants into State waters.**

(29) [Docking and launching] **time intervals shall not be considered as a rationale for not cleaning a [**drydock or marine railway**].**

(30) Innovative measures for collecting abrasives may be presented for evaluation.

(31) Material (spent abrasives, paint chips, etc.) shall be cleaned up from the area in the vicinity of marine railways before the incoming tide.

(32) 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.

(33) In-Water Hull Cleaning
To be developed.

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 stategy 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 (: g/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 : g/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 : g/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 : g/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 except 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***	2	30 mg/l	NA	60 mg/l	1/Month	5G/8H*
Total Residual Chlorine or CPO	2 or 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 BPJ limit of 800 mg/l daily maximum should be included in the permit.

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

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 is 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) <u>Creosote Preservative Process</u>

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) <u>Pentachlorophenol Preservative Process</u>

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.

I. 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, and temperature are evaluated differently, as described at the end of this section.) The composite average is compared with the permit limit, and the information in Table 1, which is based on the existing monitoring frequency, to determine the potential monitoring frequency reduction.

Table 1. Ratio of Long Term Average to Monthly Average Limit

Baseline Monitoring	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 entry 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.

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 the effluent limitations for which reduced monitoring was granted. For facilities that do not maintain performance levels, reinstate the baseline frequencies for those 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. Alternate Disinfection - Bacteria Monitoring Frequencies

When disinfection is by means other than chlorination, use the following guidance for bacteria monitoring frequency to ensure adequate continuous disinfection. 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.

a. Treatment works with a design flow of > 1.0 MGD not discharging to PWS or shellfish waters: Monitoring frequency is 3 per week at 48 hour intervals between 10 am and 4 pm.

b. Treatment works with a design flow of < 1.0 MGD not discharging to PWS or shellfish waters: Monitoring frequency is once per week between 10 am and 4 pm.

c. Treatment works discharging to PWS or shellfish waters: Monitoring frequency is as follows:

Design Flow (MGD)	Frequency
> 2.0	1/day (10 am to 4 pm)
1.001-2.0	5 days/wk (10 am to 4 pm)
0.101-1.0	3 days/wk (10 am to 4 pm)
0.041-.10	2 days/wk (10 am to 4 pm)
< 0.040	1/week (10 am to 4 pm)

J. 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 ≥ 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.

K. 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.).

SECTION MN – MUNICIPAL

TABLE OF CONTENTS

A. FACT SHEET 1

B. PERMIT FORMAT 13

1. COVER PAGE 13
2. PART I A, EFFLUENT LIMITS PAGE 14
3. PART II, PERMIT BOILERPLATE 14

C. BACTERIA AND CHLORINE LIMITATIONS/PROCEDURES 23

1. LIMIT DEVELOPMENT 23
2. ALTERNATE DISINFECTION 24
3. HALOGEN BAN VARIANCE IN ENDANGERED/THREATENED SPECIES, NATURAL TROUT WATERS 28
4. DISINFECTION REDUCTIONS OR WAIVERS 29
5. CHLORINE REDUCTION TESTING PROGRAM 46

D. MUNICIPAL SPECIAL CONDITIONS 48

E. SAMPLING 65

1. INTRODUCTION 65
2. SAMPLE TYPES 65
3. SAMPLING SCHEDULE 65
4. SAMPLING SCHEDULE TABLE 66
5. ALTERNATE DISINFECTION - BACTERIA MONITORING 67
6. MONITORING REDUCTIONS FOR REISSUANCES 67
7. REPORTING 69

F. NUTRIENT ENRICHED WATERS PROCEDURES 70

G. BYPASS POINT SOURCES 71

H. SECONDARY AND EQUIVALENT TO SECONDARY TREATMENT LIMITS 72

1. EXAMPLE 1 72
2. EXAMPLE 2 73
3. EXAMPLE 3 74
4. FLOW CHART : EQUIVALENT TO SECONDARY TREATMENT REGULATION 75

I. TOTAL SUSPENDED SOLIDS LIMITS FOR WASTE STABILIZATION POND FACILITIES 77

J. PLANT EXPANSION/UPGRADE PROCEDURES 78

1. PERMITTEE REQUESTED EXPANSION OF A COMPLYING FACILITY 78
2. BOARD REQUIRED UPGRADE FOR A NON-COMPLYING FACILITY 78
3. BOARD REQUIRED EXPANSION/UPGRADE FOR A NON-COMPLYING FACILITY 79
4. SCHEDULE OF COMPLIANCE FOR REQUIRED EXPANSION/UPGRADE 79
5. PLANT EXPANSION -- CHLORINE PAGES 80

K. SWAMP AND MARSH WATERS 82

L. SEWAGE SLUDGE 83

FLOW CHART : SEWAGE SLUDGE PERMITTING IN VIRGINIA 84

1. IMPLEMENTATION STRATEGY FOR VPDES PERMIT REGULATION PART VI 85
2. SUBMITTAL OF SLUDGE MANAGEMENT PLAN 85
3. COORDINATION WITH VDH FOR SMP REVIEW AND APPROVAL 86
4. TECHNICAL CRITERIA USED FOR REVIEW AND APPROVAL OF SMP 86
5. SLUDGE MANAGEMENT PLAN REVIEW 86
6. LAND APPLICATION PLAN 88

7. AMENDMENTS TO THE SMP 88
8. FACT SHEET 88
9. LAND APPLICATION REQUIREMENTS 89
10. MONITORING 96
11. RECORDKEEPING AND REPORTING 98
12. A. EXAMPLE PART I A PAGE WHEN SLUDGE IS LAND APPLIED BY GENERATOR OR CONTRACTOR 102
12. B. EXAMPLE PART I A PAGE WHEN SLUDGE IS LAND APPLIED BY GENERATOR 104
13. SLUDGE SPECIAL CONDITIONS 105
14. TABLE I, RECOMMENDED PLANT AVAILABLE NITROGEN (PAN) APPLICATION RATES 113
15. TABLE II, ESTIMATED YIELDS 114
16. TABLE III, RESIDUAL PLANT AVAILABLE NITROGEN (PAN) 114
17. METHODS OF SEWAGE SLUDGE ANALYSIS 115
18. METHODS OF SOIL ANALYSIS AT LAND APPLICATION SITES 117
19. ANALYTICAL METHODS REFERENCES 118

M. COORDINATION WITH THE OFFICE OF WASTEWATER ENGINEERING 119

SECTION MN – MUNICIPAL

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

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. (***If the discharge is into a 303(d) listed water (TMDL), add this sentence: "The limitations in this permit were developed in accordance with § 303(d)(4) of the Clean Water Act. Therefore, antidegradation restrictions do not apply.")***

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 WLA.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. Federal Effluent guidelines – cite CFR
2. Water Quality-based Limits: - show calculations or cite WQM plan reference
3. Best Professional Judgement: - provide narrative rationale
4. Other (e.g. wasteload allocation model): - specify & document with model output or WLA from TMDL or basin plan

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 9 VAC 25-31-250*)

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 Control and Treatment Regulations, 9 VAC 25-790, bacteria standards; other 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. **95% Capacity Reopener**
Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-200 B 2 for all POTW and PVOTW permits

c. **Indirect Dischargers**
Rationale Required by VPDES Permit Regulation, 9 VAC 25-31-200 B 1 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

d. **CTC, CTO Requirement**
Rationale: Required by Code of Virginia ' 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790.

e. **O&M Manual Requirement**
Rationale: Required by Code of Virginia ' 62.1-44.19; Sewage Control and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190 E.

f. **Licensed Operator Requirement**
Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 D and the Code of Virginia § 54.1-2300 et seq, Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.), require licensure of operators.

g. **Reliability Class**
Rationale: Required by Sewage Collection and Treatment Regulations, 9 VAC 25-790 for all municipal facilities.

h. **Financial Assurance and Disclosure to Purchasers**
Rationale: Required by Code of Virginia § 62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9 VAC 25-650-10 et seq.

i. **Nutrient Enriched Waters Reopener**
Rationale: Policy for Nutrient Enriched Waters, 9 VAC 25-40-10 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.

j. **Water Quality Criteria Reopener**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of water quality criteria.

k. **Sludge Reopener**
Rationale: Required by VPDES Permit Regulation, 9 VAC 25-31-220 C 4 for all permits issued to treatment works treating domestic sewage.

l. **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.

m. **Compliance Reporting Under Part I A**
Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when toxic 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.

n. **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.

o. **Sludge Use and Disposal**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-100 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. Technical requirements may be derived from the Department of Health's Biosolids Use Regulations, 12 VAC 5-585-10 et seq.

p. **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.

q. **Pretreatment**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-730 through 900, and 40 CFR part 403 require certain existing and new sources of pollution to meet specified regulations.

r. **Toxics Management Program**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-210 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. **Storm Water Management**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 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. 9 VAC 25-31-120 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, 9 VAC 25-151-10 et seq.

t. **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 it they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

u. **Compliance Schedules**
Rationale: 9 VAC 25-31-250 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.

v. **Bacterial Effluent Limitations and Monitoring Requiements – Additional Instructions**
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 9 VAC 25-260.

w. **Part II, Conditions Applicable to All Permits**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-190 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 (9 VAC 25-31-280 B 4 and 9 VAC 25-31-100 J and P). This includes, but is not limited to:*
    - *waivers from application testing requirements*
    - *variances from technology guidelines(9 VAC 25-31-220 A 2) or water quality standards*
    - *variances from VPDES permit manual guidance*

23. Regulation of Users: 9 VAC 25-31-280 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 9 VAC 25-31-280 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 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 if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. 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.

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 Comment: *(State "No comments were received during the public notice" or "Comments received during the pubic notice are provided in the attached Response to Comments". Include significant VDH and EPA comments in the Response to Comments.)*

26. 303(d) Listed Segments (TMDL): (*Indicate if the facility discharges to a segment that 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 the current 303(d) list, then the fact sheet must include some description of how the TMDL requirements are being met. Permit writers may choose from one of the following categories to fulfill this requirement.*)

Permits for discharges into segments listed in part 1:

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 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.

