DEPARTMENT OF ENVIRONMENTAL QUALITY

Division of Air Programs Coordination

New Source Review Permits Program Manual

Final September 7, 2000
Revised November 16, 2001
Revised April 1, 2002

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Chapter 1

Introduction

A. Purpose

The purpose of these guidelines is to provide interpretive guidance to permit writers when processing applications and drafting minor New Source Review permits issued by DEQ. It is intended to function such that the legal, regulatory and policy basis of these permits is clearly presented in a form that is useful to permit writers. It should be noted that this document is intended to be used as a source of guidance for permit writers when developing permits and does not countermand or supersede any requirement of the Air Pollution Control law or the Virginia Regulations for the Control and Abatement of Air Pollution.

This Manual describes the legal, regulatory, and policy requirements that a permit writer should understand when reviewing an application and drafting a permit. It is meant to be consulted during permit development with information easily accessible and references clearly explained to allow the permit writer to review other material when additional research is needed. It is not definitive in the way that the Regulations are; rather, the Manual interprets some rules and offers tips to permit writers in preparing permits. Where these guidelines prescribe tasks taken directly from law, regulation, or a formal policy document, there will be a clear indication that there is little room for interpretation in these cases.

B. Definitions

The minor NSR permit program has terms and concepts that are important to an understanding of the permit application and to development, issuance, and enforcement of minor NSR permits. The definitions section of the Regulations (9 VAC 5-10-20, “Terms Defined”) provides the meanings of some of these terms but is by no means a comprehensive list of the concepts necessary for proficiency in the program. Additional definitions appear in the following rules:

- Minor NSR, 9 VAC 5-80-10
- State Operating Permits, 9 VAC 5-80-800 through 5-80-1040
- PSD Major Permits, 9 VAC 5-80-1700 through 5-80-1970
- Non-attainment Major Permits, 9 VAC 5-80-2000 through 5-80-2170
- Federal Operating Permits, 9 VAC 5-80-50 through 5-80-305
- Existing Stationary Sources, 9 VAC 5-40-10 through 5-40-7940

C. Regulations

Virginia has converted its regulations to an administrative code system. The regulations and associated section numbers for all state regulations have been converted to new Virginia Administrative Code (VAC) citations. With some exceptions, a single regulation was converted to a single chapter under the new VAC system. One of the exceptions is the Regulations for the Control and Abatement of Air Pollution (VR 120-01), which has been converted into eight chapters, one for each Part. Immediately following this paragraph is a table that shows the conversion of all currently promulgated State Air Pollution Control Board regulations to the new chapter system. In addition, in the directory named "K:\agency\programs\reg" there is a file, "#reg-org.ext," which contains a conversion chart for each section and appendix from the old VR 120-01 to the new VAC section numbers.

Table 1 –1. Regulation Conversion Chart

Current Regulation Number	New Chapter Number
VR 120-01 Regulations for the Control and Abatement of Air Pollution	
Part I (General Definitions)	9 VAC 5 Chapter 10
Part II (General Provisions)	9 VAC 5 Chapter 20
Part III (Ambient Air Quality Standards)	9 VAC 5 Chapter 30
Part IV (Existing and Certain Other Sources)	9 VAC 5 Chapter 40
Part V (New and Modified Sources)	9 VAC 5 Chapter 50
Part VI (Hazardous Air Pollutant Sources)	9 VAC 5 Chapter 60
Part VII (Air Pollution Episodes)	9 VAC 5 Chapter 70
Part VIII (Permits for Stationary Sources)	9 VAC 5 Chapter 80
VR 120-50-04 Regulation for Emissions Trading	9 VAC 5 Chapter 140
VR 120-50-02 Regulation for Transportation Conformity	9 VAC 5 Chapter 150
VR 120-50-03 Regulation for General Conformity	9 VAC 5 Chapter 160
VR 120-50-01 Regulation for General Administration	9 VAC 5 Chapter 170

D. List of References

Permit writers may use the following references when evaluating a permit application or drafting a permit. These materials function to help the permit writer quantify emissions, identify appropriate air pollution control requirements and equipment, ascertain applicable regulatory requirements and develop consistent permit limitations.

(1) **The Clean Air Act (42 U.S.C. 7401-7626, Public Law 101-549)**

(2) **The State Air Pollution Control Law (*Virginia Code* sections 10.1-1300 et seq. and 10.1-1182 et seq.)**

(3) **The Virginia Regulations for the Control and Abatement of Air Pollution** (9 VAC 5 Chapters 10-80, 140-170)

(4) **Code of Federal Regulations** - 40 CFR Part 60, Part 61, and Part 63

(5) **DEQ boilerplate permits** - The currently established boilerplates are contained in K:\agency\bp_revw\cnd\ along with a merge file. A procedures document describing the use of the boilerplate permit for an individual source category is contained in k:\agency\bp_revw\pro. The boilerplates are structured such that there is a basic skeleton document and documents that represent the conditions specific to individual source categories.

(6) **EPA's AP-42, Compilation of Air Pollutant Emission Factors** - AP-42, Volume I, contains information on over 200 stationary source categories. This information includes brief descriptions of processes used, potential sources of air emissions from the processes and in many cases common methods used to control these air emissions. Methodologies for estimating the quantity of air pollutant emissions are presented in the form of Emission Factors. The document is divided into an Introduction, 14 chapters and 5 appendices. Each chapter covers a different major industry or source category. Each chapter contains one or more sections describing a specific operation with common products or similar process methodologies.

(7) **Federal Register** - The Federal Register is an official record published every business day by the National Archives and Records Administration. Each issue of the Federal Register is organized into four categories:

(a) Presidential Documents, including Executive Orders and proclamations;

(b) Rules and Regulations, including policy statements and interpretations of rules;

(c) Proposed Rules, including petitions for rulemaking and other advance proposals; and

(d) Notices, including scheduled hearings and meetings open to the public, grant applications, and administrative orders.

Documents published in the Federal Register as rules and proposed rules include citations to the Code of Federal Regulations (CFR) and to the United States Code to refer readers to the CFR parts affected by or governing rule-making and to legal provisions underlying the rules and notices.

(8) EPA technical and scientific documents - The Technology Transfer Network maintained by EPA's Office of Air Quality Planning and Standards contains several web sites with information useful to permit writers during the permit development process. Some of these are as follows:

(A) CHIEF - The Emission Factor and Inventory Group of EPA supports the Clearinghouse for Inventories and Emission Factors (CHIEF) Web site. CHIEF provides access to tools for estimating emissions of air pollutants in various geographic domains (e.g. urban areas, regions, or the entire nation). It serves as EPA's central clearinghouse for the latest information on air emission inventories and emission factors. Emission estimation databases, newsletters, announcements and guidance on performing inventories are included in CHIEF. DEQ encourages frequent access to CHIEF to obtain new information, as it becomes available.

(B) NSR - The NSR TTN Web site is designed to provide material and information pertaining to New Source Review (NSR) permitting. The user can search the abstracted index of the "New Source Review Prevention of Significant Deterioration and Non-attainment Areas Guidance Notebook" by selected key words or a customized text word or text string.

(C) OAR P & G - The OAR Policy and Guidance Web site is designed to provide access to rules, policy, and guidance documents produced by EPA's Office of Air and Radiation (OAR). This site allows regulators, the regulated community and members of the general public to easily obtain access to both current and historical regulatory information. This site should make the task of understanding, implementing and complying with the requirements of the new environmental regulations much easier.

(D) UATW - Unified Air Toxics Web site. This web site is a central clearinghouse and repository for air toxics information from all of the entities within EPA working on Toxic Air Pollutant issues. By sharing information and data, EPA hopes to reduce duplication of effort wherever possible. Toxic air

pollutants are also referred to as air toxics or hazardous air pollutants (HAPs).

(E) Region VII NSR Policy and Guidance searchable database - A full-document- searchable compendium of NSR policy and guidance has been developed by EPA Region VII and is accessible by selecting R-VII NSR and Permits compendium. At present the Region VII database must first be downloaded, then opened and searched by Adobe Acrobat. Region VII currently up-dates this database on a quarterly basis. OAQPS will continue to make new policy and guidance documents (as well as historical ones) available on this NSR web site as they become available.

Appendix A tells how to get to the web sites where these sources of information may be looked up.

(9) EPA Policy Guidance Documents - A number of EPA guidance memos, proposed regulations, MACT rules, and other sources of permitting policy guidance can be found on the directory K:\AGENCY\EPABULL\AIR and its sub-directories. One file, K:\AGENCY\EPABULL\AIR\Listing.sum, is a table of directory contents, complete with descriptions of the documents.

(10) DEQ Permitting Policies - The Office of Air Permit Programs (OAPP) maintains a listing of current DEQ policies and OAPP guidance which direct or support the permit process.

(A) Policy Guidance Memos - Policy guidance memos signed by John Daniel (Director of the Division of Air Programs Coordination) are found in K:\AGENCY\AIRGIDE\POLICY. Guidance memos are listed by year and number, starting with 1001 every year. (The designation of 2001, 2002, etc. is for guidance memos from the Water Programs Coordination Division; the designation 3001, etc. is for the Waste Programs Coordination Division; these files are kept elsewhere.) A file named K:\AGENCY\AIRGIDE\Guidan.doc is a table listing DEQ policy guidance documents.

(B) Air Quality Program Policies and Procedures (AQPs) - Air Quality Program Policies and Procedures (AQPs) approved by the State Air Pollution Control Board are also found in K:\AGENCY\AIRGIDE\POLICY. These are listed as “AQP-01.f, AQP-02.f,” etc.

(C) Guidance from OAPP – The Office of Air Permit Programs (OAPP) issues guidance and information on permitting matters from time to time, usually upon request of one or more regional offices. This is found in several places. The first place to look is in K:\AGENCY\AIR

PERMITTING\MEMOS. OAPP can assist with inquiries regarding other OAPP and Air Division guidance.

E. Delegation of Authority

Section 10.1-1322 of the Air Pollution Control Law gives DEQ the authority to issue, amend, revoke or terminate and reissue permits consistent with regulations adopted by the Board. Section 10.1-1307.3 requires the Director to supervise, administer and enforce the provisions of the Air Pollution Control Law, including section 10.1-1322. To properly issue, amend, revoke, or terminate and reissue a permit, the director may delegate to the Regional Offices the authority to process air permits.

In his January 22, 1999 Delegation of Authority Memorandum (**Appendix B**), the Director stated "the Regional Directors and the Regional Permit Managers...shall have the authority to process the following permits:

... Air Permits."

Hence the issuing, amending, revoking, and terminating and reissuing of Minor NSR permits is a delegated authority performed in the Regional Offices. All Minor NSR permits are drafted and issued by the Regional Offices, with the OAPP acting as technical and procedural consultants to the process as requested by regional personnel.

The Minor NSR permit program is a decentralized program where the regional offices are responsible for implementing the permit process in a consistent manner and the Office of Air Permit Programs is responsible for coordinating and communicating the legal, regulatory, and policy determinations instrumental to proper implementation. The Regional Offices and the OAPP collaborate on issues related to permit development to create permitting approaches that are protective of the health of the citizens of the Commonwealth and protective of the environment of the Commonwealth. When performing these functions, it is incumbent upon both the Regional Offices and the OAPP to ensure proper customer service for the regulated community as well as the citizens of the Commonwealth.

F. Using these Guidelines

This Manual is intended to be used by permit writers. Where some part of this document is discovered to be incorrect, inaccurate, unclear or not useful, the permit writer discovering this should notify OAPP as quickly as possible. This document is intended to keep up with the evolving permit process and there is no better source to judge its helpfulness than the people who use it. Contact OAPP through E-mail or by phone when the document falls short of its goal of being correct and usable. In

this manner, the department can quickly update these documents so that other users will not experience the same problems.

Chapter 2

Permit Processing

A. Purpose of a Minor NSR permit

The Minor New Source Review program is intended to ensure that regulated facilities properly adhere to the State Air Pollution Control Law and the Regulations for the Control and Abatement of Air Pollution ("Regulations") by establishing the framework for issuing minor NSR permits, when such permits are required. These permits are drafted consistent with the minor NSR permit regulation, 9 VAC 5-80-10. This regulation applies to the construction, reconstruction, relocation or modification of any stationary source located throughout the Commonwealth of Virginia. A "stationary source" is defined by the Regulations to mean any building, structure, facility, or installation which emits or may emit any air pollutant (9 VAC 5-80-10 B.3.). The term "pollutant" is defined in the Regulations as substances in the atmosphere that may be harmful to human health, animal or plant life, or property, or which unreasonably interferes with enjoyment of life or property (9 VAC 5-10-20). No one may begin actual construction of a stationary source, relocate an emissions unit, modify a source, reconstruct a source, or reduce a stack or chimney height without obtaining a permit issued pursuant to the Regulations. Portable emission units, not otherwise exempt, may also be subject to NSR rules, although relocation of a portable plant does not require a permit.

There are two general categories of facilities which are regulated under Virginia's air pollution regulations: "Existing sources" and "new and modified sources." "Existing sources" (9 VAC 5 Chapter 40) were constructed prior to March 17, 1972 or reconstructed prior to December 10, 1976 (the original NSR rules adopted these dates as threshold requirements for the application of the rules). These are also referred to as "grandfathered sources." In general, existing sources do not require a permit to construct and operate since they were in existence prior to promulgation of the applicable regulations.

Some existing sources require registration; for example, Rule 4-8 (9 VAC 5-40-880 et seq.) sets emission limits for boilers with heat input of less than the permit exemption limit of 50 million BTU per hour (gaseous fuel) but more than 10 million BTU per hour. Rule 4-8 (specifically 9 VAC 5-40-1020), in combination with 9 VAC 5-20-160, requires registration of such a source.

"New and modified sources" (9 VAC 5 Chapter 50) are defined as being constructed, modified, or relocated, after March 17, 1972 or reconstructed after December 10, 1976. All new and modified sources not exempted by 9 VAC 5-80-11 require a permit. If an

existing source relocates, it should be evaluated as a new source and a permit may be required. Note that definitions of "new" and "existing" in federal regulations such as New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants for Source Categories (known as Maximum Achievable Control Technology requirements, or MACT) may vary from the definitions in state rules.

B. Application - Form 7

Any facility requesting a minor New Source Review permit under 9 VAC 5-80-10 must fill out an application. The Form 7 is designed to provide information needed to determine whether a permit is needed, and if so, what is required by the Air Pollution Control Law and the Regulations. A copy of the Form 7 application is located in "K:\AGENCY\FORMS\ FORM7AP.WPD." In its current version (dated May 19, 1999), the form contains instruction pages i - x and 16 numbered entry tables with instructions on the back of each page. Table 2-1 below provides a list of some of the items that may be required before an application is deemed complete. A further discussion of what constitutes a complete application is provided in **Chapter 4**.

Table 2-1 List of items supplied by the source with the Form 7 application

1. ***FORM 7***	Form 7, including Document Certification Form signed by a responsible official.
2. ***MAP***	Source location map including all USGS UTM coordinates.
3. ***FACILITY***	Site plan of facility including dimensions of all buildings (length, width and height), all stack and emission point locations by stack number, property line and fence line.
4. ***PROCESS***	Process flow diagram/schematic, with material balance including requested permit limits, and narrative description.
5. ***MSDS***	Material safety data sheets indicating the percent by weight of each ingredient and, for coatings, the VOC content in pounds per gallon.
6. ***CALCULATIONS***	Calculations of emission estimates. Control technology justification to include economic analysis, if required.
7. ***STACK TEST***	Stack test data if applicable.
8. ***MODEL***	Air quality modeling based on consultation with the applicable regional office and the Office of Air Permit Programs, if required.
9. ***LOCAL GOVERNING BODY CERTIFICATION FORM***	The source should forward the form to the local governing body, if applicable (new "greenfield" sources and major modifications).

C. Processes Requiring an Application

The process initiated by the submittal of the Form 7 reflects the specific activity that the source proposes for review by DEQ. The process may result in a determination that the activity is exempt from permitting, requires only an amendment to an existing permit, or requires a completely new permit. In addition to these permit processes, the Form 7 may be used to request a registration update, detail a change of ownership, or describe some other change to an existing permit. Briefly, an application may need to be submitted if the source undertakes any of the following:

1) Modification - The applicant has a source with an existing permit and the process or equipment is subject to permit review based on a modification made to that process or equipment. A "modification" is any physical change in, change in the method of operation of, or addition to, an emissions unit which increases the uncontrolled emission rate of any air pollutant emitted into the atmosphere by the unit or which results in the emission into the atmosphere of any air pollutant not previously emitted. The term “modification” describes the change at the facility, not the change to the permit; see **Chapter 4**, section **F** for exceptions to this definition.

2) New Source Construction - The applicant is applying for a permit for a new "greenfield" source, i.e. a facility built on land not previously disturbed. Construction here means fabrication, erection or installation of an emissions unit. The applicant must have the permit issued prior to initiation of permanent physical on-site construction of an emissions unit, i.e., prior to “beginning actual construction,” which is defined as activity, other than preparatory activity, marking the initiation of the change (9 VAC 5-80-10 B.3.). An emissions unit is any part of a stationary source which emits or would have the potential to emit any air pollutant. An alternative reason for permitting would be the addition of a new emission unit to a facility with no previous permits.

3) Exemption - The applicant is applying for a written exemption letter to cover a listed exemption to permitting.