Example fact sheet language:

This facility discharges directly to (name of receiving stream). The stream segment receiving the effluent is listed for non attainment of (list parameter) in part I of the current approved 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 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 for non attainment of (list parameter) in part I of the current approved 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 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 for non attainment of (list parameter) in part I of the current approved 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 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 for non attainment of (list parameter) in part I of the current approved 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 part II:

Part II 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 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 for non attainment of (list parameter) in part I of the current approved 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

Compliance attained but segment not delisted:

Fact Sheet Information:
- Segment identification.
- The reason the segment was listed (as noted above).
- The parameter 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 for non attainment of (list parameter) in part I of the current approved 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

Compliance schedule complete but facility still is not in compliance.

Fact Sheet Information:
- Segment identification.

- The reason the segment was listed (as noted above).
- The parameter 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 for non attainment of (list parameter) in part I of the current approved 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 segments listed in part III:

Part III is an informational section and may not necessarily lead to TMDLs. No permit re-opener condition is necessary for permits that authorize a discharge to the segments listed in this part. However, it is suggested that a discussion be included in the fact sheet relative to implementation of the tributary strategy for the Chesapeake Bay Initiatives.

Example fact sheet language:

No general language can be given for this category. The general requirements of the particular tributary strategy that impacts the permit should be briefly identified and should include a brief discussion of how this facility is complying with the initiatives identified in the strategy.

Special Permit considerations:
None (However, note that this may depend on the facility history and compliance with the strategy. If they do not make any effort to comply, certain strategies may eventually lead to a permit limit.)

Permits for discharges into segments listed in part IV:

Part IV is a listing of threatened waters that currently meet the criteria. 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 threatened (as noted above).
- The parameter 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 threatened for (list parameter) in part IV of the current approved 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 segments listed in part V:

Part V is a listing of segments that do not meet the standard due to natural conditions. It is readily apparent that if a segment fails to attain the standards solely due to natural conditions then the standard is somehow in error and needs to be corrected.

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 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 for non attainment of (list parameter) in part V of the current approved 303(d) list. The non attainment 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 non-attainment.

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 effluent limitations, monitoring requirements, and other conditions set forth in this permit.

Owner Name:
Facility Name:
City/County:
Facility Location:

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

Stream Name:
River Basin:
River Subbasin:
Section:
Class:
Special Standards:

The authorized discharge shall be in accordance with this cover page, Part I - Limitations and Monitoring Requirements and Part II - Conditions Applicable To All VPDES Permits, as set forth herein.

_____
Director, 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 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.

C. Bacteria and Chlorine Limitations/Procedures

1. Limit Development

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 1/day for all domestic facilities with a design flow >1,000 gpd. This frequency is sufficient for assuring protection of the receiving stream. This is similar to the monitoring for other toxics. Increasing the frequency of monitoring on a case-by-case basis may be appropriate. However, in most instances, the permit limits for disinfection or operation and maintenance requirements may require more frequent internal monitoring to insure adequate disinfection.

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 WLA.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 WLA.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 WLA.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.
WLA.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.
WLA.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.

f. Bacteria Standards

Bacteria limits may be required in the permit. They should be for E. coli in freshwater or for enterococci in saltwater or the transition zone. 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.)

E.coli and enterococci bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean	Single Sample Maximum
Fresh water		
E.coli (N/100 ml)	126	235
Saltwater and Transition Zone		
enterococci (N/100 ml)	35	104

The disinfection policy of 9 VAC 25-260-170.B (Water Quality Standards) requires that all effluents attain the above applicable bacteria concentrations prior to discharge. In other words, they are effluent requirements as well as in-stream criteria.

For municipal facilities, all effluent sampling frequencies are now more than once per month, so the geometric mean applies and should go in the permit as a monthly average. (If there is a case where effluent sampling is performed once per month or less or a single sample is being evaluated for some reason, the single sample maximum applies.)

If chlorine limits are to be used instead of enterococci bacteria limits, the permittee must demonstrate the ability of the chlorine limits to allow the enterococci bacteria standard to be met. (The agency has already analyzed sufficient data to determine that chlorine limitations that were sufficient to meet fecal limits will also maintain E. coli criteria.) For new issuances, this demonstration should be made during the application process if possible, or if no effluent is available to test the bacteria limits 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 with a compliance schedule for meeting the bacteria limits (up to four years is acceptable). 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 chlorine demonstration requirements in Section MN and the permit should include the special condition "**Bacterial Effluent Limitations and Monitoring Requirements - Additional Instructions**" that appears in the Industrial Special Conditions section of the manual which follows.

g. Shellfish Waters

For sewage discharges into 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 average. 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.

h. Chlorine Demonstration Requirements

A demonstration that chlorine limits can be used as a surrogate for bacteria limits in a permit can be made for discharges to waters where the use of chlorine limitations in lieu of fecal coliform limitations was allowable. Demonstration should be made by the applicant or permittee and will be based on an evaluation of bacteria data taken from an effluent.

Samples to be analyzed for the following parameters should be taken within 15 minutes of each other:
· Applicable bacteria -E.coli or enterococci (N/100 ml)
· Chlorine residual after contact but before dechlorination (mg/l)
· Effluent flow (mgd)

For demonstration purposes, 12 data points will be considered the minimum acceptable data set, to be collected at the following frequency:

Design flow > 1.0 MGD	3/Week by grab sample at 48 hour intervals between 10 a.m. and 4 p.m.
Design flow < 1.0MGD	1/Week by grab sample between 10 a.m. and 4 p.m.

Demonstration that chlorine is an adequate surrogate is to be considered satisfied if there are no exceedences of the applicable criterion in the demonstration data set while the discharge is in compliance with the facility's permitted chlorine limitations. Specifically:
· If more than one sample is taken in a calendar month, the geometric mean of the data for that calendar month can not exceed the applicable geometric mean criterion.
· If only one sample is taken in a calendar month, the value of that data point can not exceed the applicable single sample maximum criterion.

The demonstration submitted by the permit applicant should include the following:
a. The original data set including the following information and data:
· date and time sample collected
· bacteria (colonies/100 ml)
· chlorine residual after contact but before dechlorination (mg/l)
· chlorine contact time (minutes)
· flow (mgd)
b. The geometric mean calculations and results; and
c. A summary of results in tabular format and a statement of compliance or noncompliance with the demonstration requirements.

For VPDES permitted discharges where primary disinfection is by means other than chlorination, demonstration of compliance with the new bacteria criteria is the same as above except the data submitted should include the following:
· date and time
· E.coli or enterococci (N/100 ml)
· Fecal coliform (N/100 ml)
· Flow (mgd)

Demonstration should be considered satisfied if there are no exceedences of the applicable new bacteria criterion when fecal coliform limitations are met.

The results of all case-by-case demonstrations should be submitted by the regions to the Office of Water Permit Programs to enable DEQ to review whether the need for case-by-case demonstration remains appropriate.

2. Alternate Disinfection

When the permittee uses a disinfection method other than chlorine, disinfection is assured by using bacteria limits in Part I A. In some cases, chlorine may be used as a backup disinfection method. When chlorine is used as a backup for an alternative disinfection method, include bacteria monitoring on Part I A and add a footnote to chlorine conditions in Part I B if a chlorine demonstration has been made as discussed in the preceding paragraphs. This is essentially the reverse of the procedure used when chlorine is the disinfection method and bacteria limits are added in the special conditions in case an alternative is used after the permit is issued. Bacteria monitoring may be required due to the location of the discharge (i.e. PWS or shellfish waters) in addition to being required due to the use of alternate disinfection. In these instances, place both bacteria limits and chlorine on the Part I A page. In reissuing permits to facilities that have used alternate disinfection in the past to meet fecal coliform limits, and where these limits are being changed to E. coli or enterococci for the first time, it may be necessary to give the permittee a compliance schedule for meeting the new limits. The need for a compliance schedule should be determined by a demonstration of the ability of the alternate disinfection to meet the new limits. This demonstration can be made either with the application or after reissuance through a special condition. The demonstration requirements are described in this section. If demonstration is satisfied, fecal coliform limitations and monitoring should not be required in the VPDES permit. The applicable freshwater or saltwater/transition zone geometric mean E.coli or enterococci limitations should be included on the Part 1.A. page. If demonstration is not satisfied, the permit should contain fecal coliform monitoring as well as a compliance schedule for meeting the applicable freshwater or saltwater/transition zone geometric mean limitations. Monitoring frequency should be in accordance with the Alternate Disinfection section of this manual. If demonstration is to be made during the permit term, the VPDES permit should contain fecal coliform limitations per this manual and the permit should include the special condition listed as "**Bacterial Effluent Limitations and Monitoring Requirements - Additional Instructions** " appearing in the Municipal Special Conditions section of the manual which follows. No demonstration should be required if the applicant chooses to meet the new bacteria standards without a compliance schedule.

a. Part I B language when chlorine is used as a backup to alternate disinfection

Total Residual Chlorine (TRC) Effluent Limitations and Monitoring Requirements

If chlorination is chosen as a disinfection method, TRC [DMR # 005] shall be limited and monitored by the permittee as specified below:

1. Effluent TRC shall be monitored, following dechlorination, 1/day by grab sample and limited as specified below:

	Monthly Average	Weekly Average
TRC (mg/l)	*	*

2. TRC shall be monitored at the outlet of the chlorine contact tank, prior to dechlorination, [**frequency from sampling table**] by grab sample.

3. No more than [**10% of total number of monthly samples**] of all samples taken at the outlet of the chlorine contact tank shall be less than [**1.0 mg/l or 1.5 mg/l**] for any one calendar

month.[DMR # 157]

4. No TRC sample collected at the outlet of the chlorine contact tank, prior to dechlorination, shall be less than 0.6 mg/l. [DMR # 213]

The above requirements, if applicable, shall substitute for the bacteria requirements delineated in Part I A.

* Use values derived from waste load allocations.

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. Disinfection Reductions or Waivers

During the process of approving, issuing, or reissuing a VPDES permit, DEQ staff may consider, with the advice of the Virginia Department of Health (VDH) as described in regulation 9 VAC 25-260-170, whether disinfection requirements may be modified through approval of requests for a disinfection reduction or waiver, as appropriate, on a seasonal or year-round basis. The disinfection policy (9 VAC 25-260-170 B 3) states, in part:

"...the Board, with the advice of the State Department of Health, may determine that reduced or no disinfection of a discharge is appropriate on a seasonal or year-round basis. In making such a determination, the Board shall consider the actual and potential designated uses of these waters and the seasonal nature of those uses. Such determinations will be made during the process of approving, issuing, or reissuing the discharge permit and shall be in conformance with a Board approved site specific beneficial use attainability analysis performed by the permittee."

Case-by-case determinations concerning the appropriate level of disinfection for sewage discharges can be made only for discharges which are over fifteen miles upstream or more than one tidal cycle downstream of a water supply intake and/or discharge over five miles upstream of shellfish waters. The process for applying and receiving a reduced disinfection requirement is outlined in the following procedures.

a. To apply for modified disinfection requirements in a VPDES permit, the owner or owner's agent must file an original and at least three copies, of Sections I, II and III of the Use - Attainability Analysis Form (UAAF) for Modified Disinfection Requirements with the appropriate DEQ Regional Office (RO). See the form on the pages following this introduction. Ensure all UAAFs are signed in accordance with the Permit Regulation.

b. Upon receipt of the Sections I, II, and III of the UAAF, date it as to when it was received and then review it for completeness. The RO forwards a copy of the form to the appropriate Virginia Department of Health (VDH) Regional Office.

For all modified disinfection requirement requests, a correct and properly filled out form is required before the request can be considered complete. The RO determines whether or not such requests are administratively complete within 14 days of receipt of the form. If the form has not been filled out completely and correctly by the permittee, then the form must be returned with a letter noting the deficiencies and requesting they be corrected.

c. Review the first three sections of the form to determine whether the permittee qualifies for consideration of a site specific determination of appropriate disinfection levels.

Base disapproval on one of the following conditions:

- VDH recommends disapproval of the request for reduced disinfection or a waiver;
- The discharge is located within fifteen miles upstream or one tidal cycle downstream of a water supply intake; or
- The discharge is located within five miles upstream of shellfish waters.

d. Transmit the Use-Attainability Analysis section (Sections IV through VI) of the UAAF to the applicant with the appropriate decision checked and signed by the RO Director.

e. Upon receipt of the completed UAAF, the RO will forward the package to the Water Quality Standards section of the Office of Water Quality Standards, (OWQS). This transmittal includes copies for: the appropriate VDH, Virginia Marine Resources Commission (VMRC), Department of Historic Resources, (DHR), Department of Game and Inland Fisheries, (DGIF), Planning Offices and agricultural agent comments provided on the Use Attainability Information form and the appropriate Request for Background Information forms.

f. Upon receipt of complete information by OWQS and a cursory review approval by the Environmental Program Manager for WQS, schedule a meeting of the disinfection committee. OWQS will form a disinfection committee to review each request on a case-by-case basis. OWQS will distribute copies of the form to each member for review before the meeting to make a preliminary assessment of the case. The membership of the committee is composed of at least one representative from the VDH and the following from the DEQ:

- A representative from OWQS, who serves as committee chairman;
- Regional Representative of the Office of Enforcement;
- Regional Permit Writer; and

- A representative from OWPP.

The committee has 120 days to approve or disapprove a disinfection waiver from the date when the UAAF form is deemed complete.

g. The committee will meet and make a recommendation conditional upon comments received during the public notice of the VPDES permit action.

h. **The DEQ will ensure public participation and comment by including a description of possible disinfection waiver effects in the public notice for VPDES permit action**. A 45-day public notice period is required. The public notice should clearly state that direct contact or primary recreational water use in the impacted zone would represent an actual or potential health hazard. The notice should also describe the impacted zone in terms of local landmarks. Send the public notice to property owners adjacent to the affected area. These adjacent property owners should be identified in the UAAF, Section V.

i. If significant public comment is received, the committee will either diapprove the proposed alternative disinfection limits or recommend that the agency go to public hearing. If no significant public comment is received, the committee will recommend one of three options:

- Disinfection is not needed;
- Disinfection is needed year round; or
- Disinfection is needed seasonally.

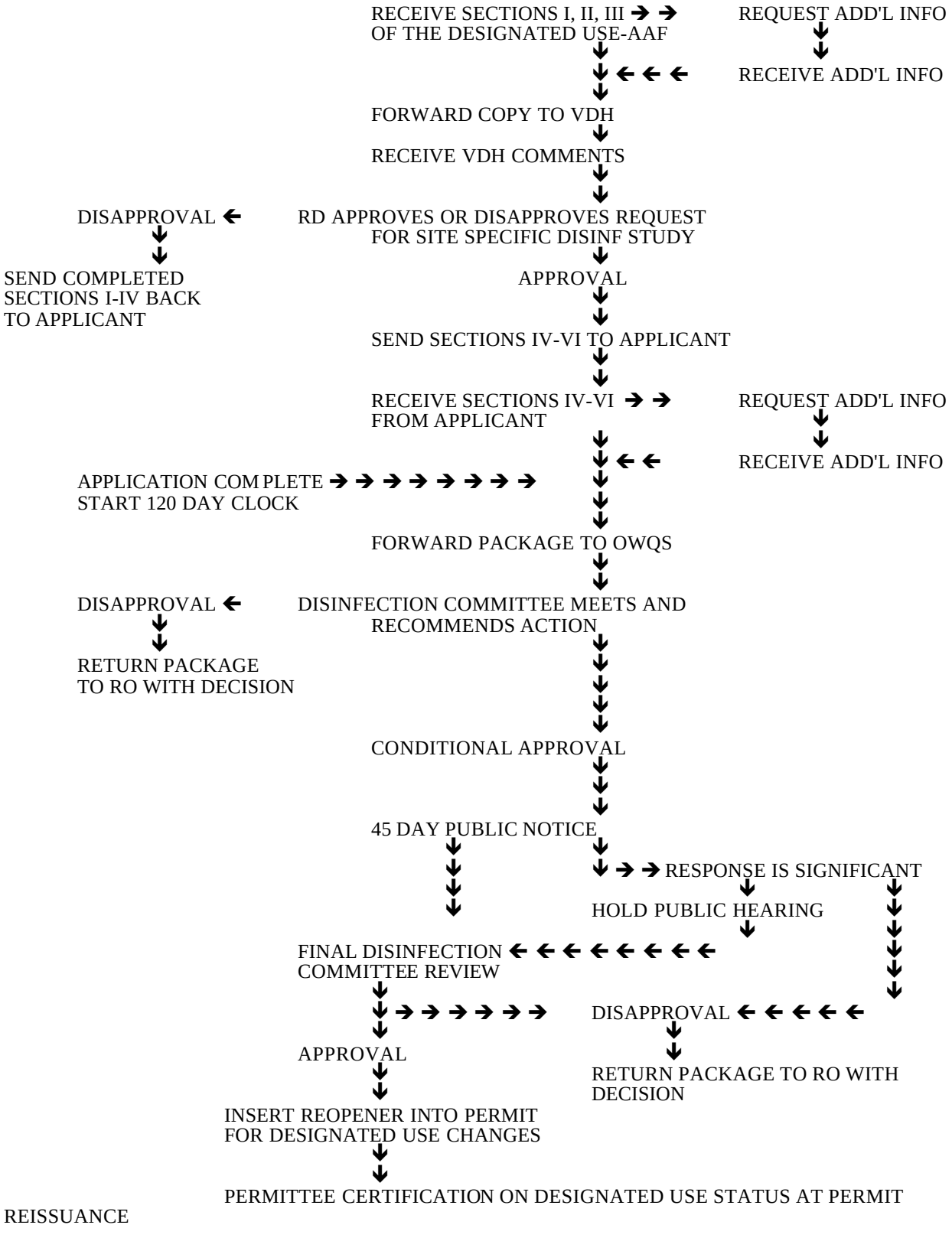
j. Once public comment period has closed, a photocopy of the public record will be added to the beneficial use-attainability form and the combined DEQ/VDH committee will conduct a final review of the information.

k. At the time of permit reissuance the permittee should reevaluate Section VI of the UAAF and submit a certification to the regional office that conditions have or have not changed at the site. The permittee may be required to submit more information if regional or central office staff think that recreational uses have changed at the site. The Virginia Department of Health should be notified if the waiver is continued.

l. Include a permit special condition reopener if there is a significant change in designated uses of the water body.

m. Applicants who wish to appeal a committee decision have two options. One option is found in Section 62.1-44.25 of the State Water Control Law. A second option is formal judicial review.

n. Modified Disinfection Requirements Processing Flow Chart



p. UAAF

DEPARTMENT OF ENVIRONMENTAL QUALITY
USE-ATTAINABILITY ANALYSIS FORM
FOR MODIFIED DISINFECTION REQUIREMENTS

****

INSTRUCTIONS: SECTIONS I-III ARE TO BE COMPLETED BY THE APPLICANT AND SUBMITTED TO THE DIRECTOR OF THE DEQ REGIONAL OFFICE ISSUING THE PERMIT

I. PERMIT SPECIFICATIONS

A. Name of Facility:

B. VPDES Number: VA00

C. Name of Permittee:

D. Mailing Address of Permittee:

E. Telephone Number of Permittee:

F. Location of outfall(s) for which alternative disinfection limit(s) requested as described in the permit (attach separate sheet if necessary):

G. Estimated Maximum Discharge Flow (mgd):

H. Estimated Average Discharge Flow (mgd):

I. Identify all waste treatment unit operation processes:

J. Water Quality Standards Stream Classification (Obtain from 9 VAC 25-26-390 et seq.) or cover page of most recent VPDES permit: I__, II__, III__, IV__, V__, VI

K. Any Applicable Special Water Quality Standards (Obtain from 9 VAC 25-260-310 and 350) or cover page of most recent VPDES permit:

p. **UAAF** (cont.)