4) Registration Update - The applicant is requesting an update of the registration data describing the facility. 9 VAC 5-20-160 requires registration of all sources to which permits are issued under 9 VAC 5 Chapter 80 (9 VAC 5-80-10 and other permit rules) and for which emission standards are given in 9 VAC 5 Chapter 40 (9 VAC 5-40-10 et seq.), 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.), and 9 VAC 5 Chapter 60 (9 VAC 5-60-10 et seq.) and that the registered sources keep the registration information updated. Existing sources subject to the board's regulations may be required to register with the department and to conduct air emissions monitoring. DEQ has determined that the Form 7 application meets the informational requirements of this registration process.

5) Ownership Change - The applicant is requesting an update of the registration data describing the facility ownership. A change in ownership of a facility is not a modification of the facility. Acquisition of a facility that is in compliance with regulations does not require a new permit provided that no changes are made which increase emissions above any exemption levels. The new owner is required to notify the Department within 30 days after a change of ownership (9 VAC 5-80-10 O). This is accomplished by filling out the first three pages of Form 7. The facility registration is transferred to the new owner automatically upon change of ownership, provided that the department is properly notified. A change of ownership requires the permit to be amended so that the name of the permit holder on the permit cover page is correct and current.

6) Permit Amendment – The applicant is applying for an amendment to an existing permit to reflect changes in the operation of existing equipment. (If the equipment were new, a permit for a modification would be sought.) The change in the operation may not fit within permit exemption levels. An application, or at least part of one, is in order.

There may be other reasons for filling out and submitting the Form 7 application that are not described above. In some cases, the permit writer will have to make a reasoned judgment as to when to require submittal of an application. In making this determination the permit writer should consider that the application requires a certification from the applicant that the information contained in the application is true and accurate. Where a case-by-case judgment must be made regarding the need for a completed application, the criteria for the decision must be based on the requirements in the regulations, 9 VAC 5-80-10 D. and –10 E.

D. Applicable Regulations

The Regulations prohibit construction of a new stationary source and reconstruction or modification of an existing stationary source without a permit, if a permit is required. In reviewing a permit application for various regulatory requirements, some specific questions the permit writer should ask are:

1) Does the new source or modification fit any of the permit exemptions in 9 VAC 5-80-11?

2) Is the application for a permit to construct and operate [9 VAC 5 Chapter 80 (9 VAC 5-80-10)], a state operating permit [9 VAC 5 Chapter 80, Article 5 (9 VAC 5-80-800 et seq.)], or a federal (Title V) operating permit [9 VAC 5 Chapter 80 Article 1 (9 VAC 5-80-50 et seq.)]? If it is for an exclusionary general permit (9 VAC 5-500-10 et seq.), a different application form, Form 500, must be used. (Similarly, a Form 805 is required for a Title V application.)

3) Are the uncontrolled emissions (or the potential to emit, in the case of a PSD permit) sufficient to require review as: a state major source (9 VAC 5-80-10 G.1.), a federal major (Title V) source (9 VAC 5-80-50 et seq.), a Prevention of Significant Deterioration (PSD) source (9 VAC 5-80-1700 et seq.), or a non-attainment source (9 VAC 5-80-2000 et seq.)?

4) Is the source of the type category that is subject to permitting as a New Source Performance Standards (NSPS) (40 CFR Part 60, 9 VAC 5-50-410) or National Emission Standards for Hazardous Air Pollutants (NESHAPS) (40 CFR Part 61, 9 VAC 5-60-70) source?

5) Is the source subject to a Maximum Achievable Control Technology (MACT) **(**40 CFR Part 63) standard?

6) Is the proposed source a boiler, incinerator or industrial furnace subject to 9 VAC 20 Chapter 60 (9 VAC 5-80-11 I.7.a& -c.)? If yes, the source is not exempt from permit requirements.

7) Is there a minor source boilerplate that applies **(**K:\AGENCY\BP_REVS\CND\WORD)?

8) What governing body notifications are required (9 VAC 5-80-10 D.5. and 9 VAC 5-80-1- G.5.b.)?

The Regulations are divided into 8 chapters designated as Chapters 10 through 80. There are also Chapters 150 (Transportation Conformity), 160 (General Conformity), 170 (Administration), 190 (Merck Variance), and 500 (Exclusionary General Permits). The Regulations can be found in K:\AGENCY\PROGRAMS\REG; the official version is in the Virginia Code Commission's web site at http://legis.state.va.us/codecomm or the DEQ web site at http://www.deq.state.va.us.

Pursuant to the Clean Air Act, the Environmental Protection Agency has set standards referred to as National Ambient Air Quality Standards (NAAQS) for certain air pollutants typically emitted from stationary sources such as manufacturing facilities. These "criteria pollutants" include sulfur oxides, particulate, carbon monoxide, ozone, nitrogen dioxide, and lead. These standards are the basis for evaluation of air quality analysis associated with any permit application and are located in Chapter 30 of the Regulations.

Existing sources are regulated through the application of source rules contained in Chapter 40 entitled "Existing Stationary Sources." The chapter contains 44 separate rules that regulate Visible emissions, Odor, Toxics emissions, and 40 separate source categories including standards for general process operations. Chapter 50 contains the new source rules, the bulk of which are incorporated by reference from 40 CFR part

60. Chapter 60 contains the NESHAP and MACT standards which have been incorporated by reference from Parts 61 and 63, respectively, of 40 CFR.

Chapter 80 contains all the permit regulations for permits issued by DEQ. These include; Minor NSR Regulation (9 VAC 5-80-10); Federal Operating Permits Regulation (9 VAC 5-80-50 et seq.); Acid Rain Operating Permits (9 VAC 5-80-360 et seq.); State Operating Permits (9 VAC 5-80-800 et seq.); PSD Major NSR Permits (9 VAC 5-80-1700 et seq.); Non-Attainment Major NSR permits (9 VAC 5-80-2000), and Major HAP NSR (9 VAC 5-80-1400 et seq.).

Permit applicability for a regulated facility is usually determined after reviewing an application submitted by the source and comparing the application to several sections of the Regulations including 9 VAC 5-80-11, 9 VAC 5 Chapter 40, 9 VAC 5 Chapter 50, and 9 VAC 5-80-10. Exemption levels are listed in 9 VAC 5-80-11 and if the emissions from the proposed source are below the exemption levels, the source is not required by regulation to obtain a permit. An exemption, however, does not relieve any owner of the responsibility to comply with any other applicable provisions of the Board's regulations or other laws, ordinances and orders of the governmental entities having jurisdiction.

E. Technical Structure

9 VAC 50-80-10 I. states that no minor NSR permit shall be granted unless compliance with the standards described in 9 VAC 50-80-10 H, “Standards for granting permits” is demonstrated to the satisfaction of the board by a review and analysis of the application performed on a source-by-source basis. For stationary sources this includes a control technology review for criteria and hazardous air pollutants and air quality impact analysis where deemed applicable. Where a source proposes to reduce a stack height in the application, the source must perform the air quality impact analysis. In reviewing a permit application for various technical requirements, some specific questions the permit writer should ask are:

1) What method was used for calculating emissions? Where were the emission factors found? Was the calculation method appropriate, and do the calculated emissions accurately reflect those that one might expect from the process?

2) What is the impact of toxic pollutant (9 VAC 5 Chapter 40 Article 3, 9 VAC 5 Chapter 50 Article 3) emissions? Hazardous Air Pollutants (HAPs) (AQP-5, K:\AGENCY\PROGRAMS\ POL&PRO)?

3) Does the proposal have Best Available Control Technology (BACT) (9 VAC 5-50-260)?

4) Is public participation required? (9 VAC 5-80-10G.)

5) Is dispersion modeling required for criteria or toxic pollutants (9 VAC 5-80-10 I.1.b, 9 VAC 5-40-210, 9 VAC 5-50-210)?

Existing sources are required to meet emission limitations established by Chapter 40 of the Regulations and may be required to conduct periodic emission testing in order to determine compliance with the standards. New and modified stationary sources, are required to demonstrate their use of the best available control technology (BACT). Sources within specific categories listed in the Regulations must also comply with the EPA New Source Performance Standards (9 VAC 5 Chapter 50 and 40 CFR Part 60), the National Emission Standards for Hazardous Air Pollutants (9 VAC 5 Chapter 60, Part II, Article 1 and 40 CFR Part 61), and the Maximum Achievable Control Technology standards (9 VAC 5 Chapter 60, Part II, Article 2 (9 VAC 5-60-90 et seq.), and 40 CFR Part 63).

Performing the technical review of the application information requires that the permit writer understand the emission rates of each criteria pollutant and hazardous air pollutant that may be emitted by the source or emissions unit. The facility or unit may also be exempt if the emission rates are below those described in 9 VAC 5-80-11. The emission rate may be below the exemption levels in 9 VAC 5-80-11 but exceed the applicability thresholds for some applicable emission standard in 9 VAC 5 Chapter 40 or an applicable standard of performance in 9 VAC 5 Chapter 50. In this situation the source would be exempt from permitting but still be subject to the more restrictive provisions. Any new source subject to Rule 5-5 (9 VAC 5-50-400 et seq.) is not exempt unless the proposed stationary source emission rates are below those described in 9 VAC 5-80-11 and the applicable requirements of the NSPS or of Rule 5-5 are only record-keeping or reporting.

F. Public Notification

The term “public notification” means the process by which the general public is notified that the application for the proposed stationary source has been received and that DEQ has analyzed the application for regulatory applicability and technical requirements. The permit covered by the public notice should contain all the requirements prescribed by the Regulations that apply to the proposed source. Documentation for the public notice should also include the control technology review and any air quality analysis undertaken. The purpose of the public participation period is to gather any comments that the general public (interested or affected citizens, environmental groups, and otherwise interested parties) may have regarding the permit being drafted for the proposed source.

Public notification for minor NSR permits is limited to permits that fit into the “state major” category, or other permits determined to be controversial. The term “state major” is not specifically defined in the Regulations but has developed through common

agency usage to identify those permits that are considered minor NSR permits but meet the requirements of 9 VAC 5-80-10 G.4. This portion of the Regulations establishes separate criteria for public notification of applications for permits for a major stationary source or a major modification with a net emissions increase of 100 tons per year or more. Aside from this category, minor NSR permits do not routinely go through a public participation period. More extensive discussion of public notice and participation requirements appears in **Chapter 12** of this Manual.

G. Permit Issuance and signature authorities

Once permit processing is complete and the public participation process (if applicable) is finished, the permit is "issued." This means that the permit has been signed by the appropriate Regional Official based on the most recent delegation of authority memorandum issued by the Agency Director. A delegation of authority memorandum is made necessary because of the way the responsibilities for permitting are established for DEQ. Refer to **Chapter 1**, section **E. , Delegation of Authority** and **Chapter 13** for further discussion. The most recent Delegation of Authority Memorandum is dated January 22, 1999 (see **Appendix B**). Section IV B. of that Memorandum discusses the permit signature authority delegation to the Regional Offices.

H. Permit Processing and CEDS

CEDS (or the **C**omprehensive **E**nvironmental **D**ata **S**ystem) is designed to help track the various steps of the permit process. This tracking information includes: dates integral to the process; (i. e. application submittal date, application complete date, issuance date, etc.); facility information; process codes; and other information developed as part of the permit generation process. CEDS is intended to help the permit writer track the important dates, generate consistent permit conditions, store important permit-related determinations such as BACT, and store air quality-related permit conditions. The CEDS system is capable of generating the air permit document by interfacing information in the database with word processing software. The CEDS system is to be used for tracking all permit applications.

Chapter 3

Application Submittal

A. Communication with the Source

(1) Pre-Application Meeting - Prior to submitting an application, an applicant may request a preliminary meeting with Department staff. The purpose of this Pre-Application Meeting is usually to provide DEQ staff with an understanding of the proposed project and to provide the applicant with an opportunity to obtain information on regulatory requirements and the permitting process. The meeting is usually conducted at the regional office and may involve Central Office staff for more complex projects.

(2) Meeting Content - Elements of this meeting may include, but are not limited to, those items listed in Table 3-1.

Table 3-1. Pre-Application Meeting Sample Topics

(1)	Specific regulatory applicability;
(2)	Control technology strategies and analysis;
(3)	Modeling requirements;
(4)	On-site meteorological data collection;
(5)	On-site monitoring data requirements;
(6)	Potential regulatory changes within the time frame of the application review;
(7)	Documentation needed for application completeness;
(8)	Length of permitting process;
(9)	Public participation process.

(3) Communication of Meeting Results - Preliminary meetings are essential for complex projects to clarify what data the applicant needs to submit for timely evaluation of the application. Such meetings are also important for early identification and resolution of potential issues. A copy of Form 7 can be provided to the applicant during this meeting as well as, for complex projects, a copy of the Department's Modeling Procedures Guidance. If the meeting indicates that the source is going to submit a PSD permit application, the regional office should communicate this information to the affected Federal Land Manager (FLM) prior to receiving the application. The Federal Land Manager should be invited to the preliminary meeting, anyway, if there is any likelihood of a PSD permit.

B. Application Receipt and Completeness

(1) Application Receipt Date - The receipt date is the date the application is received in the regional office. The Regulations require that the board notify the applicant of the status of the application within 30 days after receipt of an application. The receipt date is also significant for tracking the initial determination of application status as well as for measuring the overall time for permit processing. Each application will have a signature date but this should not be used as the receipt date.

(2) Notification of Application Status - As indicated in paragraph (1) above, the Regulations specify 30 days for DEQ to respond to an applicant with an initial determination regarding the status of the application. This notification is required to be in writing and shall include the following information:

(A) A determination of which provisions of 9 VAC 5 Chapter 80 of the Regulations is applicable. Within 30 days of receipt of an application, the regional permit writer is required to tell the applicant whether the proposed project (a) is exempt from permitting, (b) requires a Minor NSR permit, (c) requires a PSD permit, or (d) requires a Non-Attainment permit. For section 112(g) sources, the time frame is 45 days; see the "Timeline" discussion in **Chapter 10**, section **G**(5) (following the Examples). If the source has not provided sufficient information to make the determination regarding the applicability of Chapter 80, the permit writer should communicate with the source within the 30 days to gather the information necessary to make this determination. This determination is, in any case, an initial one, subject to change as the permit application review progresses. Note: if additional information is needed to make the determination, the permit writer should request it and set a reasonable deadline, not necessarily within these first 30 days, for a response.

(B) The identification of any deficiencies. The permit writer should not consider this initial identification of deficiencies as necessarily comprehensive or as the only opportunity to review the application and request additional information. The focus at this point should be the scope of the information provided, i.e., has the applicant provided the Local Governing Body Certification Form, is the information certified by a responsible official (as defined), is all the proposed equipment listed and described in the application, etc.

(C) A determination of whether the application contains sufficient information to begin application review. The determination that the application has sufficient information to begin review is not necessarily a determination that it is complete.

(3) Application Review - In order to be considered complete for the purpose of measuring length of processing time against procedural requirements, an application for a permit must be completely filled out and have sufficient accompanying information to allow all necessary engineering and air quality analyses, and to meet all applicable information requirements. Permit applications are usually reviewed and evaluated in two ways: The first is a review for administrative completeness and the second is a technical evaluation that ensures that the technical basis for all conditions in the permit is documented. The Regulations do not distinguish types of completeness, but do require that certain elements are present, or else the application cannot be complete; see sub-section (C) of this paragraph.

(A) An application is *Administratively Complete* as of the date the last information is received in the regional office which completes the application and has sufficient accompanying information to allow all necessary engineering and air quality analyses, and to meet all applicable information requirements. Items which are explicitly needed for the application to be Administratively Complete include the information found on the first three pages of Form 7, the Local Governing Body Certification Form (when applicable), and the Document Certification (when applicable; see legal requirements for completeness).

(B) An application is *Technically Complete* as of the date the last information is received at the region that is required to finish the draft permit. This means the date the last information was received, in the form of a letter, fax, or telephone log, from outside the DEQ (the applicant, EPA, etc.). The technically complete date is subject to change. For example, if the applicant reviews the draft permit and submits new information that results in changes to the draft permit, the technically complete date is the date of arrival of the new information. The date would also change if, after review of the draft permit by other DEQ staff or as a result of comments from public notice, it is found that additional information is needed to put the permit in final form.

(C) *Application Completeness* - The permit cover letter and the first permit condition should both indicate the “deemed complete” date, which is the date all required and necessary information (including the Local Governing Body Certification Form and the certification of truth and accuracy; see 9 VAC 5-80-10 D 5 and 9 VAC 5-80-10 D 4, respectively) is in hand. In many cases the Administratively Complete and Technically Complete date will be the same, but in some instances they will differ. Examples:

(i) If the source received a deficiency letter which requested only emissions calculations, the date the region received the

calculations is both the Administratively Complete and Technically Complete date.

(ii) If the source has submitted a complete permit application, but the region has not received a requested decision by the EPA, the permit is Administratively Complete but not Technically Complete.

(iii) If a source has submitted a complete application except for the Local Governing Body Certification Form or the Document Certification, the application is neither Technically Complete nor Administratively Complete because it is missing essential elements of completeness.

C. Communication with Federal Agencies

(1) Class I areas - A "Class I area" means any prevention of significant deterioration (PSD) area in which any deterioration of existing air quality is considered significant and is designated as such in the Regulations. Class I areas are defined in 9 VAC 5-20-205 C 1 There are two Class I areas in Virginia: Shenandoah National Park and the James River Face Wilderness area in the Jefferson National Forest.