II. SITE DESCRIPTION

A. Name of Impacted Waterbody:

B. River Basin (obtain from cover page of most recent VPDES permit): James__, Roanoke__, Rappahannock__, York__, Chowan and Dismal Swamp__, Tennessee and Big Sandy__, Potomac__, New River__, Chesapeake Bay, Atlantic Ocean and Small Coastal

C. Name of the U.S.G.S. topographic map(s) on which the outfall(s) appears:
(Attach either an original or clear reproduction of the topo map and indicate the outfall(s) into the receiving stream by a triangle)

III. CONTACT WITH VIRGINIA DEPARTMENT OF HEALTH (VDH)

A. Check the appropriate VDH Office of Water Programs Region: Abingdon__, Culpeper__, Danville__, Lexington__, Richmond__, Southeast

B. Name and title of the regional health department contact:

C. The VDH is to be contacted. Check how you have made contact with the VDH Regional Office

Date(s)

Correspondence received: yes__, no__
Formal meeting held: yes__, no__
Telephone contact: yes__, no__

****

I certify under penalty of law that this document and all attachments were prepared under the 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 be 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.

Signature: _____ Date Submitted:

Title:_____ Organization:

Signatory Requirements: Shall be signed for a corporation by a responsible corporate official, for municipality, State, Federal, or other public agency by either a principal executive officer or ranking elected official and for a partnership or sole proprietorship, by a general partner or proprietor respectively.

p. **UAAF** (cont.)

INSTRUCTIONS: SECTION IV IS TO BE COMPLETED BY THE DEQ REGIONAL OFFICE

IV. DECISION REGARDING PERMITTEE'S ELIGIBILITY FOR A SITE SPECIFIC DETERMINATION OF APPROPRIATE DISINFECTION LEVELS:

___ Request approved contingent upon permittee receiving DEQ Regional Office approval of bacteria sampling stations. It is the permittees responsibility to contact the DEQ Regional Office regarding the sampling stations.

___ Request disapproved for the following reason(s):

___ The discharge is located within fifteen miles upstream or one tidal cycle downstream of a water supply intake,

___ The discharge is located within five miles upstream of shellfish waters, or

___ Other (describe):

___ VDH recommended disapproval for the following reason:

___ No decision made because information was missing. Please complete the following missing sections and resubmit:

Signature:_____ Date:
Regional Director

p. **UAAF** (cont.)

INSTRUCTIONS: A draft version of Section V is to be prepared by the permittee and presented to the DEQ Regional Office for approval before commencing sampling. Following DEQ approval of the estimates proposed by the applicant, a final version of Section V will be completed by the applicant and submitted to the DEQ Regional Office for approval by the Regional Director or a designated representative. The following minimum requirements must be followed:

1. Calculate dilution flow.
2. Conduct survey only during the months of May through October.
3. Collect replicate bacterial samples at each station.
4. Do not collect samples within 48 hours of a precipitation event.
5. Collect samples at a representative reference station above the outfall, below the outfall mixing area but before confluence with another water body, and from other representative areas in the estimated impact area.

V. IDENTIFICATION OF IMPACTED AREA AND SAMPLING STATIONS TO CHARACTERIZE BACTERIA LEVELS OF TREATED BUT UNDISINFECTED EFFLUENT:

A. Estimate potential stream miles or surface acres affected (bacteria standards not met - see MN.C.1.f and 9 VAC 25-) if disinfection waived (attach calculations)

B. Describe Location of the Upper Limit of the Impacted Zone (be specific -- include route numbers, distance in yards, etc.):

C. Describe Location of the Lower Limit of the Impacted Zone:

D. Obtain names and addresses of all property owners (or their representatives) within the affected area. Include this information as an attachment.

E. List All Stations Approved by the DEQ for Sampling for bacteria(Attach additional pages if needed; mark station numbers on attached topo map):

1.

2.

3.

4.

5.

DEQ APPROVAL:

Signature: _____ Date:
Regional Director

p. **UAAF** (cont.)

VI. WATER QUALITY AND STREAM USE SECTION

INSTRUCTIONS TO THE APPLICANT FOR COMPLETING THIS SECTION:

A. Fill in Section I of the six request forms for background information and mail to the various organizations in order to obtain some of the information needed to complete this section. (Complete the VMRC form only if the discharge is into shellfish waters in the DEQ Tidewater, Northern, or Piedmont Regions.)

B. The applicant will also collect any additional information needed for completion of the impacted area summary form at the time of the bacteria sampling.

C. Using the information collected from B, complete the Bacteria Report Form for the stream segment as described in Section V, Item E.

D. Using the information collected from A and B above, complete the Impacted Area Summary Form.

E. Use the following symbols to indicate the source of the information provided on the Summary Form:

F = Department of Game and Inland Fisheries

A = Local agricultural extension agent

H = Local Health Department

P = Local or district planning office

C = Department of Conservation and Recreation

O = Observations made during field survey

M = Virginia Marine Resources Commission

F. Attach photographs of the discharge point (cross section and facing downstream), any road crossings, and at least one cross section and long view print wherever bacteria samples were collected.

G. After sections V and VI are completed, the applicant should submit the completed forms to the DEQ Regional Office with a transmittal letter on company/governmental letterhead signed in accordance with signature requirements contained in 9 VAC 25-31-110.

BACTERIA REPORT

Bacteria Station Description (See Section V)	E. coli or enterococci(per 100 ml)	Temperature (^{o}C)
1.		
2.		
3.		
4.		
5.		

p. **UAAF** (cont.)

Impacted Area Summary Form (To be completed by applicant)

FACTOR	RESPONSE	SOURCE
Water Quality		
E. coli or enterococci per 100 ml (highest reported value)		
Physical Characteristics of Impacted Area		
Length (miles)		
Mean Depth (feet)		
Width (feet)		
7Q10 flow (cfs)		
Stream Bottom (R=rocky, S=sandy, M=muddy)		
Public Access		
Boat Ramps/Docks		
Parks, Picnic Areas, Campgrounds		
Beaches, Swimming Areas		
Roads, Hiking Trails within 100 feet		
Bridges		
Limitations to Recreational Use (check applicable items)		
No limitations		
Absence of roads and trails		
Steep or unstable slopes		
Military Restricted Zone		
Shallow water depth		
Muddy substrates		
Current Stream Uses (indicate yes or no)		
Swimming, Wading, Water Skiing		
Fishing		
Boating		
Water Supply		
Livestock		
Irrigation		
Shellfish harvesting within miles		
Natural Features or Institutional Constraints (indicate yes or no)		
State or Federal endangered or threatened species Name:		
Scenic River designation		
National or State Park		
National or State Forest		
Wetland		
State Wildlife Management Area		

p. **UAAF** (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM VIRGINIA DEPARTMENT OF HEALTH

REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed by applicant:

Applicant's Name _____

Address _____

Phones (Office) _____/_____(Home) _____/_____

Treatment Works _____

Discharge Flow (max/avg) gpd _____

Stream/River _____ River Basin _____

City/County _____ Topographic map name _____

Impacted Stream Features above and up to five miles below discharge:

_____

Mail to: The appropriate Regional Office of the Office of Water Programs, VDH (Abingdon, Culpeper, Danville, Lexington, Richmond, Southeast Virginia)

****

II. To be completed by VDH RO and LHD Staff from site inspection at and downstream from the discharge location:

CURRENT AND POTENTIAL STREAM USES (Please indicate type of Access)

Surface Water Supplies	Commercial or Public Boat Ramps/Moorings (1)
Beach/Swimming/Shellfish Waters	Private Boat Ramps/Docks
Adjacent Private Residences (1)	Fishing Access
Adjacent Commercial Areas (1)	Bridge Crossing Access
Access from Road/Hiking Trail within 100 ft	Livestock Watering (2)
	Crop Irrigation (2)

(1) Please note any potential development sites (local planning and zoning).
(2) Please contact the extension agent or VDACS if use is suspected.