(2) Notification Requirements for PSD Applications - Notification to the Federal Land Managers (or their environmental staff contacts) must include copies of all information relevant to the permit application. The permit writer should make a copy of the permit application along with any attachments and send it to the following addresses:

Jefferson National Forest	National Park Service
Forest Supervisor Jefferson National Forest 5162 Valley Pointe Parkway Roanoke, Virginia 24019 Attn: Cindy Huber Phone # (540) 563-5815 E-mail: chuber@fs.fed.us	Superintendent Shenandoah National Park Route 4, Box 292 Luray, Virginia 22835 Attn: Christi Gordon Phone # (540) 999-3499 Fax# (540) 999-3693 E-mail: christi_gordon@nps.gov

(3) Memorandum of Understanding - There are two Memoranda of Understanding (MOU) documents which are used to define the working relationships between the former Department of Air Pollution Control (DAPC) and (1) the Superintendent of Shenandoah National Park and (2) the Forest

Supervisor of the Jefferson National Forest, in which the James River Face Wilderness area is located. These MOUs have lapsed but DEQ's policy is to continue to honor the requirements of the existing MOUs until new agreements can be negotiated. The MOU between DAPC and the Jefferson National Forest is stored on K:\agency\airgide\policy\MOU_JNP.WP5, and the MOU between DAPC and the Shenandoah National Park is in MOU_SNP.WP5. In addition, see Appendices C (Shenandoah) and D (James River Face) in this Manual.

(4) Notification for the Shenandoah National Park - The MOU with Shenandoah National Park states that the regional office will provide a copy to the Park Superintendent of the applications for all major new sources or major modifications, either of which would result in a net increase of 100 tons per year of any one pollutant within 100 kilometers of the Park. In addition, copies of applications for all sources within ten kilometers of the Park must be provided. The MOU requires that the copy be provided within 7 days after receipt of the application. This time frame should be viewed as a target to be met when the permit writer is satisfied that the application will be an appropriate representation of the proposed project. Do not send misleading application information to the Park just to meet this 7-day target. Early communication with the NPS is important in the initial stages of the application review.

(5) Notification for the James River Face Wilderness - The MOU with the Jefferson National Forest states that the regional office will provide a copy to the Park Superintendent of the applications for all major new sources or major modifications, either of which would result in a net increase of 100 tons per year of any one pollutant within 100 kilometers of the James River Face Wilderness. In addition, copies of applications for all sources within ten kilometers of the Wilderness must be provided. The MOU requires that the copy be provided within 7 days after receipt of the application. This time frame should be viewed as a target to be met when the permit writer is satisfied that the application will be an appropriate representation of the proposed project. Do not send misleading application information to the Forest Service just to meet this 7-day target. Early communication with the Forest Service is important in the initial stages of the application review.

(6) Notification Requirements for Non-PSD Applications - Paragraphs (4) and (5) above discuss the notification procedures among DEQ, the National Park Service (for Shenandoah National Park), and the U.S. Forest Service (for the James River Face Wilderness) with respect to non-PSD applications. In regard to non-PSD applications, the federal agencies want to be notified about (a) applications for major new sources and major modifications within 100 km, and (b) applications for all non-major sources within 10 km of the Class I areas. Within the 100 kilometers, the communication/notification requirements apply only to facilities that emit more than 100 tons per year or that are intending to modify their facility such that the increase is greater than 100 tons per year. The federal

agencies are interested in all applications within 10 kilometers of the Park or Wilderness Area irrespective of the annual emissions level.

(7) Additional MOU Requirements - There are several additional requirements in the MOUs:

(A) The federal agencies are to inform DEQ in 2 weeks if they want to see information on BACT, the engineering analysis, modeling information, or the draft permit. If so, DEQ is to send the information within 10 days after it is available.

(B) DEQ is to tell the applicant that the federal agencies are available for a pre-application meeting. (This is more likely for major modifications.)

(C) The Public hearing notice is due to the federal agencies at least 30 days prior to hearing. For minor sources (i.e., no public hearing required) within 10 km of either Shenandoah National Park or the James River Face Wilderness, the federal agency is to tell DEQ within 5 days of receiving the application if it wants a public hearing.

(8) MOU Copies. Copies of the MOUs appear in **Appendices C** (for Shenandoah National Park) and **D** (for James River Face Wilderness) as well as in the K:\Agency files cited in paragraph (3) above.

D. "Greenfield" Sources

(1) Definition, and Inspection Requirement - The term "greenfield source" is any new site (not previously designated as a stationary source) on which equipment undergoes initial construction, installation, or relocation. The Air Pollution Control Law (*Virginia Code* §10.1-1307 E.3.) requires that the Board consider the suitability of an activity to the area in which it is located. For greenfield sources which have no existing emission units at a location this law requires that DEQ perform some preliminary inspection of the proposed location to ensure that there are no obvious threats to public health and safety, that the source can be built consistently with the legal and regulatory requirements for a new source, and that the source has not begun actual construction prior to the issuance of the permit. (See the State Air Pollution Control Board's "Suitability Policy Statement," reprinted as **Appendix E.**)

(2) Doing the Inspection - The preliminary inspection should be performed as a collaborative effort between the permitting and compliance sections of the regional office. A sample preliminary inspection form, the Permit Application Site Evaluation Form, is included in **Appendix F**. In addition to performing this inspection for greenfield sources, 9 VAC 5-80-11 G 4 requires that DEQ

determine, for a portable facility, that the portable unit to be relocated is suitable to the area in which it is to be located.

E. Use of letter versus application form

9 VAC 5-80-10 D 1 requires a single application to identify, at a minimum, each emissions point within the emissions unit subject to 9 VAC 5-80-10. This means that whenever a project proposed by any source requires permitting under the minor NSR program, the source must submit a permit application describing that project. The application must be signed and certified consistent with the requirements of 9 VAC 5-80-10 D 3 and –D 4. Where several emissions units are included in one project, a single application covering all units in the project may be submitted. A separate application is required for each location.

(1) Phased Development Projects - For projects with phased development, a single application should be submitted covering the entire project. A project with phased development means a project where the source intends to build or modify one or several emissions units over a scheduled period of time. However, construction activities may not be stopped for more than 18 months at a time.

(2) Application Required - The Regulations require an application when a proposed project is subject to permitting. This means that a permit application must be completed, signed, and certified when a new source is constructing or an existing source is modifying. Applications should also be filed for amendments to new source review permits or for modifications to existing sources. Whether to require an application from a proposed project that is exempt from permitting is up to the discretion of the permit writer.

(3) Exemption Application Requirements - The amount of information necessary to properly exempt an emissions unit from permitting varies from one exemption request to another. Where the emissions unit technology is well understood and the emissions level highly predictable, it may be sufficient to require only a letter detailing the proposal, the first three pages from the Form 7, and a document certification pursuant to 9 VAC 5-80-10 D.4. In other cases where the proposal is complex and the relationship between emission unit operation and the emission rates are not well known it may be in the best interest of DEQ to have an application completed with the information certified by a responsible official.

(4) When to require an application form for an exemption - As indicated in paragraph (2) above, it is up to the judgment of the permit writer and regional policy when to require an application for an exempted piece of equipment. The permit writer should take into account the facility location, the process type, and the type of pollutant emitted, as well as welfare concerns such as odor, when making this decision. The permit writer should also review the files associated

with the facility making the exemption request. If the source has requested and received several exemptions over a limited period of time, it may be worth requesting an application to review the combined effect of the emissions for possible compliance implications, because the Regulations contemplate that permitting will be required for incremental construction if it is deemed "contemporaneous" (within five years in the past) with the construction under review. This applies to construction increments which, though not subject to permitting in themselves, add up to a size or potential to emit requiring a permit. See 9 VAC 5-80-10 A 4.

F. Source Registration

(1) Existing Source Registration - The Regulations specify that any existing source which is subject to an emissions standard in 9 VAC 5 Chapter 40 shall register the source upon request of the Board. Thus a facility could be registered with DEQ but does not have a permit because it is either "grandfathered" (i.e., constructed before any permitting regulations were adopted) or it is exempt (under 9 VAC 5-80-11). It may nevertheless be subject to Chapter 40 of the Regulations. Regional offices are responsible for determining the applicability of source registration requirements for sources. New registration numbers will automatically be generated through CEDS, once the required data is entered by the regional office and provided, as before, to the Office of Data Analysis.

(2) New and Modified Source Registration - 9 VAC 5-20-160 also specifies that stationary sources to which emissions standards in Chapter 50 and Chapter 60 apply shall register such source operations and update such registration information. The imposition of a new source standard from Chapter 50 or Chapter 60 requires that the source comply with the standard, irrespective of its permit status. If the new standard takes effect during permit processing, it must be included in the permit. The Form 7 application is used as the source of information for the registration. An application submitted for an amendment to an existing permit is intended to provide the information necessary to update the source registration information.

(3) Annual Emissions Update - The Department, on an annual basis, sends a request to each registered major and synthetic minor source to update the throughput, equipment specifications, and pollution control equipment information maintained in the Department's database. The same is true for exclusionary general permit sources, which have to meet EGP limits every year. True minor sources are updated every three years. As a result of reviewing this information, it may be necessary to update the source's registration information even though the source has not submitted an application for permitting or requested an exemption.

Chapter 4

Application Review

For non-exempt sources of air emissions, a permit from DEQ is a pre-requisite to construction, reconstruction, or modification (9 VAC 5-80-10 C.1.). For registered sources, the permit is also a pre-requisite to relocation or to reduction of the stack height (9 VAC 5-80-10 C.2., -C.3.).

The Regulations require that the application identify each emissions point and each emissions unit involved in the project for which a permit is sought (9 VAC 5-80-10 D.1.). The basic air permit application form, DEQ Form 7, is to be used for this purpose; the form is accompanied by other information and analysis required by the Department to process the permit. Each application must be complete, as a pre-requisite to permit issuance (see 9 VAC 5-80-10 F.2.).

A. Application Completeness Review

Neither the Air Pollution Control Law (with one exception described in sub-section (3) below) nor the Regulations specify what type or amount of information is required to make a complete application for a NSR permit. Instead, they direct the Department to specify the information required and the procedures to be used for its presentation and processing (see 9 VAC 5-80-10 E.). This section presents what guidance there is and identifies aspects of DEQ Form 7 which may require additional discussion. An application completeness checklist appears in **Appendix G**.

(1) General guidance. Application information presented on Form 7 must be designed to allow the Department to (a) determine the effect of the proposed source□s emissions on ambient air quality and (b) determine compliance with applicable emission standards (9 VAC 5-80-10 E.1.). Any calculations provided by the applicant must include sufficient detail to permit evaluation of their validity by the Department (9 VAC 5-80-10 E.1.a.).

(2) Form 7. References to Form 7 relate to the version now found at K:\AGENCY\FORMS\FORM7AP.WPD. That version was revised effective March 15, 1996, but has some regulatory and legal citations which were revised in May 1999.

(3) Local governing body certification page and instructions. (Form 7, pages x and xi) This page must be completed for all applications pertaining to new facilities and to major modifications (see *Virginia Code* section 10.1-1321.1); failure to provide it in these applications prevents application completeness (9 VAC 5-80-10 D.5.) See section **C.**, below.

(4) Document certification. Every application must bear a certification by a responsible official of truth, accuracy, and completeness of the information presented (9 VAC 5-80-10 D.3, -D.4.). The required text of this certification appears in 9 VAC 5-80-10 D.4. The requirement also applies to compliance reports, progress reports, and any other documentation which supports the permit application after the original application's receipt date. An application is not complete without this certification.

B. Confidentiality of Information

Sources using confidential information in their NSR application may identify the information, justify their claim that the information is confidential, and have the Department safeguard the information as it processes the application and prepares the permit (9 VAC 5-170-60). For guidance on the handling of confidential information, refer to the draft confidential information policy and guidance paper dated 10/20/92 (available from the Office of Air Permit Programs). In addition, page v of Form 7 provides information on the criteria for deciding what is confidential information and the distinction between it and trade secret information.

(1) Confidentiality Requests. Before DEQ can consider a request for confidentiality, the source must identify the information claimed to be confidential, and submit written justification that demonstrates how it meets the confidentiality criteria in 9 VAC 5-170-60 C. This justification must include a certification. The regional office processing the application may accept the claim of confidentiality, ask for more substantiation, or reject it. These determinations and inquiries must be made in writing. If any Form 7 pages are deemed confidential, the applicant must provide copies of these pages open to the public but with the confidential information blanked out (so-called "sanitized" copies).

(2) Limits on Confidentiality. Emissions information can never be confidential, according to the Air Pollution Control Law, *Virginia Code* sections 10.1-1314, 10.1-1314.1.

(3) Trade secrets. As indicated on Form 7, page v, there is a distinction between trade secrets and confidential information. A trade secret is confidential in nature, but not all confidential information is a trade secret. A trade secret

requires the same substantiation, and gets the same protection, as does confidential information.

C. Local Government Form

As indicated above, Form 7 includes a "local governing body certification form" and instructions (Form 7, pages x and xi). This page serves to help carry out the requirement in the Regulations that sources comply with local zoning and other ordinances in the locality where they are proposed or in existence (9 VAC 5-80-10 M.). When it is required, it is also a prerequisite for application completeness. (Opportunity to comment on the air quality impacts of the permitted activity, however, comes later in the public participation phase of the process.) The procedure and applicability for the local government form are defined in the Air Pollution Control Law at *Virginia Code* section 10.1-1321.1, which is described on the instructions page (page xi) of the Form.

(1) Applicability. Sources subject to this requirement are:

(A) "Greenfield" (newly constructed) sources;

(B) Sources applying for major modifications;

(C) PSD major sources;

(D) Major sources in non-attainment areas.

For minor modifications, the local governing body certification is not necessary. However, in some cases, the modification of a facility or installation of a portable facility constitutes a change in land use requiring a local approval. The locality might have allowed the source to use some compounds or processes but not others in its special use permit approval, such that a modification might need a new approval. In cases where this is in doubt, the permit writer should consult the locality.

(2) Procedure. Applicants required to fill in the local government form must fill in the upper part and the "applicant's signature" blocks of the local government certification page (page x) and ask the affected local government to fill in its (lower) part of the page, documenting the request as part of the application. Documentation may consist of the return receipt from certified mail, as indicated in the instructions (page xi).

D. Permit process tracking: Comprehensive Environmental Data System (CEDS)

The Department has decided that all activities associated with a given permit (i.e., permit application processing, permit issuance, enforcement, and compliance, etc.) will be tracked using the Comprehensive Environmental Data System 2000 (CEDS 2000) database. See **Appendix GG**.

E. Application Time Frames

The time for processing of a new source review application depends on several factors inside and outside the process. Once the application is filed, the Department has 30 days in which to conduct its completeness review and notify the applicant of any deficiencies in the application (9 VAC 5-80-10 F.1.). The Regulations state generally that the normal processing time for the permit is 90 days after the application is determined to be complete. (9 VAC 5-80-10 F.2.).

(1) Factors determining the length of the permit process. These are:

(A) The completeness of the application. If it is not complete, the permit engineer requests the additional information needed to make it complete. (9 VAC 5-80-10 F.1.)

(B) Whether the application requires a control technology review and how long it takes (9 VAC 5-80-10 I.1.a., -I.2.a.);

(C) Whether the application requires air quality analysis (modeling), and how long it takes (9 VAC 5-80-10 I.1.b., -I.3.);

(D) Whether the source will meet standards for granting permits, and how long the analysis takes (9 VAC 5-80-10 H.1. through -H.3., -I.). These standards include the Best Available Control Technology (BACT) standard from Rule 5-4 (9 VAC 5-50-260). The BACT provision is part of 9 VAC 5 Chapter 50, cited by sub-section -H.1. of 9 VAC 5-80-10 (above).

(E) Whether the application and the proposed permit must undergo public participation, possibly including a public hearing (9 VAC 5-80-10 G.1., -G.4., -G.5). Public comment periods are at least 30 days (9 VAC 5-80-10 G.2., -G.4.); public hearings require a 30-day

notification and may add to the time involved. See **Chapter 12** of this Manual.

F. Modification

The term □modification,□ as used in air permitting, refers to making changes to a facility or emissions unit. As defined in the Regulations, a modification is a physical change to the plant or emissions unit, or to the method of operation, which results in adding a new pollutant or increasing the uncontrolled emission rate of a pollutant already emitted.

(1) Exceptions. The exceptions to the definition of □modification□ are:

(A) Maintenance, repair, and replacement which are □routine□ and fall short of the □reconstruction□ definition;

(B) An increase in the production rate of a unit which does not exceed its operating design capacity;

(C) An increase in the hours of operation;

(D) Use of an alternative fuel or raw material if, prior to permitting or applicability, the emissions unit was □designed to accommodate the alternative□ fuel or material. This is interpreted as follows:

(i) The alternative fuel or raw material need not be named in the permit or construction documents provided no physical changes were needed in order to burn the fuel or process the material;

(ii) If use of the alternative fuel or raw material does require change in the emissions unit or in its control equipment, then permit applicability needs to be determined. See **Appendix I**, which is an Office of Air Permit Programs memo to the Northern Virginia Regional office, dated October 16, 1998, concerning the meaning of the regulatory term “designed to accommodate.”

(E) Addition of an air pollution control system, except the removal of a control system or the replacement with a less efficient system. (Note that this exception to the definition of “modification” does not

appear in the rules governing permits for PSD and non-attainment area major sources.)

G. Permit Issuance

See **Chapter 13**, section **B**.

H. Net Emissions Increase (proposed regulation)

[to be added]

I. Application Complete Date

Completeness of the application is a pre-requisite to permit issuance, although not necessarily to the commencement of permit application review and analysis. The permit engineer may be able to begin the analysis with an incomplete application if there is sufficient information to begin the review. (See 9 VAC 5-80-10 F.1.) The application completeness date is the receipt date of the last item of information required for application completeness (see 9 VAC 5-80-10 F.2.)