Comments:

_____

_____

Signature _____ Date _____

Title _____

****

III. Return Original Form To:

DEQ Regional Office _____

Regional Office Contact _____

Address _____

Phone _____/_____

Provide copies to: Applications Engineer, VDH-OWP, 1500 E. Main St. Richmond, VA 23219.

p. **UAAF** (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM THE VIRGINIA DEPARTMENT OF GAME & INLAND FISHERIES
REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed and mailed by applicant:

Facility Name _____ VPDES # _____
Applicant's Name _____
Mailing Address _____
Phone(s) _____
Stream/River _____ River Basin _____
City/County _____ Topographic map name _____
Impacted Stream Area (be specific; include upstream and downstream limits)
_____
Outfall Location _____

Mail to: Environmental Officer, Fish Div., Dept. of Game & Inland Fisheries, P.O. Box 11104, Richmond, VA 23230

****

II. To be completed for the above impacted stream area by the DGIF Environmental Office:

CURRENT STREAM USES (Please indicate all uses)

Boating	Boat Ramp/Dock
Wildlife Mgmt Area	Fishing
Trout Fishing (natural)	Trout Fishing (put & take)

List Endangered Species _____

List Threatened Species _____

Other _____

Signature _____ Date _____
Environmental Officer, Fish Division, Department of Game and Inland Fisheries

****

III. The individual completing Section II must return the Original Form to the address provided below:

DEQ Regional Office _____
Regional Office Contact _____
Address _____
Phone _____/_____
(DEQ Regional Office to copy applicant)

p. UAAF (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION
REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed and mailed by applicant:

Facility Name _____ VPDES #_____
Applicant's Name _____
Mailing Address _____
Phones _____
Stream/River _____ River Basin _____
City/County _____ Topographic map name _____
Impacted Stream Area (be specific; include upstream and downstream limits)
_____
Outfall Location _____

Mail to: Environmental Program Planner, Department of Conservation and Recreation, 203 Governor Street, Suite 306, Richmond, Virginia 23219

****

II. To be completed for the above impacted stream area by Environmental Program Planner:

CURRENT STREAM USES (Please indicate all uses known to your organization)

Boating	Boat Ramp/Dock
Beach/Swimming	Fishing
Trout Fishing (natural)	Trout Fishing (put&take)
Picnic Areas	Adjacent Parkland
Road/Hiking Trail within 100 ft	Livestock Watering

List Endangered Species _____
List Threatened Species _____
Other _____

Signature _____ Date _____

Title_____

****

III. The individual completing Section II must return the Original Form to the address provided:
DEQ Regional Office _____
Regional Office Contact _____
Address _____
Phone _____/_____
(DEQ Regional Office to copy Applicant)

p. **UAAF** (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM LOCAL PLANNING DISTRICT OFFICE

REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed and mailed by applicant:

Facility Name _____ VPDES # _____
Applicant's Name _____
Mailing Address _____
Phones _____
Stream/River _____ River Basin _____
City/County _____ Topographic map name _____
Impacted Stream Area (be specific; include upstream and downstream limits)
_____
Outfall Location _____

Mail to: Local/District Planning Office
Address:_____

****

II. To be completed for the above impacted stream area by the Local Planning District Office:

CURRENT STREAM USES (Please indicate all uses known to your organization)

Boating	Boat Ramp/Dock
Beach/Swimming	Fishing
Trout Fishing (natural)	Trout Fishing (put&take)
Picnic Areas	Adjacent Parkland
Road/Hiking Trail within 100 ft	Livestock Watering

List Endangered Species _____
List Threatened Species _____
Other _____

Signature _____ Date _____

Title _____

****

III. The individual completing Section II must return the original form to the address provided below:

DEQ Regional Office _____
Regional Office Contact _____
Address _____
Phone _____/_____

(DEQ Regional Office to copy Applicant)

p. **UAAF** (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM THE LOCAL AGRICULTURAL AGENT

REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed and mailed by applicant:

Facility Name _____ VPDES # _____
Applicant's Name _____
Mailing Address _____
Phones _____
Stream/River _____ River Basin _____
City/County _____ Topographic map name _____
Impacted Stream Area (be specific; include upstream and downstream limits)
_____
Outfall Location _____

Mail to Local Agricultural Agent
Address:_____

****

II. To be completed for the above impacted stream area by the Local Agricultural Agent.

CURRENT STREAM USES (Please indicate all uses known to your organization)

Boating	Boat Ramp/Dock
Beach/Swimming	Fishing
Trout Fishing (natural)	Trout Fishing (put&take)
Picnic Areas	Adjacent Parkland
Road/Hiking Trail within 100 ft	Livestock Watering

List Endangered Species _____
List Threatened Species _____
Other _____

Signature _____ Date _____

Title _____

****

III. The individual completing Section II must return the original form to the address provided below:

DEQ Regional Office _____
Regional Office Contact _____
Address _____
Phone _____/_____
(DEQ Regional Office to copy Applicant)

p. **UAAF** (cont.)

DESIGNATED USE ATTAINABILITY INFORMATION FROM THE VIRGINIA MARINE RESOURCES COMMISSION

REQUEST FOR BACKGROUND INFORMATION FOR DEQ CONSIDERATION OF MODIFIED DISINFECTION REQUIREMENTS

I. To be completed and mailed by applicant if discharge is into tidal waters:

Facility Name _____ VPDES # _____
Applicant's Name _____
Mailing Address _____
Phones _____
Stream/River _____ River Basin _____
City/County _____ Topographic map name _____
Impacted Stream Area (be specific; include upstream and downstream limits)
_____
Outfall Location _____

Mail to: Virginia Marine Resources Commission, P. O. Box 756, Newport News, VA 23607-0756

****

II. To be completed for the above impacted stream area by the Virginia Marine Resources Commission.

CURRENT STREAM USES (Please indicate all uses known to your organization)

Boating	Boat Ramp/Dock
Beach/Swimming	Fishing
Trout Fishing (natural)	Trout Fishing (put&take)
Picnic Areas	Adjacent Parkland
Road/Hiking Trail within 100 ft	Livestock Watering

List Endangered Species _____
List Threatened Species _____
Other _____

Signature _____ Date _____

Title _____

****

III. The individual completing Section II must return the original form to the address provided below:

DEQ Regional Office _____
Regional Office Contact _____
Address _____
Phone _____/_____

(DEQ Regional Office to copy Applicant)

p. **UAAF** (cont.)

INSTRUCTIONS: THIS PAGE IS TO BE COMPLETED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

VII. RESULTS OF PUBLIC COMMENT

(Attach a representative sample of any letters received during the public comment period and the hearing exhibit list if a public hearing was conducted).

****

VIII. RECOMMENDATIONS OF REVIEW COMMITTEE TO REGIONAL DIRECTOR

_____ Application is incomplete. Please complete the following sections and resubmit:

_____ Recommend conditionally upon:

_____ receipt of public comment
_____ EPA comment
_____ other conditions (specify):_____

_____ Disinfection Needed Year Round

_____ Disinfection Not Needed

_____ Disinfection Needed Seasonally:(List Months)_____

Date of Recommendation:_____

Names of Committee Members	Organizational Unit
_____	Virginia Department of Health
_____	DEQ Water Quality Standards Program
_____	DEQ _____ Regional Office
_____	DEQ Permits Section, OWPP
_____	_____

5. 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 OWPP 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. OWPP 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.

D. 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 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*)

a. The permitee shall monitor the TRC at the outlet of each operating chlorine contact tank once per [**frequency from sampling table**] by grab sample.

b. No more than [**10% of total no. of monthly samples**] of all samples taken at the outlet of the 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.*

c. No TRC sample collected at the outlet of the chlorine contact tank shall be less than 0.6 mg/l.

d. If dechlorination facilities exist the samples above shall be collected prior to dechlorination.

If chlorine disinfection is not used, bacteria shall be limited and monitored by the permittee as specified below (*see MN.C.1.f. for instructions on using bacterial limitations*):

E.coli / enterococci (*choose one)* bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean	Single Sample Maximum
Fresh water E.coli (N/100 ml)	126	235
Saltwater and Transition Zone enterococci (N/100 ml)	35	104

2. **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.

3. **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 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.

4. **CTC, CTO Requirement** *(use in all municipal permits)* The permittee shall, in accordance with the DEQ Sewage Collection and Treatment Regulation (9VAC 25-790), obtain a Certificate to Construct (CTC), and a Certificate to Operate (CTO) from the DEQ 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.

5. **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. 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 completion of construction]**. 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. Discussion of Best Management Practices, if applicable;

c. Treatment system design, treatment system operation, routine preventive maintenance of units within the treatment system, critical spare parts inventory and record keeping;

d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.

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, 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 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. Discussion of Best Management Practices, if applicable;

c. Treatment works design, treatment works operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;

d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants that will prevent these materials from reaching state waters.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for 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.

6. **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.

7. **Reliability Class** *(use in all municipal permits. VDH Office of Drinking Water should provide a recommendation for the reliability class upon review of the application, and concurrence should be received from the DEQ OWE)* The permitted treatment works shall meet Reliability Class [**from VDH and DEQ OWE**].

8. **Financial Assurance and Disclosure to Purchasers** (*use 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 9 VAC 25-650 until the new owner or operator has demonstrated compliance with the requirements of 9 VAC 25-650. Failure to maintain adequate financial assurance in accordance with 9 VAC 25-650 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 9 VAC 25-650 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 discharges only*) The approved financial assurance mechanism shall be filed with the State Water Control Board no less than 90 days prior to [**discharge**][t**he 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.

9. **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.

10. **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.

11. **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.

12. **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.

13. **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. 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.)

Department of Environmental Quality
Water Quality Criteria Monitoring
Attachment A

New form under construction
Add Here

14. **Compliance Reporting under Part I A and Part I B** *(use for permit with water quality-based limits in Part I A and B for toxics or conventional pollutants. Modify this example as needed for effluent parameters in the permit.)*

a. The quantification levels (QL) shall be as follows:

Effluent Characteristic	Quantification Level
BOD5	5.0 mg/l
TSS	1.0 mg/l
Chlorine	0.10 mg/l
Ammonia-N	0.20 mg/l
Total Recoverable Cadmium	0.80 ug/l
Total Recoverable Copper	7.2 ug/l
Total Recoverable Nickel	13 ug/l
Total Recoverable Zinc	52 ug/l

(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. QLs for other conventionals are: Oil&Grease = 5.0 mg/l; COD = 10 mg/l; TKN = 0.50 mg/l; Color = 1.0 pcu)

b. Reporting

Monthly Average -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in Part I A and B shall be determined as follows: All concentration data below the QL listed above shall be treated as zero. All concentration data equal to or above 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, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is <QL, then report "<QL" for the quantity. Otherwise use the concentration data to determine the quantity.

Weekly Average -- Compliance with the weekly average limitations and/or reporting requirements for the parameters listed in Part I A and B shall be determined as follows: All concentration data below the QL listed in a. above shall be treated as zero. All concentration data equal to or above the QL 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, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is <QL, then report "<QL" for the quantity. Otherwise use the concentration data to determine the quantity.

Any single datum required shall be reported as "<QL" if it is less than the QL in a. above. Otherwise the numerical value shall be reported.

15. **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.

16. **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 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.

(*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 and Department of Health 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 and Department of Health 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***

17. **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 the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration.

(List 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.

18. **Pretreatment Program** *(Consult the regional pretreatment coordinator for the appropriate special condition language.)*

19. **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.

20. **Toxics Management Program**

Refer to the TMP implementation guidance for special condition text and rationale regarding TMP implementation.

21. **Storm Water Management**: *The following special conditions 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 special conditions include the general storm water conditions (Part A), the generic storm water management requirements (Part B), and sector-specific requirements for municipal treatment works (Part C). The designation of Parts A, B and C 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.***

A. GENERAL STORM WATER SPECIAL CONDITIONS

1. <u>Quarterly Visual Examination of Storm Water Quality</u>.

The permittee shall perform and document a 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.

a. Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examination shall 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 such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previous measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be 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. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term.

b. Visual examination reports must be maintained onsite with the pollution prevention plan. The report shall 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.

c. If the facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies 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.

d. 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.).

2. Allowable Non-Storm Water Discharges.

a. The following non-storm water discharges are authorized by this permit, provided the non-storm water component of the discharge is in compliance with 2.b.

(1) Discharges from fire fighting activities;
(2) Fire hydrant flushings;
(3) Potable water including water line flushings;
(4) Uncontaminated air conditioning or compressor condensate;
(5) Irrigation drainage;
(6) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;
(7) 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);
(8) Routine external building wash down which does not use detergents;
(9) Uncontaminated ground water or spring water;
(10) Foundation or footing drains where flows are not contaminated with process materials such as solvents;
(11) 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).

b. Except for flows from fire fighting activities, the Storm Water Pollution Prevention Plan must include:

(1) Identification of each allowable non-storm water source;
(2) The location where it is likely to be discharged; and
(3) Descriptions of appropriate BMP's for each source.

c. If mist blown from cooling towers is included as one of the allowable non-storm water discharges, the facility must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower. The permittee must determine that the levels of such chemicals in the discharges will not cause or contribute to a violation of an applicable water quality standard after implementation of the BMP's selected to control such discharges.

3. 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 this facility shall be prevented or minimized in accordance with the applicable storm water pollution prevention plan for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill. 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 (1998), 40 CFR 117 (1998) or 40 CFR 302 (1998) occurs during a 24 hour period, the permittee is required to notify the Department in accordance with the requirements of **Part II G** as soon as he or she has knowledge of the discharge. In addition, 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. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110 (1998), 40 CFR 117 (1998) and 40 CFR 302 (1998) or § 62.1-44.34:19 of the Code of Virginia.

B. STORM WATER POLLUTION PREVENTION PLAN

Refer to **Part C** for sector-specific storm water management requirements.

[For reissuances with existing SWPPs A storm water pollution prevention plan was required to be developed and implemented for the facility by 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 SWPP requirements** A storm water pollution prevention plan is required to be developed for the facility. The plan shall be prepared in accordance with good engineering practices.**]** The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. Permittees must 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 by incorporating by reference other plans or documents such as an erosion and sediment control plan, 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 B.**4. If an erosion and sediment control plan is being incorporated by reference, it shall have been approved by the locality in which the activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulation 4 VAC 50-30-10 et seq. All plans incorporated by reference into the storm water pollution prevention plan become enforceable under this permit.

1. Deadlines for Plan Preparation and Compliance

a. 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.]

b. 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.

2. Signature and Plan Review

a. Signature/Location. The plan shall be signed in accordance with Part II.K., and be retained onsite at the facility that generates the storm water discharge in accordance with Part II.B.2.

b. Availability. The permittee shall make the storm water pollution prevention plan, annual site compliance inspection report, or other information available to the Department upon request.

c. Required Modifications. The Director, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. Such notification shall identify those provisions of the permit that are not being met by the plan, and identify which provisions of the plan require modifications in order to meet the minimum requirements of this permit. Within 60 days of such notification from the Director, (or as otherwise provided by the Director), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the Director a written certification that the requested changes have been made.

3. Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to surface waters or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under **Part B**.4. of this permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. New owners shall review the existing plan and make appropriate changes. Amendments to the plan may be reviewed by the Department in the same manner as **Part B.**2.

4. Contents of the Plan

The contents of the pollution prevention plan shall comply with the requirements listed below and those in **Part C**. The plan shall include, at a minimum, the following items.

a. Pollution Prevention Team. The plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

b. Description of Potential Pollutant Sources. The plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. The plan shall identify all activities and significant materials that may potentially be significant pollutant sources. The plan shall include, at a minimum:

(1) Drainage. A site map indicating an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under **Part B.4.b.(3)** have occurred, and the 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 and wastewaters, locations used for the treatment, filtration, or storage of water supplies, liquid storage tanks, processing areas, and storage areas. The map must indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls; and for each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with industrial activity. Factors to consider include the toxicity of

chemicals; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified;

(2) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of submission of the application for this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of the application for this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives;

(3) Spills and Leaks. A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility within the 3 year period immediately prior to the date of submission of the application for this permit. Such list shall be updated as appropriate during the term of the permit;

(4) Sampling Data. A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit; and

(5) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices, and wastewater treatment activities to include sludge drying, storage, application or disposal activities. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, total suspended solids, etc.) of concern shall be identified.

c. Measures and Controls. The permittee shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

(1) Good Housekeeping. Good housekeeping requires the clean and orderly maintenance of areas that may contribute pollutants to storm water discharges. The plan shall describe procedures performed to minimize contact of materials with storm water runoff. Particular attention should be paid to areas where raw materials are stockpiled, material handling areas, storage areas, liquid storage tanks, material handling areas, and loading/unloading areas.

(2) Preventive Maintenance. A preventive maintenance program shall involve: timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins); inspection and testing of facility equipment and systems to uncover conditions that could cause breakdowns or failures which could result in discharges of pollutants to surface waters; and appropriate maintenance of such equipment and systems.

(3) Spill Prevention and Response Procedures. Areas where potential spills can occur that can contribute pollutants to storm water discharges, and their accompanying drainage points, shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(4) Inspections. Facility personnel who are familiar with the industrial activity, the BMPs and the storm water pollution prevention plan shall be identified to inspect designated equipment and

areas of the facility. 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. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained with the pollution prevention plan.

(5) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(6) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(7) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(8) Management of Runoff. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those that control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide for the implementation and maintenance of measures that the permittee determines to be reasonable and appropriate. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity shall be considered when determining reasonable and appropriate measures. Appropriate measures may include: vegetative swales and practices; reuse of collected storm water (such as for a process or as an irrigation source); inlet controls (such as oil/water separators); snow management activities; infiltration devices, wet detention/retention devices; or other equivalent measures.

d. Comprehensive Site Compliance Evaluation. Qualified facility personnel who are familiar with the industrial activity, the BMPs and the storm water pollution prevention plan shall conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall include the following:

(1) Areas contributing to a storm water discharge associated with industrial activity such as material storage, handling, and disposal activities shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made;

(2) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with **Part B**.4.b. and pollution prevention measures and controls identified in the plan in accordance with **Part B**.4.c. shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation;

(3) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with **Part B**.4.d.(2) shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of

noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part II.K.; and

(4) Where compliance evaluation schedules overlap with inspections required under **Part B.4.c.(4)**, the compliance evaluation may be conducted in place of one such inspection.

5. Special Pollution Prevention Plan Requirements

In addition to the minimum standards listed in **Part B.4**. and **Part C**, the storm water pollution prevention plan shall include a complete discussion of measures taken to conform with the following applicable guidelines.

Additional Requirements for Salt Storage. Storage piles of salt used for deicing or other commercial or industrial purposes and that generate a storm water discharge associated with industrial activity that is discharged to surface waters shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. Permittees shall demonstrate compliance with this provision as expeditiously as practicable, but in no event later than 3 years after the effective date of this permit. Permittees with previous coverage under a VPDES permit that included this requirement shall be compliant with this provision upon submittal of the permit application. Piles do not need to be enclosed or covered where storm water from the pile is not discharged to surface waters.

C. STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS SPECIFIC TO TREATMENT WORKS

In addition to the requirements of **Part I. B**., the plan shall include, at a minimum, the following items:

1. Description of Potential Pollutant Sources

Summary of Potential Pollutant Sources - A narrative description of the potential pollutant sources from the following activities associated with treatment works: access roads/rail lines; loading and unloading operations; outdoor storage activities; material handling sites; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., acid, bases, and solvents, etc.) of concern shall be identified.

2. Measures and Controls

a. Inspections - The following areas shall be included in all inspections: access roads/rail lines, equipment storage and maintenance areas (both indoor and outdoor areas); fueling; material handling areas, residual treatment, storage, and disposal areas; and wastewater treatment areas.

b. Employee Training - The pollution prevention plan shall identify how often training will take place, but training should be held at least annually (once per calendar year). Employee training must, 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.

c. Nonstorm Water Discharges - For facilities that discharge vehicle and equipment washwaters to the sanitary sewer system, the operator of the sanitary system and associated treatment plant must be notified. In such cases, a copy of the notification letter must be attached to the plan. If an industrial user permit is issued under a pretreatment program, a reference to that permit must be in the plan. These provisions do not apply if the discharger and the operator of the treatment works receiving the discharge are the same. In all cases, any permit conditions must be considered in the plan. If vehicle and equipment washwaters are handled in another manner (e.g., hauled offsite), the disposal method must be

described and all pertinent documentation (e.g., frequency, volume, destination, etc.) must be attached to the plan.