Chapter 5

Regulatory Review

Introduction

The regulatory basis for the new and modified source permitting program is 9 VAC 5-80-10. Type of source, size of source, pollutant emission rates, pollutant categories, and location of source are factors used to determine the exemption status or applicable regulatory requirements for a given source. Some proposals for new or modified facilities are exempt from permitting. New source and modified source permit exemptions appear in 9 VAC 5-80-11, which provides lists of exempt sources by type, size, or emission rate, and sources with no exemptions. Emission rates of both criteria pollutants and toxic pollutants must be taken into account. No source is exempt if it is subject to the requirements of New Source Performance Standards (NSPS; see 40 CFR Part 60, 9 VAC 5-50-400 et seq.), or National Emission Standards for Hazardous Air Pollutants (NESHAP; see 40 CFR Part 61, 9 VAC 5-60-60 et seq.), unless it is subject only to record-keeping and/or reporting requirements under the NSPS and the NESHAP regulations (9 VAC 5-80-11 F.). A permit is also required if the source type is never exempt (9 VAC 5-80-11 C and I). Several source types are exempt if the size limitations are met (9 VAC 5-80-11 B). For other source types, calculations of maximum annual uncontrolled pollutant emission rates are necessary to determine the exemption status based on emission rates (9 VAC 5-80-11 D, E, and I) as well as the type of permit required.

A. Exemption Levels

(1) Basis of exemption levels. The exemption levels for criteria pollutants are based on maximum annual uncontrolled emission rates. They are listed in 9 VAC 5-80-11 D for new sources and 9 VAC 5-80-11 E for modified sources, as summarized below in **Table 5-1.**

Table 5-1. Exemption Levels for Criteria Pollutants

Criteria Pollutant		New Source	Modified Source
Carbon Monoxide	CO	100 tpy	100 tpy
Nitrogen Oxides	NO_x	40 tpy	10 tpy
Sulfur Dioxide	SO_2	40 tpy	10 tpy
Particulate Matter [(a)]	PM	25 tpy	15 tpy
Particulate Matter less then 10 microns	PM_{10}	15 tpy	10 tpy
Volatile Organic Compounds	VOC	25 tpy	10 tpy
Lead	Pb	0.6 tpy	0.6 tpy

(a) The exemption levels for particulate matter are not included in the regulations, and so are based on Memo Number 01-1002 for cases where PM_{10} emissions cannot be quantified **(Appendix J)**.

The exemption levels for toxic pollutants depend on whether they have established Threshold Limit Values (TLVs) as listed in the "1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices" from the American Conference of Governmental Industrial Hygienists (ACGIH Handbook). If a toxic pollutant has an established TLV, the exemption level is based on hourly and/or annual emissions calculated by the formulas in 9 VAC 5-80-11 I. The uncontrolled emissions of the source are compared to these exemption levels to determine whether a permit is needed. For toxic pollutants without an established TLV, the exemptions are to be determined by the Board using available health effect information. Current DEQ policy is to limit review of toxic air pollutants to those regulated as Hazardous Air Pollutants (HAP) under . 112(b) of the Clean Air Act (see Air Quality Program Policies and Procedures, Air Toxics Program Priority Implementation Policy AQP-5), using the TLVs in the 1991-1992 edition of the ACGIH Handbook. (Note: this edition of the Handbook is mandated by 9 VAC 5-20-21 E 6.a.)

(2) Uncontrolled emissions. All uncontrolled emissions are based on operating without air pollution control equipment. The emissions reduction provided by air pollution control equipment is not to be included in the calculation of uncontrolled

emissions. The Virginia Regulations state that "air pollution control equipment includes control equipment which is not vital to the source operation, except that its use enables the source to conform to applicable air pollution control laws and regulations" (see 9 VAC 5-80-10 B). EPA regulations establish that air pollution control equipment does not include inherent process equipment which is necessary for the proper or safe functioning of the process, or material recovery equipment which the source documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Factors to consider in determining whether equipment may be considered inherent process equipment include:

(A) Is the primary purpose of the equipment to control air pollution?

(B) Where the equipment is recovering product, how do the cost savings from product recovery compare to the cost of the equipment?

(C) Would the equipment be installed if no air quality regulations were in place?

Hourly uncontrolled emissions are calculated at maximum design capacity. Annual emissions are calculated differently depending on whether the emissions unit is new or being modified and whether the emissions unit is currently permitted as discussed below.

(3) Uncontrolled emissions and new emission units. For new emission units, annual uncontrolled emissions are calculated based on 8,760 hours of operation. *For new unit(s) at a "greenfield" source,* the results for criteria pollutants are compared to the exemption rates in 9 VAC 5-80-11 D (new source exemption by emission rate). *For new unit(s) at an existing source*, the results for criteria pollutants are compared to the exemption rates in 9 VAC 5-80-11 E (modified source exemption by emission rate). *For both of the above source types*, the results for toxics are compared to the calculated values in accordance with 9 VAC 5-80-11 I.

(4) Uncontrolled emissions and permit conditions. Uncontrolled emissions take into account enforceable permit conditions such as limits on number of hours of operation or types or amounts of material processed or combusted on an annual basis. Annual emissions are based on 8,760 hours of operation when not limited by permit conditions. A specific boilerplate or policy/procedure may supersede these instructions (See Chapter 7 C.)

(5) Uncontrolled emissions and changes to an emission unit. For changes to an emission unit, the calculations for annual uncontrolled emissions are dependent on whether the emission unit is currently permitted. Calculations for *existing or unpermitted emissions units* are based on 8760 hours per year without air

pollution controls. For permit applicability, subtract this value from the emissions resulting from operating the proposed unit at 8760 hours per year without air pollution controls and compare the answer to 9 VAC 5-80-11 E and I to see if the change is exempt. (See Examples 5-1 and 5-2 below this paragraph). Modifications to these units usually involve an increase in the maximum capacity of the units. Calculations for *currently permitted emissions units* must be based on the permit limits (current, or newly requested) such as throughput or operating hours without air pollution controls, rather than 8760 hours per year because the definition of uncontrolled emissions includes permit conditions. Modifications to these units often involves an increase in the permitted throughput or hours of operation. The difference between the new uncontrolled emission rate (resulting from operating at the newly requested throughput or operating hours) and the current uncontrolled emission rate (resulting from operating at the currently permitted limits) is then calculated and compared to the modified exemption rates in 9 VAC 5-80-11 E for criteria pollutants and 9 VAC 5-80-11 I for toxics.

Example 5-1. Example of Modification to existing or unpermitted emissions unit.

A process with an emission factor of 2 lb PM_{10}/ton feed input is changed to increase the maximum rated capacity from 10 tons per hour to 15 tons per hour feed input. The new uncontrolled emissions are based on 15 tons per hour feed input and operating at 8760 hours per year. The current uncontrolled emissions are based on 10 tons per hour feed input and operating at 8760 hours per year. The difference between the two is compared to the table in 9 VAC 5-80-11 E.

New uncontrolled annual emissions =

15 ton/hr x 2 lbs PM_{10}/ton x 8760 hr/yr x tn/2000 lbs = 131.4 ton/yr

Current uncontrolled annual emissions =

10 ton/hr x 2 lbs PM_{10}/ton x 8760 hr/yr x ton/2000lbs = 87.6 ton/yr

Increase = 131.4 – 87.6 = 43.8 ton/yr

The modification exemption rate for PM_{10} is 10 tons per year so this is a modification and a permit is required.

Example 5-2. Example of Modification to currently permitted emissions unit.

A plant that is limited to 300,000 gallons per year of #2 fuel oil (0.5% sulfur) requests an increase in throughput to 400,000 gallons per year. The new uncontrolled emissions are based on 400,000 gallons per year. The current uncontrolled emissions are based on 300,000 gallons per year. The difference between the two is compared to the table in 9 VAC 5-80-11 E.

New uncontrolled annual emissions =

400,000 gal/yr x 143.6 (0.5) lb SO_2/1000 gal x ton/2000 lb = 14.4 ton/yr

Current uncontrolled annual emissions =

300,000 gal/yr x 143.6 (0.5) lb SO_2/1000 gal x ton/2000 lb = 10.8 ton/yr

Increase = 14.4 – 10.8 = 3.6 ton/yr

The modification exemption rate for SO_2 is 10 tons per year so, based solely on SO_2 emissions, this is an amendment to the current permit. This approach does not apply when a relaxation of BACT is sought.

Note: If the emissions are currently controlled, the comparison is still made from uncontrolled to uncontrolled to determine permitting applicability. Controlled emissions should not be used in making the comparison.

B. Exemption Processing

The following steps are required to properly evaluate an application to determine whether it is exempt from some or all permit requirements.

(1) Non-exemption by types. 9 VAC 5-80-11 C and 9 VAC 5-80-11 I 7 contain the list of emission units or facility types that are never exempt. A permit is required if the emission unit(s) or facility type is on the list. If it is not listed, then a detailed evaluation of the application form and data submitted should be performed. Controlled and uncontrolled emissions from the facility are determined using the emissions calculations developed in the application, or use the procedure in **Chapter 7** of this manual.

(2) Exemption by size or emission rate. Some types of sources may be exempt from permitting if they meet the size limits listed in 9 VAC 5-80-11 B. If the source is not covered in 9 VAC 5-80-11 B, then compare the emissions rates to the exemption rates in 9 VAC 5-80-11 D for a new source, or in 9 VAC 5-80-11 E for a new unit at an existing source or a change of an existing unit. Even if it is

covered under the above sections, the application must still be evaluated under the toxics exemption section 9 VAC 5-80-11 I.

Note that the exemption for fuel burning equipment of 9 VAC 5-80-11 B 1 does not apply to internal combustion (IC) engines. However, a transportable IC engine may meet the definition of a "non-road" engine (see 40 CFR Part 89). In that case, it is not considered a stationary source, and may be exempt from permitting according to the Memorandum on Non-Road Engines shown in **Appendix K**.

(3) For source types subject to new source performance standards (NSPS), the specific subpart of 40 CFR Part 60 which applies to the source must also be reviewed for possible exemptions from all or part of the requirements. Note that for complex processes, more than one NSPS Subpart may be applicable. In some cases a NSPS Subpart(s) is applicable even though no permit is required by the Regulations (9 VAC 5-80-11 F). There are established guidance procedures that address some common types of emission units; one example is the procedures for natural gas-fueled small boilers (NSPS Subpart Dc, see k:\agency\bp_revw\pro\ng_do2.pro). NSPS requirements can only be waived or relaxed by the EPA. Subpart A (General Provisions) should also be reviewed for applicable requirements.

(4) For source types subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), the specific subpart of 40 CFR Part 61 must also be reviewed for possible exemptions from all or part of the requirements in accordance with 9 VAC 5-80-11 F. As with the NSPS, Subpart A (General Provisions) should also be reviewed for applicable requirements. NESHAP requirements can only be waived by the EPA.

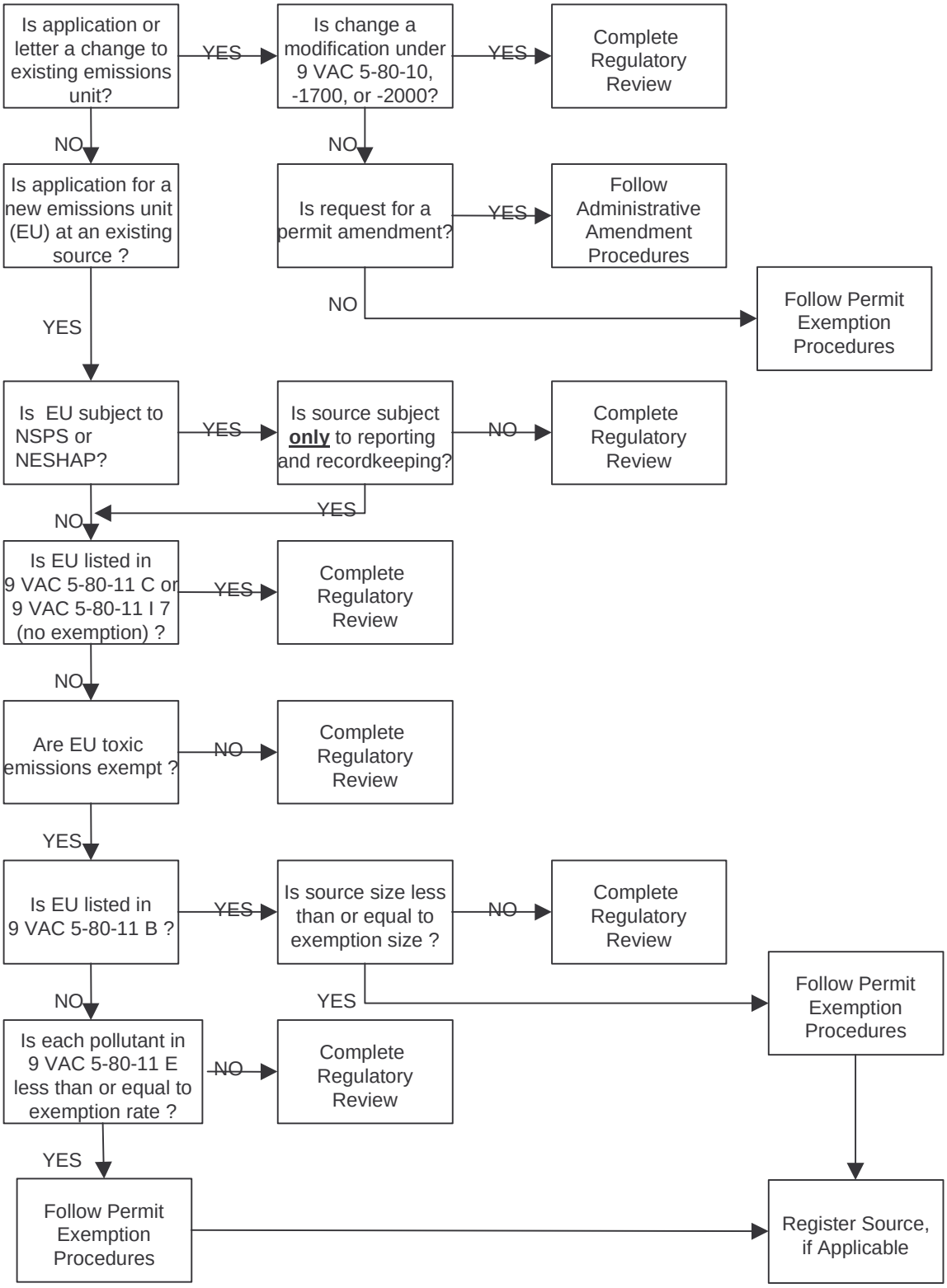
(5) For source types subject to MACT requirements, the specific subpart of 40 CFR Part 63 must also be reviewed for possible exemptions from all or part of the requirements. As with the NSPS and NESHAP rules above, Subpart A should also be reviewed for applicable requirements. Please refer to **Chapter 10** of this Manual for more information on hazardous air pollutants. MACT requirements can only be waived or relaxed by the EPA.

(6) Relocation of permitted portable facilities. No permit is required when a permitted portable facility relocates, provided the conditions in 9 VAC 5-80-11 G are met. These conditions require, among other things, a suitability determination; see the suitability policy in **Appendix E**. The Permit Application Site Evaluation form may be used for evaluating "greenfield sites" for portable units; see **Appendix F**.

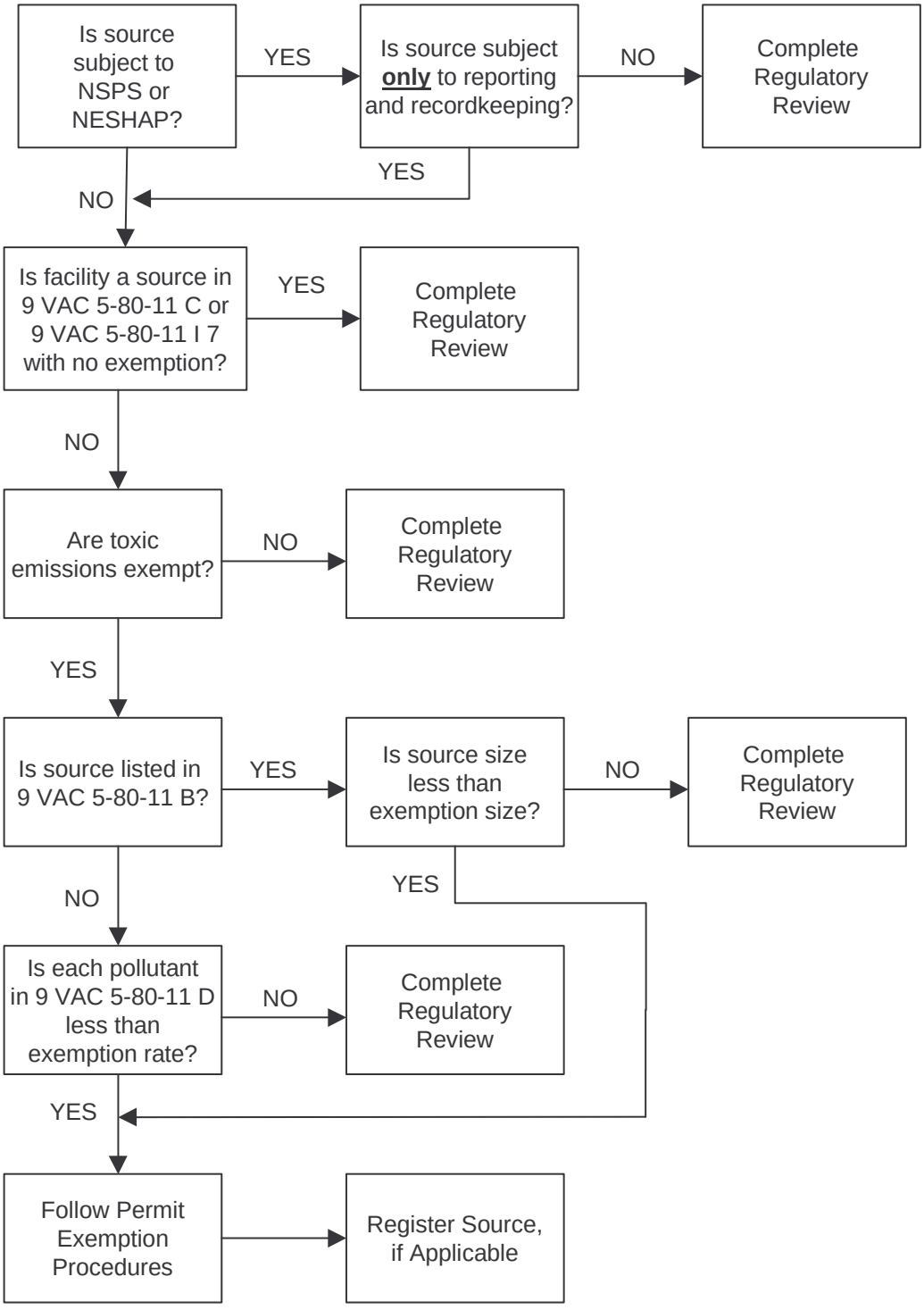
(7) Registration requirements. Permitted sources are registered. However, a source may be exempt from the permit requirements of 9 VAC 5-80-10 and still have to be registered in accordance with 9 VAC 5-20-160 and 9 VAC 5-80-11 H.