22. **Bacterial Effluent Limitations and Monitoring Requirements – Additional Instructions**
(*Use when chlorine demonstrations are to be required by the permit.)*

1. Beginning no later than [*insert date no later than six months of the permit effective date*], [*select appropriate* E.coli or enterococci] monitoring shall be performed at a minimum as prescribed below:
Monitoring Frequency: [*select appropriate 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 (*or fecal coliform for alternate disinfection demonstrations*) shall be sampled within 15 minutes of the time each [*select appropriate* E.coli or enterococci] sample is taken. The date and time the samples were collected shall also be recorded. If only one datum is collected in any given calendar month, it shall be compared to the single sample maximum of [*select appropriate* 235 colonies/100 ml or 104 colonies/100 ml] for compliance with the applicable water quality criterion. If more than one datum are collected in any given calendar month, the geometric mean for that month shall be compared to [*select appropriate* 126 colonies/100 ml or 35 colonies/100 ml] for compliance with the applicable water quality criterion.
2. No later than [*insert date no later than one year after the permit effective date*], a demonstration of adequate disinfection as described in item 3 below shall be completed, or the limitations and monitoring requirements in item 4 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:
a. The original data set including the following information and data:
- date and time sample collected
- [*select appropriate*][E.coli or enterococci] (colonies/100 ml)
- chlorine residual after contact but before dechlorination (mg/l)
- chlorine contact time (minutes) (*fecal coliform data replaces chlorine data for alternate disinfection demonstrations)*
- flow (mgd)

b. The geometric mean calculations and results; and
c. A summary of results in tabular format and a statement of successful or unsuccessful demonstration of the requirements of item 3.
In the case of unsuccessful demonstration, the permittee shall comply with item 4.
3. If there are no exceedences of the applicable [*select appropriate* E.coli or enterococci] criterion in a minimum of 12 consecutive samples collected under item 1 while chlorine limitations (*or fecal limitations*) are being complied with, then upon written notification from DEQ, [*select appropriate* E.coli or enterococci] monitoring shall no longer be required.
4. If there are any exceedences of the applicable [*select appropriate* E.coli or enterococci]

criterion in the data set collected under item 1 while chlorine limitations (*or fecal limitations*) are being complied with, then:

a. The following limitations and monitoring requirements shall become effective for [*select applicable* E.coli or enterococci] in accordance with the schedule of compliance in item 4.b below:

	Discharge Limit Monthly Average	Monitoring Requirements Frequency	Sample Type
[select appropriate]			
E.coli (N/100 ml)	126 (Geometric Mean)	2/Month Between 10 a.m. and 4 p.m. [*revise frequency as appropriate*]	Grab
OR			
enterococci (N/100 ml)	35 (Geometric Mean)	2/Month Between 10 a.m. and 4 p.m. [*revise frequency as appropriate*]	Grab

b. The permittee shall achieve compliance with the final limits for [*select appropriate* E.coli or enterococci] specified in item 4.a above in accordance with the following schedule:

(1) Submit Progress Report	By [*insert date no later than permit effective date + 12 months*], and annually thereafter
(2) Achieve compliance with final limits	By [*insert date no later than permit effective ate + 4 years*]

5. [*select appropriate* E.coli or Enterococci] sampling and analysis shall be performed in accordance with the following: [*retain the appropriate section– i.e.* E.coli or enterococci]

Samples shall be analyzed for E.coli in accordance with 40 CFR 141.21, except that maximum holding times shall be limited in accordance with 40 CFR 136 to six hours.

Samples shall be analyzed for enterococci in accordance with one of the following methods:

a. EPA Method 1600: Membrane Filtration Method for Enterococci in Water

b. Standard Methods (18th, 19th, 20th editions) Method 9230B: Multiple Tube Technique for Fecal Streptococcus and Enterococcus Groups

c. Standard Methods (18th, 19th, 20th editions) Method 9230C: Membrane Filter Techniques for Fecal Streptococcus and Enterococcus Groups

d. ASTM Method D6503 (ASTM Volume 11.02): Standard Test Method of Enterococci in Water Using Enterolet(TM)

E. 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 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. The type and frequency are based on flow.

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
PARAMETER	SAMPLE TYPE AND COLLECTION FREQUENCY				
Flow	Totalizing, Indicating & Recording	Totalizing, Indicating & Recording	Totalizing, Indicating & Recording	Totalizing, Indicating & Recording	Estimate
BOD_5, TSS, TKN	24 HC 1/Day	24 HC 5 Days/Week	8 HC 3 Days/Week	4 HC 1/Week	Grab 1/Month
Total Nitrogen* Total Phosphorus*	24 HC 1/Week	24 HC 1/Week	8 HC 1 /2 Weeks	4 HC 1/Month	Grab 1/month
TRC, Contact Tank**	Grab 1 /2 Hr	4/Day at 4 Hr Intervals	3/Day at 4 Hr Intervals	3/Day at 4 Hr Intervals	Grab 1/Day
Bacteria***	Grab 1/Day 10am – 4pm	Grab 5 Days/Week 10am – 4pm	Grab 3 Days/Week 10am – 4pm	Grab 1/Week 10am – 4 pm	Grab 2/Month 10am – 4pm
pH, DO, TRC Effluent	Grab 1/Day	Grab 1/Day	Grab 1/Day	Grab 1/Day	Grab 1/Day
WQS Parameters (Toxics)	1/8H, 24 HC or Grab 1/Month	1/8H, 24 HC or Grab 1/Month	1/8H, 8 HC or Grab 1/Month	1/8H, 4 HC or Grab 1/Month	Grab 1/Month

* Applicable when N or P are limited or for discharges to Nutrient Enriched Waters.
** If an alternative disinfection method is used, see Alternate Disinfection instruction
*** These frequencies are for bacteria sampling which may be required regardless of the disinfection method

5. Alternate Disinfection - Bacteria Monitoring

When disinfection is by means other than chlorination, use the following guidance for bacteria monitoring frequency to ensure adequate continuous disinfection.

a. Treatment works with a design flow of ³ 1.0 MGD not discharging to PWS or shellfish waters 3 per week at 48 hour intervals between 10 am and 4 pm.

b. Treatment works with a design flow of < 1.0 MGD not discharging to PWS or shellfish waters Once per week between 10 am and 4 pm.

c. Treatment works discharging to PWS or shellfish waters
Monitoring frequency is as follows:

Design Flow (MGD)	Frequency
> 2.0	1/day (10 am to 4 pm)
1.001-2.0	5 days/wk (10 am to 4 pm)
0.101-1.0	3 days/wk (10 am to 4 pm)
0.041-.10	2 days/wk (10 am to 4 pm)
≤ 0.040	1/week (10 am to 4 pm)

6. 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. Procedures already established, such as the Designated Use Attainability Analysis that requires Virginia Department of Health review and concurrence, should be used for that purpose.

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, and temperature are evaluated differently, as described at the end of this section.) The composite average is compared with the permit limit, and the information in the following table, which is based on the existing monitoring frequency, to determine 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.

Ratio of Long Term Average to Monthly Average Limit

Baseline Monitoring	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 entry 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.

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 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.

7. 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.

F. 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 ≥ 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.

G. 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.)

H. 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 MN-75, 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

Can the facility meet conventional secondary limits?

	Monthly Avg	Weekly Avg
BOD_5	30 mg/l	45 mg/l
$CBOD_5$	25 mg/l	40 mg/l
TSS	30 mg/l	45 mg/l
Monthly Avg removal of 85% for BOD_5, $CBOD_5$ and TSS		

YES → Issue permit with conventional secondary limits

NO ↓

Is the inability to meet 30-day average limits due to receipt of industrial waste? YES → SEE 1 NEXT PG

NO ↓

Is the facility a waste stabilization pond? YES → SEE 2 NEXT PG

NO ↓

EQUIVALENT TO SECONDARY

Is a trickling filter or waste stabilization pond used as the principle process? NO → Apply conventional secondary or water quality limits

YES ↓

Does the 95th percentile value for the monthly average BOD_5 and/or TSS achieved for at least the last 2 years exceed 30 mg/l? (Do not include upsets, bypasses operational error or other unusual conditions.) NO → Apply conventional secondary or water quality limits

YES ↓

Do these values represent > 65% removal of BOD_5 on a consistent basis? NO → Apply conventional secondary or water quality limits

YES ↓

Do these values protect water quality standards as presented by waste load allocation models or 303(e)/208 Plans? YES → If the facility has shown, or the Board believes, more stringent limits than equivalent to secondary can be maintained, adjust limits accordingly.

NO ↓

Determine values that protect water quality standards.