Two Exemption Flow Charts, one for new facilities and one for existing facilities, are shown below to serve as a guide for exemption processing. **Appendix L** provides the checklist for exemption review. If the proposed new or modified source meets the exemption criteria, the permit writer should send a letter to the applicant confirming the exempt status of the source (see **Appendix M** for the exemption letter boilerplate). The applicant is also advised of the registration requirement, if applicable, in the same letter.

EXEMPTION FLOW CHART - NEW FACILITIES



EXEMPTION FLOW CHART - EXISTING FACILITIES



C. Minor NSR Applicability

The state new source review (NSR) permitting regulations contained in 9 VAC 5-80-10 establish the procedures for pre-construction review and permitting of new and modified stationary sources. These regulations apply to non-major stationary sources, and major stationary sources not subject to either the federal prevention of significant deterioration (PSD) or non-attainment (NA) NSR permitting programs. The applicability of PSD, NA, and the state NSR permitting programs must be evaluated carefully with each proposed action because it is possible for a facility to be subject to the provisions of all three programs. In cases where a facility is subject to the provisions of the state NSR program and a federal permitting program, the more stringent requirements shall prevail. Regardless of how many permit programs apply to a particular facility, only one application is required to be submitted, and only one permit will be issued.

The state NSR regulations apply to the construction, reconstruction, relocation or modification of any stationary source which is not exempt from permitting (see sections **A.** and **B.** above for details on exemption determinations). The regulations broadly define a new source to encompass any stationary source, or portion of it, which was constructed or relocated on or after March 17, 1972, and any stationary source, or portion of it, which was reconstructed on or after December 10, 1976. Therefore, discussions of new sources in this section include relocated and reconstructed sources qualifying as new sources.

The state NSR permitting regulations classify a modified source as a stationary source, or portion of it, which was modified on or after March 17, 1972. See the definition of "modification" in 9 VAC 5-80-10 B., which is explored in depth in **Chapter 4** , section **G**.

Several important aspects to consider when evaluating whether a change to a facility or emissions unit constitutes a modification subject to permitting are provided below:

(1) If a source proposes to use an alternative fuel or raw material, Title 10.1, Chapter 13, section 10.1-1322.4 of the *Code of Virginia* establishes a specific exemption from permitting if the owner demonstrates that the emissions resulting from the use of the alternative fuel or raw material supply are decreased.

(2) Incidental increases in carbon monoxide (CO) emissions resulting from utility facilities' NO_x control efforts are excluded from both minor and major modification permit requirements. This policy is provided in the July 19, 1999 memorandum from John M. Daniel, Jr., the Director of the Division of Air Programs Coordination, to Karen J. Sismour, then the Regional Permit Manager, TRO (see **Appendix HH**). Two EPA policy documents referenced in the John Daniel memo pertain to exclusions from federal NSR permitting requirements for pollution control efforts. These memos may be reviewed for details on pollution control projects which might trigger major NSR requirements.

The applicability of the state NSR permitting regulations is dependent on many factors. The interplay of the exemptions rules (9 VAC 5-80-11) with the new vs. modified distinction makes applicability one of the most difficult, and most important, determinations we make. The material here should be read in conjunction with the detailed discussion of the permit exemption levels (9 VAC 5-80-11 et seq.) in sections **A**. and **B**. of this Chapter.

In reviewing a project to determine permitting applicability, it is important to have an understanding of when to use the new source exemption levels versus the modified source exemption levels. The new sources exemption levels by size established in 9 VAC 5-80-11 B apply to new "greenfield" sources as well as new emission units at existing facilities. The listing of new sources with no exemptions in 9 VAC 5-80-11 C also applies to new greenfield facilities, and in certain cases new emission units at existing facilities. The new source exemption levels by emission rate established in 9 VAC 5-80-11 D apply to new greenfield facilities, while the modified source emission rates established in 9 VAC 5-80-11 E apply to modified sources as well as new emission units at existing facilities. In this latter case, the new emissions unit effectively modifies the stationary source at which it is to be installed.

The regulations do not specify how projects involving multiple emission units should be evaluated. The regulations may be interpreted to apply to each individual emissions unit in evaluating state NSR permitting applicability.

Example 5-3: A registered facility submits a permit application to install two new production lines. The requirements of 9 VAC 5-80-11 B, C, F, and I are not applicable to the source type. The uncontrolled emissions from each production line will be 8 tons per year of VOC emissions. The modified source VOC exemption levels established in 9 VAC 5-80-11 E are 10 tons per year. When viewed individually, the production lines do not trigger state permitting requirements. However, when the VOC emissions are aggregated, the project does exceed the modified source emission rate exemption levels. The emissions from the entire project should be aggregated to evaluate permitting applicability. If emission units were viewed individually, it is possible that a facility may exempt itself out of state NSR, while triggering PSD or NA permitting. Please note that while emission increases are aggregated, any simultaneous decreases at the facility cannot be considered under minor NSR permitting.

Example 5-4: If a facility wants to add two new boilers, each using liquid fuel with maximum rated capacity of 9.9 million Btu/hr, then the modification would require a permit because it does not fit the exemption in 9 VAC 5-80-11 B 1.b.

D. True Minors

As previously stated, the state NSR permitting regulations apply to non-major stationary sources, and major stationary sources not subject to either the federal PSD or NA permitting programs. Non-major stationary sources may be true minor sources, or "synthetic minor" sources (ones which accept emission limits below major permit applicability thresholds; see, for example, the definition in 9 VAC 5-80-810 C.). The major source status of a facility is determined from the potential annual emissions of regulated pollutants from the facility (expressed in tons per year). The major source classification will be different depending on which specific regulations are being considered. For example, the major source definition for the federal operating permit program (Title V) is different from that in the PSD regulations, or the NA regulations.

For the purposes of the state NSR permitting program, a true minor source must meet the following criteria:

(1) The uncontrolled emissions of any regulated pollutant do not exceed 100 tons per year;

(2) It is not a major source under either of the federal NSR programs (e.g., PSD/NA rules);

(3) The source emits or has the potential to emit less than 10 tons per year of any hazardous air pollutant, or less than 25 tons per year of any combination of hazardous air pollutants.

(4) It is not made a minor source by accepting either emission limits or operating restrictions in a permit such that its potential to emit is brought below the major source threshold.

These criteria establish the true minor classification of a source with respect to the preconstruction NSR permitting programs. The major or minor source status of a facility with respect to other regulations and permitting programs may be different. Operating permit programs, such as the Title V program or the state operating permit program, are not concerned with preconstruction review. Rather, they focus on the already established air pollution control requirements for a facility in establishing an operating permit. A Title V major source, including one classified as major for emissions of hazardous air pollutants, may be subject to permitting under the state NSR rules, PSD or NA regulations depending on the specific modification or construction activity it proposes (see discussion below of minor modifications at major sources).

E. Synthetic Minors

The term "synthetic minor" is not defined in state or federal regulations. It refers to a situation where a source accepts some type of limit in order to keep its emissions below a major source threshold. The major source threshold, or classification, avoided by creating a synthetic minor source depends on the regulation under consideration and the pollutant(s) emitted. For the state NSR permitting program, a synthetic minor source is one which accepts federally enforceable restrictions to limit its emissions, thereby avoiding Prevention of Significant Deterioration or Non-attainment (PSD/NA) major new source review. A source which takes permit limits below Title V major source thresholds (potential to emit of 100 TPY for criteria pollutants, 10 TPY for any one HAP or 25 for any combination of HAPs) also becomes a synthetic minor and avoids Title V major status. (A greenfield source can take a limit to avoid PSD but still be a state major or Title V major source.) The limits accepted by the source to become a synthetic minor source may be in the form of restrictions on operating hours, limits on production, limits on raw material or fuel throughput, pollutant emission limits, or a combination of these.

F. Significance levels and PSD/NA applicability

Determination of PSD/NA NSR permitting applicability is a complex topic. A complete discussion of the issues is beyond the scope of this Manual. However, because state minor NSR often involves understanding the intricacies of major NSR, the topic warrants at least a general discussion. See **Appendix II**.

G. Minor modifications at major sources

A PSD/NA major source may propose a project which requires minor NSR. If a proposed modification will result in net emissions increases below significance levels, then the activity may not be subject to PSD/NA review.

Example 5-5: An existing source located in an ozone non-attainment area which is a major source for SO_2, CO, and NO_x proposes to add a new distillate oil-fired boiler with uncontrolled emissions of 50 tons/yr SO_2, 120 tons/yr CO, and 30 tons/yr NO_x. At the uncontrolled emission rates, the source would be subject to PSD and NA review. However, if the source accepts limits to lower the uncontrolled emissions to rates below the significance thresholds for each pollutant, then the source would not be subject to PSD/NA review. The state NSR program would be used to establish federally enforceable limits that restrict the emissions to levels below the significance thresholds.

Note that a PSD/NA major source cannot seek state NSR permits for a planned sequence of projects in order to avoid major NSR. In this case, the emissions resulting from the individual projects would need to be added together to determine the applicability of major NSR.

H. Netting

Netting is the use of an emission reduction credit plant-wide (as defined in the EPA's New Source Review Workshop Manual, October 1990 Draft) at an expanding or modernizing major source to lower the net emissions increase below "significant" levels at the same source and thus to avoid PSD and non-attainment review. A fuller discussion of netting appears in **Appendix JJ**.

I. Non-attainment

A proposed new or modified source is subject to a Non-attainment New Source Review pursuant to 9 VAC 5-80-2000 et seq. when it is located in a non-attainment area, and is either a major source, or an existing major source undergoing a major modification that will emit, or will have potential to emit, non-attainment pollutant(s) at or above emission thresholds (see Section **F**, above). Further discussion of non-attainment review appears in **Appendix KK**.

J. Pre-construction review for MACT sources

The owner or operator of a facility which is major for a MACT standard is required to submit an application for approval (see **Chapter 3**) to construct a new source, or reconstruct a source after the effective date of that MACT standard. Sources constructed prior to the effective date are not subject to the preconstruction review requirements. Those sources that are considered area sources under the standard (i.e., potential to emit is less than 10 tons per year for any one HAP, or less than 25 tons

per year for more than one HAP) are required to submit notification of the intent to construct or reconstruct. It should be noted however, that each specific MACT subpart may contain exceptions to the general provisions. These exceptions are normally noted in a table at the end of each subpart. The preconstruction review requirements for MACT sources can be found in 40 CFR 63.5.

The preconstruction review requirements for case-by-case MACT found in 9 VAC 5-80-1420 of the Regulations differ from the general requirements and are described in further detail in **Chapter 10**.

Chapter 6

Engineering Analysis

Introduction

Strictly speaking, engineering evaluation only encompasses the review of emission estimates and control technology and has already been discussed in this manual. What is referred to as the engineering analysis is, in reality, the documentation of the permit review process. As such, it includes regulatory as well as engineering aspects. When we talk about preparing the engineering analysis, what we are really talking about is documenting the permit review process.

The type and amount of documentation required varies with the type of permit being processed. In all cases, it is important to state what the emissions are, where they come from, what regulations apply, what factors have been taken into consideration, what action is recommended, and how the requirements of 9 VAC 5-170-170 (and *Virginia Code* section 10.1-1307), regarding substantive considerations of suitability, have been addressed.

All permit applications undergo some level of engineering evaluation. The level of complexity and detail generally depends upon the permit type. In most cases, the emissions evaluation must be completed before the regulations can be reviewed to determine the permit type. Once the engineer makes the determination as to the permit type, he or she can proceed with performing and documenting the permit review.

In the "no permit required" case, a record of the determination must be made. Calculation sheets, the minor permit checklist, or a short memo, will serve as adequate documentation supporting the no-permit determination; the short memo is appropriate for a minor permit determination. In the case of a minor permit, a minor engineering analysis (**Appendix O**) and a minor permit checklist (for minor permit review procedures and checklist see **Appendix P**) are required to substantiate the minor permit. In the case of a more complicated minor permit, a formal engineering analysis (remainder of this **Chapter**) may be necessary.

For all major permits, including PSD and Non-Attainment, a formal Engineering Analysis is required. Because the emissions are much more significant than in a minor permit and because it will be used for EPA, public and board review, this is a much more complex and detailed document. (See **Appendix Q** for a suggested state major source permit procedures checklist.)

Use the outline which follows to prepare a formal engineering evaluation. Note that you must address each topic as it applies to the associated permit. The analysis should be written in the form of an intra-agency memo to the Regional Director.

Formal Engineering Analysis

A Executive Summary

The Executive Summary should contain a brief synopsis of the major sections for complex permit applications. The section is optional and is not necessary for many applications.

B Introduction and Background

(1) Company background

Describe the facility including company name and type of business. Give the location of the proposed construction, including county, UTM coordinates, and the site suitability (refer to 9 VAC 5-20-204 of the Regulations for non-attainment areas).

(2) Project Summary

Describe what the owner wants approval to do. Give all the facts which bear on the description of the facility and proposed action. The following must be covered:

(A) Type of Source: modified or new, size, capacity

(B) Permit history of modified sources to include current operations, proposed operations and related enforcement actions to include whether facility is currently in compliance with state and federal regulations such as the NAAQS.

(C) Process/Equipment Description: discuss the production capabilities in terms of production rate and proposed production schedule.

(3) Schedule of Project

Include the date the application was received, proposed construction commencement date, and proposed start-up date.

C Emission Evaluation of Criteria and Toxic Pollutants

Summarize uncontrolled, predicted, and recommended emissions and include the calculations as an enclosure.

D Regulatory Review and Considerations

The permit engineer reviews the regulations to determine which criteria pollutants, toxic pollutants, modeled emissions/ambient air impact, control technology standards, and analysis apply.

(1) Criteria Pollutants

Apply 9 VAC 5-80-11 as the threshold to determine exemption. Evaluate criteria pollutants under PSD and Non-attainment review. Include any netting performed. Discuss state major applicability. Compare model results to the National Ambient Air Quality Standards (NAAQS).

(2) Toxic Pollutants

Apply 9 VAC 5-80-11 as the threshold to determine exemption. Evaluate toxic pollutants using 9 VAC 5-50-160, NESHAP, and MACT. Compare model results to the Significant Ambient Air Concentrations (SAAC).

(3) Control Technology Standards and Analysis

Discuss the control technology or standard used from the list below:

- LAER
- NESHAP
- RACT
- MACT
- BACT
- NSPS

Include a discussion of the analysis that supports use of the control technology or standard.

(4) Modeling Parameters (see **Chapter 9**)

Discuss the site layout, to include the location and dimensions of structures, which describes the plot plan of the facility. Building locations and dimensions, stack locations and dimensions should be discussed. Other stack parameters such as stack velocity, temperature, cover and other applicable parameters. Terrain features to include simple, complex, flat and intermediate should be discussed. Discuss the model used and other modeling considerations.

E Compliance Determination

(1) Stack Test

Discuss the need for specific stack tests and how they will be conducted to support the applicant in demonstrating initial and continuing compliance.

(2) Visual Emissions Evaluations (VEEs)

Discuss the need for VEEs and how they will be conducted to support the applicant in demonstrating initial compliance.

(3) CEMS - Continuous Emission Monitoring System

Discuss the Continuous Emission Monitoring System or systems that are required and how they support demonstration of compliance.

(4) Record-Keeping Requirements - Data Collection and Reporting

Compliance with emission limits, throughput limits, or other limits established in permit conditions needs to be verifiable through adequate record-keeping requirements. These requirements must be placed in the permit as permit conditions and should reflect parameters that can be reasonably measured. For example, if there is a throughput limit on solvent usage, then a separate permit condition needs to require that adequate records be kept on the solvent usage rate. If the %S in a fuel is established as a permit condition, then certification of the fuel %S analysis needs to be required as a permit condition to demonstrate compliance with the %S limit. See the specific boilerplate conditions for guidance on record-keeping time periods and exact wording.

F Public Participation

Discuss the applicability of a public hearing and include the Public Hearing

Package and planned locations. The Public Hearing Package consists of the opening statement for the public hearing, the public briefing statement, and a list of documents which are made available during the public comment period. (See **Chapter 12** for details.)

G Legal Requirements: Site Suitability (See **Appendix E**)

Discuss the requirements of § 10.1-1307 of the Virginia Air Pollution Control Law and 9 VAC 5-170-170 of the Regulations. Include language as follows:

(1) The character and degree of injury to, or interference with safety, health, or the reasonable use of property which is caused or threatened to be caused:

The activities regulated in this permit have been evaluated consistent with 9 VAC 5-50-260, 9 VAC 5-40-180, and 9 VAC 5-50-180 and have been determined to meet these standards where applicable.

[The emissions regulated in this permit have been evaluated for air quality impacts consistent with existing DEQ policy and have been found to have negligible impact on ambient air quality. OR The emissions regulated in this permit are defined as de minimis consistent with existing DEQ policy and have therefore not been modeled as part of this permit development.]

(2) The social and economic value of the activity involved:

For new construction and major modifications

The social and economic value of the facility submitting the application has been evaluated relative to local zoning requirements. The local official has deemed this activity not inconsistent with local ordinances. The signed Local Government Form is attached. OR The local zoning authority was contacted consistent with regulations and no response from the zoning official was received.

For amendments to minor NSR permits

This application has been deemed an amendment to an existing Minor NSR permit, and emissions increases associated with this project are below significance levels defined in 9 VAC 5-80 Article 8 and in 9 VAC 5-80 Article 9. This project is deemed to have de minimis impact on the current emissions levels and does not affect the current social and economic value of the facility.

(3) The suitability of the activity to the area in which it is located:

*Consistent with the Board's Suitability Policy dated 9/11/87 (see **Appendix E**), the activities regulated in this permit are deemed suitable as follows:*

(A) Air Quality characteristics and performance requirements defined by SAPCB regulations:

This permit is written consistent with existing applicable regulations. The source [is not/is] a source of toxics emissions and therefore [has not/has] been modeled[./ and shows no impact on the SAAC.] The emissions for criteria pollutants associated with this permit are below significance levels so no modeling was performed.

(B) The health impact of air quality deterioration which might reasonably be expected to occur during the grace period allowed by the Regulations or the permit conditions to fix malfunctioning air pollution control equipment;

Condition XX of the permit requires the facility to notify the Regional Office within 4 business hours of any malfunction and to meet certain shutdown requirements where hazardous pollutants are emitted.

(C) Anticipated impact of odor on surrounding communities or violation of the SAPCB Odor Rule;

No violation of Odor requirements is anticipated as a result of this permit action.

(4) The scientific and economic practicality of reducing or eliminating the discharge resulting from the activity.

The state NSR program as well as the PSD and Non-Attainment programs require consideration of levels of control technology which are written into regulation to define the level of scientific and economic practicality for reducing or eliminating emissions. By properly implementing the Regulations through the issuance of this permit, the staff has addressed the scientific and economic practicality of reducing or eliminating emissions associated with this project.

H Notification of Other Government Agencies

Discuss which of the following DEQ divisions, other state agencies and federal agencies were notified and include any comments submitted to the Division of Air Programs Coordination ("Air Division").

- DEQ Division of Waste Programs Coordination
- DEQ Division of Water Programs Coordination
- Department of Labor and Industry
- U. S. Environmental Protection Agency (US EPA), Region III
- National Park Service (Shenandoah National Park)
- United States Department of Agriculture, Forest Service (James River Face Wilderness)
- States in the affected Air Quality Control Region

I Pollution Prevention

Discuss pollution prevention if applicable, including cross-media transfer of pollutants from air to water and/or solid waste. See the pollution prevention guidance documents supplied by the Department in **Appendices DD** and **EE.**

J Document List

List the documents used as references in the preparation of the engineering evaluation and permit conditions.

K Recommendations

When the major source permit review is complete, the permit writer submits the draft permit package recommendation for approval or disapproval to the Regional Director who signs as the designate for the agency Director (see **Appendix B**). The submitted package should contain the draft permit, cover letter, engineering analysis, application, and a complete public comment period documentation package when required. Copies of applicable NSPS/NESHAP/MACT federal regulations are to be included with approved permit.

Chapter 7

Emission Limitations (Criteria and Toxic Pollutants)

Introduction

The rules governing air permitting depend on the permit engineer's ability to find and use emission factors for various pollutants and processes, to apply appropriate standards depending on the emissions that are anticipated for the source or pollutants in question, and to write a permit containing appropriate emission limits and operating requirements which enable the facility to meet those limits. This chapter should be read in conjunction with other chapters, notably **Chapters 4, 5, 8,** and **11**, in preparing to write a new source review permit. It may also be handy, along with **Chapter 5**, in determining whether a permit is required in the first place.

B. A. Forms of Emission Limitations

Emission limitations in minor new source review and other permits are typically pegged to the averaging time in the applicable standard from Chapter 40, Chapter 50, or Chapter 60 of the Regulations (respectively, the rules on existing sources; the rules, including federal NSPS provisions incorporated by reference, on new sources; and the rules on sources of hazardous air pollutants). They must be expressed, however, in terms that are understandable to the source and the Department's inspectors, so that compliance can be achieved by the source and checked, if and when necessary, by inspectors. Emission limitations in a minor new source review permit may take a number of forms, including but not limited to the following:

- tons per year (in which case there will need to be an additional term, such as a short-term limit or operational restrictions, that enable the limitation to be effectively monitored and practically enforced). Tons per year is calculated as the sum of each consecutive 12-month period;

- pounds per hour

- grains per dry standard cubic foot

- usage rates: gallons of coating, for example, per measure of resulting product or measure of time, i.e., gallons per hour or gallons per square foot of coating coverage.

B. Emission Factors

Emission factors and other data to estimate emissions may be found in:

- Boilerplate Procedures.
- Stack test data.
- Mass balances based on physical/chemical principles.
- Manufacturers' guarantees.
- EPA publication AP-42.[1]
- EPA source classification codes (SCC) numbers.
- FIRE (Factor Information Retrieval System). [1]
- Air Pollution Engineering Manual (AWMA).
- Source data.
- VOC/PM Speciation.
- Control Technology Guidance (CTG) Documents.
- Alternative Control Techniques (ACT) Documents.
- EPA Control Technology Center. [2]
- Locating and Estimating (L&E) Series Documents. [1]
- Various documents in K:\AGENCY such as
  - Formaldehyde from furniture plant veneer press applications, see K:\AGENCY\AIR PERMITTING\MEMOS\HCHO.PER
  - Lime manufacturing, see K:\AGENCY\DTE\PERMAST\LIME-MFG.EF
  - Coal boilers and boilers > 100 mmBtu/hr, see K:\AGENCY\AIR PERMITTING\MEMOS\COGEN.PER
- -- Trade groups sometimes develop emission factors for their source categories

List the references for the emission factors used and support any undocumented emission factors with sound engineering and scientific principles. Listing the SCC# is useful information for entering the permit into CEDS. The references and SCC# go in the cover memo submitting the permit for approval and signature, not in the permit itself. Contact OAPP for assistance as necessary.

C. Units Used in Expressing Emission Factors

Emission factors are expressed in quantity of emissions (typically units of weight such as pounds) per quantity of production. Production units may be mass units, or they may be units that are meaningful within the particular industry (such as cubic yards of concrete). Often the permit writer will be able to choose from several available emission factors. For example, emissions for a boiler might be calculated using lb/1000 gallons of fuel, lb/ton of fuel, or lb/MMBtu of heat input.

1 Information can be found at www.epa.gov/ttn/chief
2 (919) 541-0800

Generally, permit throughput limits will correspond to the chosen production units. Therefore, where several emission factors are available, preference should be given to the factor that most closely matches the record-keeping preference for the facility. If a company tracks fuel usage in tons, for example, that factor may be used for calculating emissions and establishing a throughput limitation.

D. Calculating Uncontrolled Emissions

The annual uncontrolled emissions for a new source or a change to an existing source are used to determine whether the source is exempt. Hourly calculations are also required, pursuant to 9 VAC 5-80-11 I., if HAPs are involved and, pursuant to 9 VAC 5-80-11 B 4-14, hourly and daily VOC calculations are required for those source categories. Uncontrolled emissions are based on operating at maximum design capacity without air pollution controls, but considering enforceable permit conditions that limit the hours of operation or production or process rate on an annual basis. Annual emissions may be calculated differently depending on whether the emissions unit is new or being modified and whether the emissions unit is currently permitted. Annual emissions are based on 8,760 hours of operation when not limited by permit conditions. Additionally, Inherent limitations on the maximum capacity of a source may be taken into account. Inherent limitations are found in those processes where there is a natural barrier to the maximum capacity at which the equipment can operate , such as, annual emissions from coating operations (e.g. paint spray booths) and grain elevators .

Example 7-1 Including Inherent Limitations in Estimating Emissions

In a paint-spraying booth at a small auto body shop, there is a limitation on the number of cars that can be painted and dried in a given amount of time because of the time it takes to perform each task required (e.g., preparation of the surface, painting, drying, etc.). In estimating the maximum capacity the permit writer should not assume that the paint spraying equipment operates continuously every hour throughout the year. Instead, he or she can assume that it operates the amount of time that is possible to paint the maximum number of cars that the booth can handle per hour if operated 8760 hours per year.

*(See Miscellaneous Metal Parts Coating Procedures at k:\agency\bp_revw \pro\ misccoat.pro, and EPA's November 14, 1995 guidance memo on grain elevators at K:\agency\epabull\air\ guidance\grainfnl.wpf, respectively). Similarly, the EPA policy on emergency generators does not require calculations based on 8,760 hours, but rather allows a default assumption of 500 hours of operation per year; see Memo No. 97-1001, dated January 22, 1997, for explanation and interpretation of this policy (K:\agency\ airgide\policy\97-1001).

Daily emissions may need to be calculated for some permit applications, but are not discussed in detail.

(1) New Emissions Unit. For new emissions units hourly and annual emissions are calculated as follows:

- Hourly emissions calculations should be based on operating at maximum design capacity without air pollution controls.

- Annual emissions calculations should be based on 8,760 hours of operation without air pollution controls, taking into account any physical limitations.

For new units determine permit applicability as follows:

- For new units at "greenfield" sources, compare the emission rates to the exemption rates in 9 VAC 5-80-11 B (exemption by size) or 9 VAC 5-80-11 D (new source exemption table to be used if not covered in 9 VAC 5-80-11 B), and 9 VAC 5-80-11 I (exemption levels for toxic pollutants). 9 VAC 5-80-11 C, new sources with no exemptions, should also be checked for applicability

- For new units at existing sources compare the emission rates to the exemption rates in 9 VAC 5-80-11 B or 9 VAC 5-80-11 E, and 9 VAC 5-80-11 I.

(2) Modified Emissions Unit. For changes to an emissions unit, the calculations for annual uncontrolled emissions are dependent on whether the emissions unit is currently permitted.

(A) *Existing/Unpermitted unit.* Modifications to these units usually involve an increase in the maximum rated capacity of the units. Emissions should be calculated as follows:

- Hourly emissions calculations should be based on operating at the new maximum design capacity without air pollution controls.

  Annual emissions calculations should be based on operating after the modification at 8760 hours per year without air pollution controls.

To determine permit applicability, take the post-modification annual uncontrolled emissions and subtract the current emissions (operating the current unit at 8760 hours per year without air pollution controls). Compare the result to the modified emission rates in 9 VAC 5-80-11 E and 9 VAC 5-80-11 I to see if the change

qualifies as a modification.

(B) *Currently permitted units.* Calculations for currently permitted emissions units must be based on the permit rather than on 8760 hours per year because the definition of "potential to emit" takes account of federally enforceable permit conditions. Assuming there are no federally enforceable pollution controls in the permit, the emission calculations should be based as follows:

- Hourly emissions calculations should be based on operating at maximum design capacity without air pollution controls.

- Annual emissions calculations should be based on operating at the new requested throughput or operating hours without air pollution controls.

To determine permit applicability, compare the increase in uncontrolled emissions with the modified source exemption rates in 9 VAC 5-80-11 E and 9 VAC 5-80-11 I, to see if the change qualifies as a modification or an administrative amendment.

E. Control Equipment and Control Efficiency

In some cases, expected performance of a control device is the most reliable predictor of emissions. For example, a fabric filter vendor may guarantee that emissions from its unit will not exceed a given weight (in grains) per cubic foot of exhaust air. Such emission rates may be used to calculate emission limits.

F. Predicted Emissions Calculations

Predicted emissions take into account the proposed control methodology. Hourly emissions are based on maximum capacity. Annual emissions are based on proposed throughput , hours of operation, or restrictions needed to alleviate a modeled NAAQS exceedance (see next paragraph). Predicted emissions must meet BACT or LAER, including applicable NSPS, NESHAP, or standards from the Regulations, such as 9 VAC 5 Chapters 40, 50, or 60.

If preliminary calculations show a potential air quality exceedance of a SAAC, or that a PSD review may be required, negotiations with the source may be required to resolve exceedances or to allow a minor permit to be issued. After the engineer completes the regulatory review, emission control evaluation, air quality analysis, and toxics analysis, the calculations may be refined based on new information or conditions

accepted by the source such as a reduction in requested throughput, substitute coatings, or increasing of stack heights or use of controls.

G. Short-Term Emission Limit

Short-term emissions usually represent the worst case allowable emissions for equipment operating at maximum capacity. These limits provide a way to verify that emission estimates are accurate, control devices are operating as designed, and air quality standards are being met. Averaging periods (1-hour, 3-hour, 8-hour, or 24-hour for pound-per-hour limits; or usage rate limits like gallons per hour, per day, or per week) should be specified in setting short-term emission limits. When needed to protect air quality standards (state toxics or NAAQS), a short-term emission limit can be established with a corresponding short-term throughput limit. In other cases, short-term limits may simply provide a method of verifying compliance on a more frequent basis than annually. For example, a monthly limit on VOC emissions may be established as the short-term limit for a facility using mass balance to determine compliance. In no case should a short-term limit exceed a 30-day averaging period, in keeping with EPA guidance on practical enforceability.

H. Long-Term Emissions

Long-term (usually annual) emission limits take into account any restrictions on throughput, operating hours, or other parameters that would serve to reduce emissions. It is common for permittees to request such restrictions in order to avoid applicability of a program (such as PSD or Title V), even though they may wish to have short-term limits reflect the maximum operating capacity of equipment. In calculating annual emissions, it is important to include only those reductions that are made enforceable through permit conditions.

C. I. Recommended Permit Emissions Limits

The permit limits are usually the predicted emission rates, but may be different based on the following:

(1) An allowance for equipment deterioration may be given by setting the permit limits at 120 percent of predicted emissions, provided BACT or LAER is still met.

(2) Criteria pollutants with controlled emissions less than 0.5 tons per year are not listed in the permit. Criteria pollutants with emissions greater than 0.5 tons per year should be listed.

(3) Toxic limits are not listed in the permit if the predicted emission rate from a new emissions unit or the net increase from a modification is less than the toxics exemption rate.

The justification should be listed on the worksheet when the Predicted Emissions are not used as the Recommended Permit Emission Limits.

See Stand-alone Chapter 8 updated August 31, 2020

Chapter 8

Control Technology Standards

Introduction

New and modified stationary sources are subject to the Best Available Control Technology (BACT) requirements pursuant to 9 VAC 5-50-260. New source review permitting in accordance with 9 VAC 5-80-10, therefore, must include a BACT determination and reflect BACT in permit conditions. Other control technology standards may apply to new and modified sources and/or existing sources, as discussed below.

A. Best Available Control Technology (BACT) Requirements

As defined in 9 VAC 5-50-250, BACT means a standard of performance (including a visible emission standard) based on the maximum degree of emission reduction for any pollutant which would be emitted from any proposed stationary source which the board, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such source through the application of production processes or available methods, systems and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. BACT is a case-by-case determination, and varies depending on the size and location of the facility. In no event shall application of best available control technology result in emissions of any pollutant that would exceed the emissions allowed by any applicable standard in:

- New Source Performance Standards (9 VAC 5-50-400 et seq.);
- National Emission Standards For Hazardous Air Pollutants (NESHAPs) (9 VAC 5-60-60 et seq.);
- National Emission Standards For Hazardous Air Pollutants For Source Categories (MACT requirements) (9 VAC 5-60-90 et seq.).

If the board determines that technological or economic limitations on the application of measurement methodology to particular emissions unit would make the imposition of an emission standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead of requiring the application of best available control technology. Such standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means that achieve equivalent results.

BACT is required for all new facilities and modified sources subject to the permitting requirements of 9 VAC 5-80-10. In many cases experience with an applicant's industry category is sufficient to set BACT without further analysis. (This is referred to as "presumptive BACT.") The permit engineer reviews the BACT proposal and determines acceptable control technology based on the following:

- applicable boilerplates
- source action reports (SAR)
- Chapter 40 Control Technology, RACT, NSPS, NESHAP, MACT, and GACT
- EPA□s RACT BACT and LAER Clearinghouse (RBLC) database of the Clean Air Technology Center (web site http://www.epa.gov/ttn/catc)

In rare cases where BACT is not already identified, and generally for state major sources, a formal BACT analysis becomes necessary. Procedures for the formal BACT analysis can be found in EPA□s New Source Review Workshop Manual, October 1990 Draft, Chapter B. For PSD permits, formal BACT analysis is required.