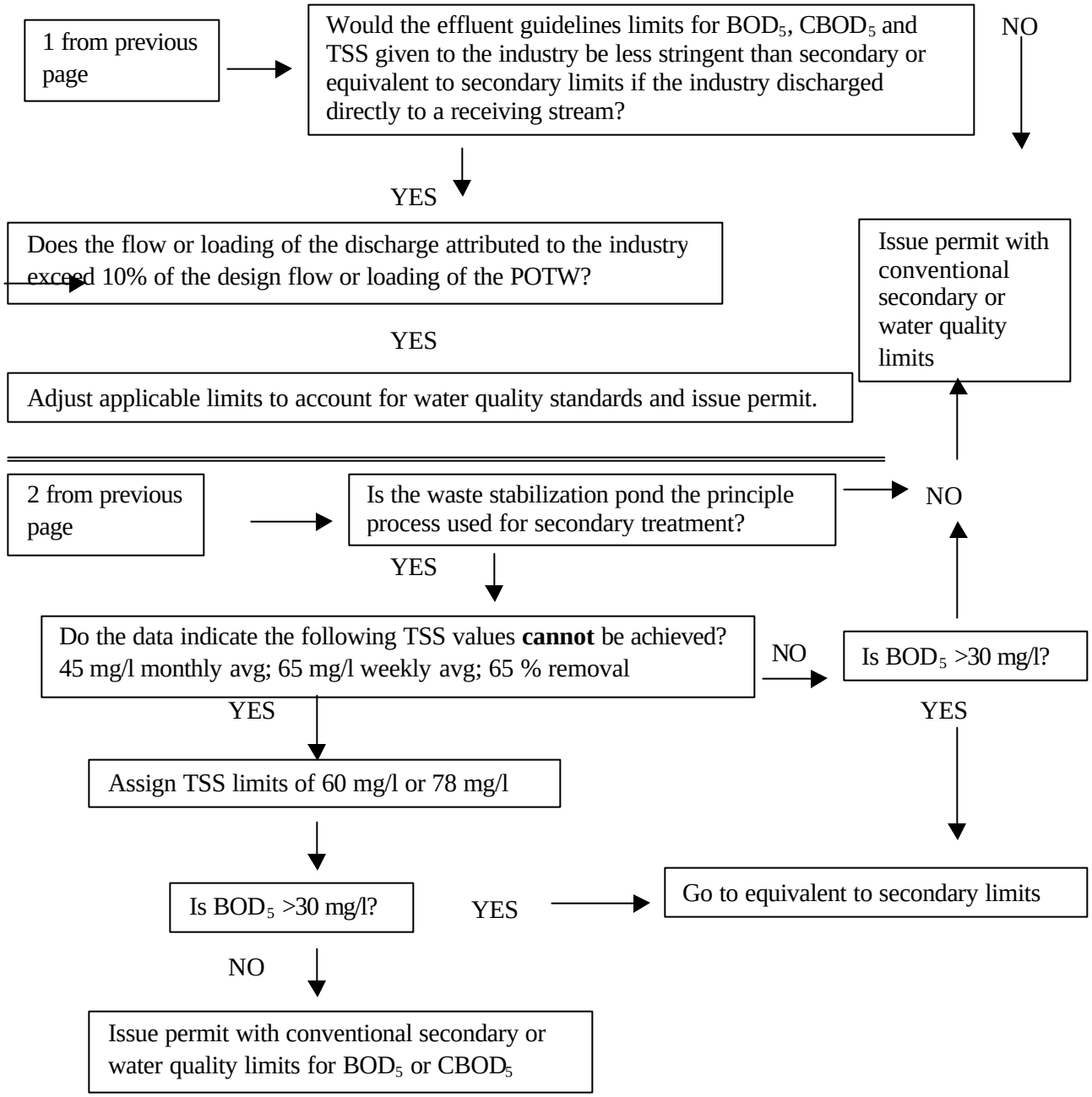
If the facility cannot meet more stringent limits, assign the following:

	Monthly Avg	Weekly Avg
BOD_5	45 mg/l	65 mg/l
$CBOD_5$	40 mg/l	60 mg/l
TSS	45 mg/l	65 mg/l

If $CBOD_5$ is used instead of BOD_5, $CBOD_5$ values for secondary treatment are: 25 mg/l, 45 mg/l and 85%. If applicable, evaluate a tier concept for limits.

4. Flow Chart: Equivalent to Secondary Treatment Regulation (cont'd)

SPECIAL CONSIDERATIONS



I. 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 MN-75, 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

J. 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.	Submit 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 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 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:

Geometric Mean Single Sample Maximum

Fresh water E.coli (N/100 ml)	126	235
Saltwater and Transition Zone enterococci (N/100 ml)	35	104

(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:

	Geometric Mean	Single Sample Maximum
Fresh water E.coli (N/100 ml)	126	235
Saltwater and Transition Zone enterococci (N/100 ml)	35	104

(*see MN.C.1.f. for instructions on using bacterial limitations*)

d. Use an appropriately labeled separate and complete chlorine special condition for each flow tier.

K. 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. :	3.0 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.

L. 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

Sewage Sludge Generators

↓

Submit VPDES Permit App w/ SMP to DEQ and VDH

Identify Use or Disposal

↓

Use

Land Application (Bulk or Bag)

Generators → → ↓

↓

Contractors

↓

Biosolids (Construction and/or Operation) Permits issued by VDH/BUR

Disposal

Landfilling → → (DEQ-Waste/EPA)*

Incineration → → (DEQ-Air/EPA)*

Surface Disposal → → →

↓

SMP Reviewed by DEQ RO

↓

General Requirements
Pollutant limits
Management Practices
Site Restrictions
Monitoring
Recordkeeping
Reporting

VDH forwards comments to DEQ

↓

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

Coordination with VDH for review and approval of the SMPs related to the Biosolids Use Regulations should continue. VDH will provide comments on the SMP 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 review and approval time for a SMP could be up to 45 days. This extra time is necessary for VDH 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 Manageme nt 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 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.

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

Part II J 1 c of the permit boilerplate requires the permittee to notify the Board of any changes to the sludge use or disposal practices during the permit term. These 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). 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	Bagged sewage sludge	Any 1 of the Class A	Any 1 of the first 8

Loading Rate (APLR) Sewage Sludge	applied subject to ceiling and APLR limits in Table 1	requirements in Table 2	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.

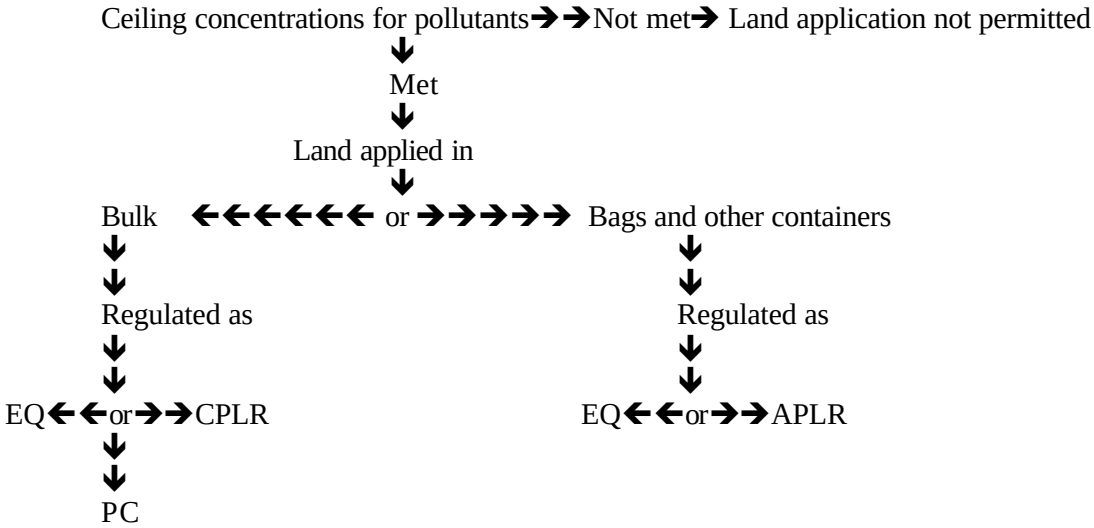
(3) Option 3: CPLR Sewage Sludge

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

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 Virginia Agronomic Land Use Evaluation System (VALUES), which is now incorporated into 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 a and 12 VAC 5-585-580), pH management for lime conditioned or stabilized sludge application (See 12 VAC 5-585-600), and maximum application rates for phosphorus (See 12 VAC 5-585-610). The permit application form Sections C.10 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	Enteric Viruses[b]	Specific Oxygen Uptake Rate[d]
Copper	Helminth ova[b]	pH[e]
Lead		Percent Solids[f]
Mercury		
Molybdenum		
Nickel		
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

SECTION MN – MUNICIPAL

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 _____

SECTION MN – MUNICIPAL

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: Sludge Preparer	Person Responsible for Recordkeeping: Sludge Applier	Records That Must Be Reported[a]
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

12. a. Example Part I A page when sludge is land applied by generator or contractor (cont'd.)

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**

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)* All fields which exhibit a soil pH of 6.5 or greater shall not receive any application of sludge with a calcium carbonate ($CaCO_3$) equivalency of 20% or greater. All fields which exhibit a soil pH less than 6.5, shall receive an application of sludge 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)* All fields which exhibit a soil pH of 6.8 or greater shall not receive any application of sludge with a calcium carbonate equivalency ($CaCO_3$) of 20% or greater. All fields which exhibit a soil pH less than 6.8, shall receive an application of sludge in accordance with 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) Silage (T/ac)	160 21	150 20	140 19	130 18	120 17	110 16	100 15	85 13	65 10
Grain sorghum (bu/ac)	140	130	120	110	100	90	90		80
Soybeans (bu/ac) Early Season Late Season (1)	 50 40	 45 34	 40 34	 40 30	 35 25		 25 18		 20 15
Canola (2)	UNDETERMINED AT THIS TIME								
Wheat (bu/ac) Standard Intensive	 64 80		 56 70		 48 60		 40 50		 24 30
Barley (bu/ac) Standard Intensive	 100 115		 70 88		 60 75		 50 63		 30 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		
	ICP SW-846 Method 6010		

Pollutant	Analytical Method	Maximum Holding Time, Sample Preservation, Container, Preparation	Comments
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.
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	

Pollutant	Analytical Method	Maximum Holding Time, Sample Preservation, Container, Preparation	Comments
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	
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.

M. Coordination with the Office of Wastewater Engineering

The area engineers and central office engineer (formerly with the Virginia Department of Health) under the Water Division Director comprise the Office of Wastewater Engineering. The areas for which the area engineers are responsible do not at this time completely coincide with DEQ regional boundaries so a table in Section L is provided indicating responsible areas.

The responsibilities that were transferred to DEQ from VDH in 2003 and implementation of the Sewage Collection and Treatment Regulation (SCAT reg; now 9 VAC 25-790) are largely the responsibility of this office. When working with municipal facilities now, permit writers should coordinate with this office rather than VDH for SCAT reg related activities such as preliminary engineering conferences and reports, review of plans and specifications, CTCs and CTOs, and O&M Manual and Sludge Management Plans review input. This office should also be given an opportunity to comment on reliability class recommendations made by the VDH Office of Drinking Water.