B. Chapter 40 Control Technology

Control technologies for existing sources are discussed in 9 VAC 5 Chapter 40 (9 VAC 5-40-10 through 9 VAC 5-40-8190), which contains 46 rules (as of the date of this Manual's promulgation), addressing general emission standards applicable to all sources as well as specific standards applicable to particular types of processes, operations, or equipment. These rules also serve as the minimum controls acceptable for new and modified sources undergoing BACT analysis pursuant to 9 VAC 5-50-260. However, a number of Chapter 40 rules apply to non-attainment areas and are not necessarily BACT for attainment areas. Also, according to 9 VAC 5-40-10 B, the provisions of Chapter 40 apply to new and modified sources when they are more restrictive than those in Chapter 50 or Chapter 80 (9 VAC 5-80-10 and other permit rules). One example is the case of miscellaneous metal parts and products coating systems. See the appropriate procedure for these sources in k:\agency\bp_revw\pro\misccoat.pro.

C. New Source Performance Standards (NSPS) Requirements (40 CFR Part 60)

The new source performance standards (NSPS) in 40 CFR Part 60 establish the minimum performance for the emission control systems of various types of new sources. They are incorporated by reference in 9 VAC 5-50-400 et seq. According to Section 111 of the Clean Air Act, NSPS "shall reflect the degree of emission limitation and the percentage reduction achievable through application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately

demonstrated." Additionally, these standards are subject to periodic review and updated as necessary.

D. Reasonably Available Control Technology (RACT) Requirements

RACT is defined in 9 VAC 5-40-250 C as the "lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." RACT is not applicable to new or modified sources. However, RACT technology must be considered in the BACT analysis.

In Virginia, RACT generally applies to existing VOC and NO_x sources which are located in ozone non-attainment areas designated as moderate or worse levels (see **Appendix N** for a listing of the non-attainment regions), and have a theoretical potential to emit at or above a certain amount. The term "theoretical potential to emit" is defined in 9 VAC 5-40-300 B and 9 VAC 5-40-310 C. The emission limit is dependent on the relevant pollutant (VOC or NO_x) and on the area where the source is located as shown below, based on 9 VAC 5 Chapter 40 Part II Article 4 (9 VAC 4-40-240 et seq., as amended July 1, 1997):

- For VOC: 25 tons/year in Northern Virginia Emissions Control Area and 100 tons/year in the Richmond Emission Control Area (see 9 VAC 5-40-300 B);

- For NO_x: 50 tons/year in Northern Virginia Emissions Control Area (see 9 VAC 5-40-310 C).

If a source subject to RACT submits an application for a permit to modify and proposes netting, the lower of actual emissions or SIP allowable emissions (including RACT allowable emissions) is used to establish the baseline for netting.

RACT is determined on a case-by-case basis after taking into account many factors, including efficiencies of controls, costs of controls, age of the facility, quantity of emissions, nature of emissions, severity of the existing air quality problem, extent of present controls, comparability to standard practice in similar process or related industries, and cross-media and economic impacts.

The determination of what technology constitutes RACT for a given source category can, and does, change with time, with the determination being made at a given time that the selected technology represents the most stringent that is feasible and economically reasonable for the source category. RACT determinations are listed in the EPA□s RACT BACT and LAER Clearinghouse database (RBLC) of the Clean Air Technology Center web site (http://www.epa.gov/ttn/catc).

E. National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements (40 CFR Part 61)

The Clean Air Act of 1970 required EPA to regulate hazardous air pollutants and set risk-based standards for these pollutants at a level that would provide an ample margin of safety to protect the public health. The legislative regulations are called the National Emission Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR Part 61. These emission standards reflect the performance of the best available systems of emission reduction, taking into account health effects of the pollutants. To date NESHAP have been established for eight hazardous air pollutants: beryllium, mercury, vinyl chloride, benzene, radionuclides, arsenic, asbestos, and radon. Because of the difficulty and uncertainty in assessing health risks, the Clean Air Act Amendments of 1990 changed the basis of NESHAP regulations from health to available control technology, resulting in the MACT standards. In addition, the pollutant-specific basis in the NESHAP regulations changed to a source category-specific basis for the MACTs.

F. Maximum Achievable Control Technology (MACT) Requirements (40 CFR Part 63)

Title 40, Code of Federal Regulations, Part 63 (40 CFR Part 63) contains the National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT standards). These are required for all major sources in the categories and subcategories which are listed as mandated under Title III of the Clean Air Act Amendments of 1990. A source is major for HAPs if it has the potential to emit, considering controls, 10 tons per year of a single pollutant or 25 tons per year of multiple pollutants from the designated list of 188 hazardous air pollutants (HAPs). Some MACT standards also affect area sources (non-major HAP sources as defined in section **E** above). MACT sources are subject to Title V permitting requirements unless it is specified in the MACT standards that the state has the option to adopt regulations to defer or exempt some sources from the requirements.

MACT is the maximum degree of reduction in emission of HAPs, taking into consideration the cost, any non-air quality health and environmental impacts, and energy requirements. MACT may be achieved, in part, through application of measures, processes, methods, systems, or techniques. MACT technology must be considered in the BACT analysis.

The basis for development of MACT standards is as follows. For a new source, MACT must be no less stringent than the best performing emission control currently in use for a similar source. For an existing source, MACT must be no less stringent than the average emission limitation achieved by the best performing 12 percent of existing sources in a source category or subcategory which contains 30 or more sources. For a category with fewer than 30 sources, the MACT for an existing source must be no less

stringent than the average emission limitation achieved by the best performing 5 sources. These requirements apply to case-by-case MACT determinations under section 112(g) and "MACT hammer" determinations under section 112(j) of the Clean Air Act. More detailed instructions appear in **Chapter 10**, section **G**.

G. Generally Available Control Technology (GACT) Requirements

Non-major HAP sources (<10 tpy each HAP and <25 tpy total HAPs) are referred to as "area sources" under Title III of the Clean Air Act. The Act requires EPA to set GACT, which is typically less stringent than MACT, for certain area source categories. Costs, economic impacts, and the technical capabilities of owners and operators to operate emission control equipment may be considered in developing GACT. In many cases, where EPA determines that the MACT for a source category is generally available, GACT may be the same as MACT. Unlike the situation for MACT sources, EPA need not conduct a residual risk analysis for GACT sources.

H. Lowest Achievable Emission Rate (LAER) Requirements.

LAER requirements are required for permits issued to new major sources or major modifications in non-attainment areas. According to 9 VAC 5-80-2010, LAER means, for any source, the more stringent rate of emissions based on the following:

(1) The most stringent emission limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner of the proposed stationary source demonstrates that such limitations are not achievable; or

(2) The most stringent emission limitation which is achieved in practice by such class or category of stationary sources. This limitation, when applied to a modification, means the lowest achievable emission rate for the new or modified emission units within the stationary source. In no event shall the application of this term allow a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under an applicable new source performance standard.

LAER differs from BACT in that economic feasibility is not a consideration. The lowest emission rate that has been demonstrated to be technically feasible is the rate that must be met.

Sources of information for determining LAER are following:

(1) SIP limits of all States for that particular class or category of source.

(2) Non-attainment pre-construction or operating permits issued in any non-attainment area for that particular class or category of source.

(3) EPA□s RACT BACT and LAER Clearinghouse (RBLC) database of the Clean Air Technology Center (web site http://www.epa.gov/ttn/catc)

Chapter 9

Air Quality Analysis

A. Criteria Pollutants Analysis

Any pollutant increase (maximum allowable) for a modification of an existing facility or all pollutant emissions from a new facility that exceeds the PSD significant emission rates should be modeled and compared to the PSD Class II significance levels (see PSD MODELING GUIDANCE). If the maximum predicted concentration for the specific averaging periods exceeds these levels, then the entire affected emission point for the modification (to include the increase) or the entire new facility is to be modeled. The predicted concentration is added to the monitored background value selected for the specific averaging time period (provided by the central office modeling staff). This value would then be compared to the appropriate NAAQS.

B. Toxic Pollutants Analysis

Any increase (potential to emit) in priority hazardous pollutants (see AQP-5) from a modification of an existing facility that exceeds the exemption level should be modeled with either a screening or a refined modeling procedure. If the emissions from the modification (pollutant specific) of a facility result in a predicted ambient air concentration greater than or equal to 75% of the SAAC, then compare the modification emissions to the total facility emissions. If the ratio of the modification emissions to the total facility is less than the ratio of predicted emissions to the SAAC, then the entire facility should be analyzed and compared to the pollutant SAAC. Of course, this should be addressed on a case-by-case basis since the permitting staff of a particular region will be more knowledgeable of the emitting sources for that facility. One of the considerations for the permitting staff is whether the modification is subject to a MACT requirement. If it is subject to a MACT standard it may not be necessary to model the source in question.

In the case of a new facility, the entire facility should be modeled for pollutants exceeding their specific exemption levels. However MACT applicability may affect the modeling decision.

C. Air Quality Modeling

The initial analysis can be done with EPA-approved screening techniques such as SCREEN3 or ISCST3 in the screening mode resulting in maximum predicted concentrations. The initial modeling could be done by either the regional staff or by the

applicant. The next level of refined analysis involves refined modeling with the EPA approved model, ISCST3 or the current, equivalently appropriate, EPA-approved model. A representative, appropriate 5-year set of National Weather Service (NWS) surface data from 24-hour (first order) stations and NWS upper air data (for mixing heights) or at least one year of approved, on-site meteorological data is required for this type of analysis. The resulting highest, second-highest concentration for the pollutant-specific short-term averaging periods and the highest concentration for the annual periods (for toxic pollutants, the maximum predicted concentration for both averaging periods is required) are added to the background monitored concentration (criteria pollutants only) and then compared to the appropriate standard. The more refined modeling requires a protocol or plan that would be reviewed and approved by the central office modeling staff before the modeling is undertaken. The modeling effort (summarized in a report and submitted along with all modeling input and output files via an electronic media) by the applicant or representative gets reviewed by the central office in collaboration with the regional permitting staff.

D. Modeling the Entire Facility

(1) New Source

If a new or reconstructed source's potential to emit (PTE) exceeds the exemption levels in 9 VAC 5-50-160 D, then the entire facility should be modeled to determine the Predicted Ambient Air Concentration (PAAC). The PAAC should not exceed the SAAC.

(2) Existing Source

For modifications at an existing source, the uncontrolled emissions increase (which would include "de-bottlenecking") should be taken into account when determining applicability of 9 VAC 5-80-10. If the emissions are above the exemption level, the potential to emit that pollutant from the modification should be included in the modeling analysis. The potential to emit that pollutant from the entire facility should be modeled under the following circumstances:

(A) If the emissions from the modification of a facility result in a predicted ambient air concentration greater than or equal to 75% of the SAAC then compare the modification emissions to the total facility emissions. If the ratio of the modification emissions to the total facility emissions is less than the ratio of predicted emissions to the SAAC the entire facility should be modeled.

(B) If there have been complaints regarding the pollutants emitted from the proposed modification;

(C) If the regional permit engineer suspects that an exceedance is likely due to the stack characteristics, locations of property lines, or magnitude of emissions;

(D) If the source has made several exempt modifications for the same pollutants;

(E) In the case of a facility that has had facility-wide modeling conducted prior to the current modification, the previous modeling may be used, after consultation with the OAPP air modeler, and the results simply added to the newly modeled increase. Changed circumstances at the facility or surroundings may require new modeling, which is why consultation is recommended.

E. Data Submittal Requirements

As a minimum, the following should be submitted with the air quality analysis in support of the permit application:

1) A facility plot plan to scale showing fence line, emission sources and buildings;
2) Building(s) dimensions and base elevations;
3) A USGS 7.5 minute topographic map showing location;
4) Stack parameters and emissions for point sources and source dimensions and release heights for area sources;
5) UTM coordinates; and
6) Modeling input/output files on electronic media, if required, and a concise report addressing regulatory requirements.

Chapter 10
Toxic Air Pollutants

Introduction: Toxics Regulations and SIP Approval

There are four types of hazardous (toxic[3]) air pollution regulations, which are incorporated into Virginia permits. Two sets of regulations are not part of the State Implementation Plan (SIP), but are federal; they are administered in Virginia through our delegated authority. A third category is administered by Virginia but is not part of the SIP. Additionally, a fourth category covers permitting regulations for New and Reconstructed Major Sources of Hazardous Air Pollutants (HAPS).

(1) "NESHAPs"- The National Emissions Standards for Hazardous Air Pollutants (NESHAPs) are the federal hazardous air pollutant (HAP) regulations which pre-date the 1990 Clean Air Act Amendments (CAAA). These are found at 40 CFR Part 61. They are adopted into the state regulations at 9 VAC 5-60-60 (Rule 6-1). They are excluded from the SIP, and EPA has delegated us the authority to administer and enforce these rules with the exception of radon, radionuclides and asbestos which is implemented by Dept. of Labor and Industry through an MOU.

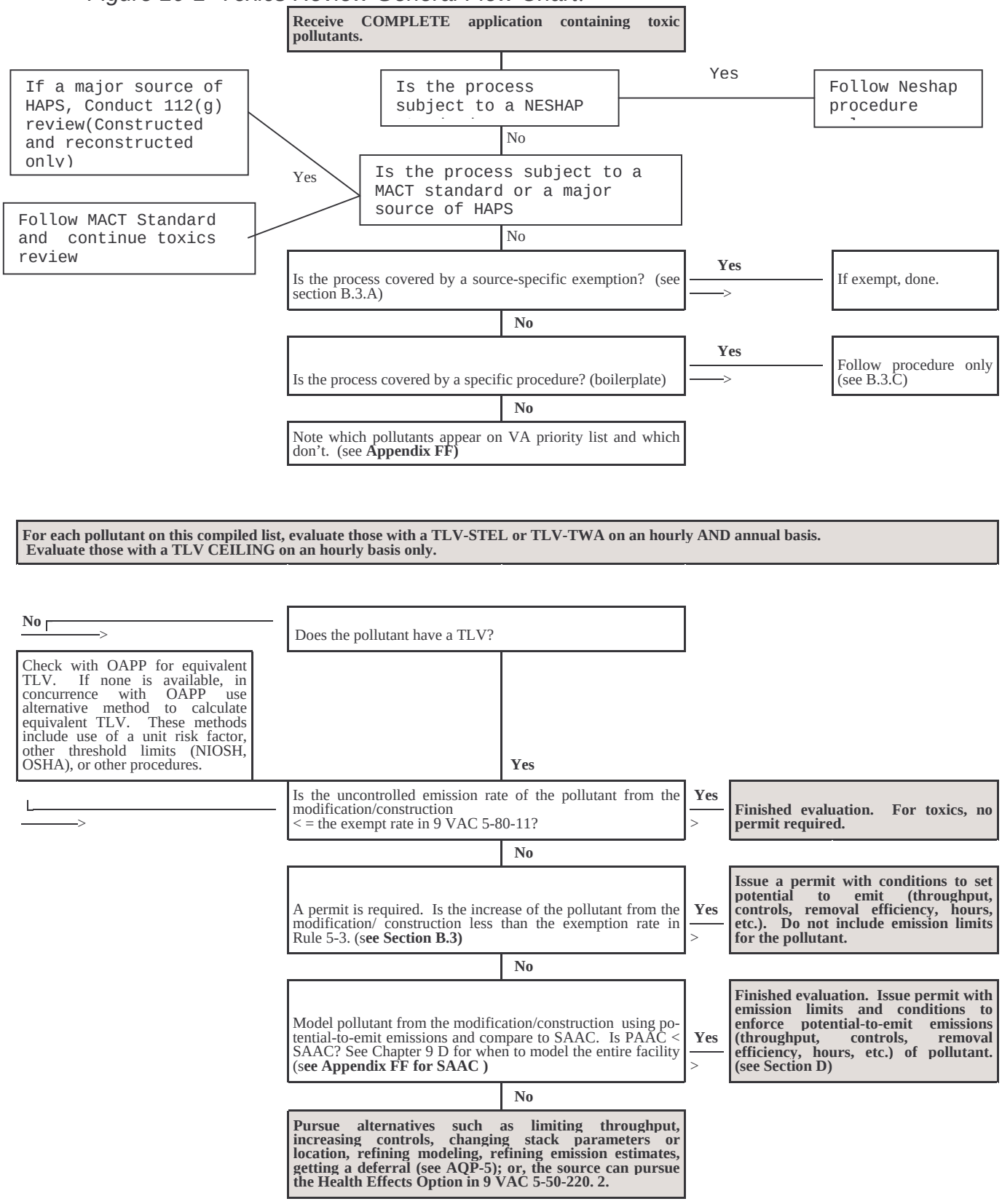
(2) "MACT standards"- The National Emission Standards for Hazardous Air Pollutants for Source Categories (also known as Maximum Achievable Control Technology (MACT) standards) are the post-1990 CAAA federal HAP regulations. These technology–based standards can be found at 40 CFR Part 63. They are adopted into the state regulations at 9 VAC 5-60-90 (Rule 6-2). As with the NESHAPs, the MACT standards are excluded from the SIP, and we have partial delegated authority to administer and enforce them.

(3) "State Toxic Regulations" – The third type of HAP regulations are the Virginia state toxics rules found at 9 VAC 5-40-160 and 9 VAC 5- 50-160 (Rules 4-3 and 5-3). The state toxics program was not submitted as part of the approved SIP. However, the current NSR permit regulation is SIP- approved and under recent EPA interpretation, terms and conditions in an NSR permit relating to the state toxics program are approved under the SIP, making them federally enforceable.

(4) HAP major source regulations - the fourth type of HAP regulations is the permitting regulations for New and Reconstructed Major Sources of Hazardous Air Pollutants, 9 VAC 5-80-1400 et seq. These regulations pertain to case-by-case MACT (federal CAA sections 112(g)) determinations and are discussed in detail in section H of this chapter.

3 The words "hazardous" and "toxic" are both used to describe these types of pollutants, however in general the term "hazardous" refers to federal regulations and more specifically the 112(b) list and "toxics" refers to state regulations.

Figure 10-1 Toxics Review General Flow Chart.



A. Regulations and AQP-5 List of Regulated Toxics

When evaluating whether a source is subject to 9 VAC 5-50-160 (Rule 5-3), the DEQ policy is to limit review of toxic air pollutants to those regulated as Hazardous Air Pollutants (HAP) under § 112(b) of the Clean Air Act, with the exception of radionuclides, asbestos and fine mineral fibers (see **Appendix FF,** *Tables 1 and 2*). See also Air Quality Program Policies and Procedures, Air Toxics Program Priority Implementation Policy AQP-5 which is available on K:\AGENCY at K:\AGENCY\AIRGIDE\POLICY\AQP-5.

B. Exemption Levels and the SAAC

(1) NESHAP

Sources subject to 9 VAC 5-60-60 (Rule 6-1) are not exempt from permitting, with the exception of those that are subject only to the reporting and/or record-keeping requirements. Exemption from applicability to the NESHAP should be determined by reviewing the specific sub-part of 40 CFR Part 61.

(2) MACT

Source types subject to 9 VAC 5-60-90 (Rule 6-2) are not exempt from permitting requirements, except for those that are subject only to record-keeping and reporting requirements. Exemption from applicability to the MACT should be determined by reviewing the specific sub-part of 40 CFR Part 63. Currently a review of the MACT as well as state toxics is required for applicable sources.

(3) State Air Toxics

The permit exemption levels for toxic pollutants with established Threshold Limit Values (TLV) are based on hourly and/or annual uncontrolled emissions calculated by the formulas in 9 VAC 5-80-11 I. For toxic pollutants without an established TLV, the exemptions are to be determined by the Board using available health effect information (see Figure 10-1). The Significant Ambient Air Concentration (SAAC) is the concentration of a toxic pollutant in the ambient air that, if exceeded, may have the potential to injure human health. The SAAC is not to be exceeded. The SAAC is calculated by the formulas in 9 VAC 5-50-190.

(A) Source-Specific Exemptions
- (i.) Consumer Products (9 VAC 5-50-160 F)
- (ii.) NESHAP (9 VAC 5-50-160 E.1.a)
- (iii.) Hazardous Waste Incinerators (9 VAC 5-50-160 E.1.b)
- (iv.) Application of Pesticides (9 VAC 5-50-160 G)

(B) Sources with No Exemption (9 VAC 5-80-11 I.7)
- (i.) Incinerators
- (ii.) Ethylene oxide sterilizers
- (iii.) Hazardous waste boilers/furnaces

(C) Boilerplate Procedures- See the Boilerplate Procedures at, \\StreetTalk\Data Files@RCHMD.12@Servers\agency\BP_REVW\PRO\,

PROCESS/POLLUTANT	COMMENTS	SEE
BOILERS-GAS & DIST OIL <100 MBTU/HR	GENERALLY NOT NECESSARY	NG-DO.PRO
BOILERS-RESIDUAL OIL <100 MBTU/HR	MAY EVALUATE BERYLLIUM, COPPER, FORMALDEHYDE, NICKEL, VANADIUM	RES-OIL.PRO
BOILERS-WOOD <100 MBTU/HR	EVALUATE BENZENE, FORMALDEHYDE, NAPHTHALENE, PHENOL	WOODBOIL.PRO
COATINGS	TAKE INTO ACCOUNT PHYSICAL LIMITATIONS ON CAPACITY	MISCCOAT.PRO

C. Estimating Emissions – Uncontrolled and Potential Emissions

(1) Uncontrolled Emissions. The permitting exemption levels for hourly and annual uncontrolled emissions are calculated using the formulas in 9 VAC 5-80-11 I. Uncontrolled emissions are based on operating without air pollution control equipment at maximum design capacity.

(2) Potential Emissions. The potential to emit of a source is evaluated when determining the applicability of 9 VAC 5-50-160. Hourly and annual exemption levels are calculated using the formulas in 9 VAC 5-50-160 D. The potential to emit of the source should be compared to these exemption levels in determining rule applicability. Potential to emit takes into account permit conditions and air pollution control equipment. If potential to emit is less than the toxics exemption level, but uncontrolled emissions exceed the exemption level, then operational limits, not emissions limits, should be placed in the permit.

Example10-1
A permit application calls for installation of a baghouse on a process, which emits cadmium. The permit exemption levels for cadmium are 0.0033 lb/hr and 0.00725 tpy. Uncontrolled emissions of cadmium (without the baghouse) are calculated to be 0.01 lb/hr and 0.02 tpy; therefore, the process must be permitted. Once the permit is written and the baghouse is required, potential to emit becomes 0.0001 lb/hr and 0.0002 tpy. Cadmium emissions are neither modeled nor included as an emission limit. However, permit conditions should require the baghouse and specify removal efficiencies (if applicable) or other relevant operating parameters.

D. Procedures for Calculation and Modeling

The agency exempts from modeling requirements any emissions unit(s) with potential to emit less than exemption levels in 9 VAC 5-50-160 D. If those exemption levels are exceeded, then modeling should be conducted.

(1) Determining the SAAC

Each pollutant has an hourly SAAC or a combination of an hourly and an annual SAAC. Compliance must be shown for both, if both exist. The SAAC values to be met are as follows:

(A) A one-hour SAAC of 1/40 of the TLV-Ceiling limit for substances with a TLV-Ceiling limit;

(B) An annual SAAC of 1/500 of the TLV-TWA and a one-hour SAAC of 1/40 of the TLV-STEL for substances with both a TLV-TWA and a TLV-STEL; and

(C) An annual SAAC of 1/500 and a one-hour SAAC of 1/20 of the TLV-TWA for substances with only a TLV-TWA.

See **Appendix FF,** *Tables 1 and 2* for priority pollutants and their calculated SAAC.

E. MACT Standards and Minor NSR Permitting (Proposed Regulation)

F. Toxics Control Technology Review (Proposed Regulation)

G. Section 112(g) Case-by-Case MACT Determinations in NSR Permitting

(1) 112(g) Background

On July 16, 1992, EPA published an initial list of source categories for which air toxics emissions standards are to be promulgated. By November 2000, EPA must develop, for all these categories, rules that require the maximum achievable reduction, considering cost and other factors. These rules are generally known as " Maximum Achievable Control Technology" (MACT) standards.

In developing the 1990 Amendments to the Clean Air Act (the Act), Congress recognized that EPA could not immediately issue MACT standards for all industries; thus there was a potential for significant new sources of toxic air emissions to remain uncontrolled for some time. Congress also recognized that,

in general, it is most cost-effective to design and add new air pollution controls at the time when facilities are being built or significantly rebuilt.

As a result, Section 112(g) of the Act requires MACT-level control of air toxics when a new major source of any hazardous air pollutant (HAP) is constructed or reconstructed. The source with DEQ assistance must determine "new source MACT" for the source on a case-by-case basis when EPA has not yet issued a final (not proposed) MACT standard for that source category, even if that particular industry is not listed on the Section 112(c) Source Category List (see EPA toxics website for current list, http://www.epa.gov/ttn/uatw/). The MACT emission limitation for a new source is defined as the limitation that is not less stringent than the emission limitation achieved in practice by the best controlled similar source, and that reflects the maximum degree of reduction in emissions that DEQ (taking into consideration the cost of achieving such emission reduction, and any non-air quality health impacts, environmental impacts, and energy requirements) determines is achievable by the newly constructed or reconstructed major source.

On December 27, 1996, EPA promulgated regulations implementing certain provisions in Section 112(g) pertaining to construction and reconstruction. However, the provisions pertaining to modifications under section 112(g) were not promulgated. The DEQ permitting regulations for 112(g) sources can be found at 9 VAC 5-80-1400 et seq.

(2) Applicability

Effective June 29, 1998, all owners or operators of major sources of HAPs that are to be constructed or reconstructed in Virginia will be required to install "new source MACT."

(A) □ Construct a Major Source " . means:

(1) To fabricate, erect, or install at any undeveloped site a stationary source or group of stationary sources that is located within a contiguous area and under common control and that emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs; or

(2) To fabricate, erect, or install at any existing site a new discrete process or production unit in which the collection of equipment or structures produces an intermediate or final product independently, in substantial degree, from the existing equipment or structures and that emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs (see applicability

examples below), unless the process or production unit satisfies the following criteria:

(a) All HAPs emitted by the process or production unit that would otherwise be controlled under the requirements of this subpart will be controlled by the emission control equipment that was previously installed at the same site as the process or production unit; and

(i) The Department has determined within a period of 5 years prior to the fabrication, erection, or installation of the process or production unit that the existing emission control equipment represented best available control technology (BACT) or lowest achievable emission rate (LAER) under 40 CFR Part 51 or 52; or

(ii) The Department determines that the control of HAP emissions provided by the existing equipment will be equivalent to that level of control currently achieved by other well-controlled similar sources (i.e., equivalent to the level of control that would be provided by a current BACT or LAER determination); and,

(b) The Department determines that the percent control efficiency for emissions of HAPs from all sources to be controlled by the existing control equipment will be equivalent to the percent control efficiency provided by the control equipment prior to the inclusion of the new process or production unit; and

(c) The Department has provided notice and an opportunity for public comment concerning its determination that criteria in paragraphs (a), (b), and (c) above apply, and concerning the continued adequacy of any prior LAER, BACT determination; and

(d) If any commenter has asserted that a prior BACT or LAER determination is no longer adequate, The Department has determined that the level of control required by that prior determination remains adequate; and

(e) Any emission limitations, work practice requirements, or other terms and conditions upon which the above

determinations by the Department are applicable requirements and either have been incorporated into any existing Title V permit for the affected facility or will be incorporated into such permit upon issuance.

SAMPLE APPLICABILITY DETERMINATIONS

Example 10-2.

At a plant that manufactures fiberglass reinforced plastic boats, the owners wish to add more spray guns to an existing fabrication line to supplement the existing spray guns in laminating a particular model of boat hulls. The new spray guns will have a PTE greater than 10 tons/year HAP.

In this example the fiberglass hull is considered the intermediate product in the manufacture of the final product (complete boat). The structures and equipment needed to manufacture the final product, in this case, include the existing spray guns and other operations in the building (e.g. the lamination operation and other supporting equipment) that typically are found in the production of boats. Since the new spray guns do not in and of themselves produce the intermediate product, they are not considered a process or production unit that is subject to review under 112(g).

Example 10-3

From example 10-2, assume that the owner adds more spray guns to laminate a second model of boat hulls. The room is large enough to accommodate two lamination lines at the same time. The new spray guns have a PTE greater than 10 tons/year HAP.

The same rationale as 10-2 applies. The collection of equipment needed to produce the boat hull includes the lamination process as well as the gel coat process. Since the addition of the second lamination line does not produce an intermediate product, if no additional laminating or other essential equipment were added it would not be subject to 112(g) review.

Example 10-4

Using example 10-3, a gel coat spray booth and supporting equipment needed to manufacture the boat hulls are added in addition to the spray guns. The process and production unit in this case is the set of equipment that consists of the gel coat spray booths, the spray guns and the supporting equipment. This new set of equipment can operate alone and produce an intermediate product. As a result all sources of HAP (booth, guns, laminating room) are subject to 112(g) review.

Example 10-5
An aluminum reduction plant has several potlines, which manufacture aluminum. Each potline consists of between 100 and 200 electrolytic reduction cells "pots" that are connected together in series electrically to complete a circuit. Each pot produces molten aluminum. The company wishes to add more pots on each line. The additional pots will result in a major increase in emissions.

Although each individual pot contributes to the production of the aluminum, the separate pots are not considered discrete process or production units in that they cannot operate independently (they are both functionally and physically interconnected and unable to function alone). The individual pots are not subject to 112(g) review

Example 10-6
Assume the facility from example 10-5 adds a new potline, which is major for HAPs. The entire potline is considered the collection of structures and equipment that produces an intermediate product (molten aluminum). The potline is subject to 112(g) review. Also note the potline is an example of a process or production unit that is part of a larger production unit, the aluminum production plant.

Example 10-7
At an automobile assembly paint shop, three coating steps, primer, surfacer and topcoat, are used to paint the automobile body. Another parallel topcoat step is added to the existing topcoat step. Both topcoat steps then feed back into a bake oven. The new topcoat step will be a major source of HAP.

The new topcoat line would not be subject to 112(g) review. The intermediate product in this case is the painted automobile body. The top coating step cannot take place without the preceding primer and surfacer steps and the supporting infrastructure.

(B) "Reconstruct a Major Source" means:

(1) The replacement of components at an existing process or production unit that in and of itself emits or has the potential to emit 10 tons per year of any HAP or 25 tons per year of any combination of HAPs, whenever:

(a) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable process or production unit; and,

(b) It is technically and economically feasible for the

reconstructed major source to meet applicable MACT emission limitations for new sources established under this subpart.

(3) Exclusions

(A) The source is specifically regulated or exempted from regulation under a standard issued pursuant to Section 112(d), Section 112(h), or section 112(j), and incorporated in another subpart of 40 CFR Part 63; or

(B) The owner or operator of the major source received a permit for the construction or reconstruction project prior to June 29, 1998 or the source was constructed or reconstructed before June 29, 1998.

(C) Electric steam generating units, unless these units are added to the Section 112(c)-source category list.

(D) Stationary sources that are within a source category that have been deleted from the Section 112(c)-source category list.

(E) Activities conducted at a research laboratory facility whose primary purpose is to conduct research and development into new processes and products, where the source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner.

(F) The re-allocation of allowable HAP emissions at a facility if there is no construction or reconstruction.

(4) Permitting Steps

(A) Once applicability under 9 VAC 5-80-1400 has been determined, the source should submit its recommended MACT emission limitations and requirements to the regional office for approval. The MACT emission limitation and control technology recommended by the applicant must be approved by the Regional Office, with assistance as needed from OAPP. The recommended limitation must not be less stringent than the emission limitation achieved in practice by the best- controlled similar source. It must reflect the maximum degree of reduction in emissions that the Department, taking into consideration the cost of achieving such emission reduction, and any non-air quality health impacts, environmental

impacts, and energy requirements determines is achievable by the newly constructed or reconstructed major source.

(1) When determining the MACT emission limitation or agreeing to the recommendation by the source, the Department should consider any relevant proposed MACT standard or presumptive MACT determination. The EPA 112(g) website provides information on the program as well as a 112(g) clearinghouse. Final MACT determinations must be submitted to EPA region III and will be placed in the clearinghouse database.

(2) Should a MACT standard be promulgated after a case-by-case determination has been made, the source will have 8 years to come into compliance with the newly developed standard if it is more stringent than the new case-by-case determination.

(B) Public participation is required for all permit actions involving section 112(g) sources. (See **Chapter 12**, section **A**).

(C) Notification to other states is required as part of the public participation process. See **Chapter 12**, sections **A.** and **E.**

(5) Timeline.

(A) The permit writer must notify the source of the status of the application in writing within 45 days (9 VAC 5-80-1450 A).

(B) Within 30 days of receipt of additional information, the permit writer must notify the applicant of any additional deficiencies (9 VAC 5-80-1450 A).

(C) Processing time is normally 180 days after the application is deemed complete (9 VAC 5-80-1450 B).

(D) Optionally the following steps may be taken prior to public participation:

(1) Notification in writing to the source of disapproval of the application within 30 days after the source receives written notice of completeness of application.

(2) The applicant has 60 days to respond in writing after receiving notification of disapproval.

(3) The engineer must either initially approve or issue final disapproval of the application within 90 days after notification of intent to disapprove or within 30 days of receipt of additional information, whichever is earlier.

Chapter 11

Permit Conditions

A. Practical Enforceability

The permit must specify how compliance is to be determined, both initially and over time. If a permit is not enforceable, or it is unclear in its requirements, it could cause confusion and complications for enforcement/compliance personnel and for the source. The initial compliance determination occasionally takes the form of an emissions (stack) test which may also include a visible emissions evaluation (VEE). In most cases involving sources of particulate emissions, the VEE alone is sufficient to show compliance. In many cases no check on initial compliance is required. In all cases, record-keeping is required as part of compliance determination. These records may include annual throughput of product, fuel consumption, and calculations of total and speciated HAP emissions from coating operations on an hourly or annual basis. Hourly records can be required, generally only when there is the possibility of a SAAC being exceeded at maximum hourly production levels. In some cases, continuous emissions monitoring (CEM) is required to demonstrate initial as well as on-going compliance. Monitoring and record-keeping requirements in a permit should be pegged to the averaging periods for the underlying applicable requirements with which compliance is being tracked.

B. Permit-Specific Conditions

As a general practice, all of the requirements specified in a permit should include citations to the underlying regulatory authority. New source review permits may, and normally do, indicate that the facility is to be operated as described in the application except as the permit otherwise indicates. NSR permit-specific conditions include:

(1) Reference to the permit application and supporting materials. The first permit condition refers to the permit application and should list, by date, all revisions and amendments to the application. When a permit supersedes an existing permit, the application for the original permit, and any amendments, should be listed as well as the current application and any revisions it may have. If the most recent application covers the entire source, then only the most recent application needs to be included in an amended permit.

(2) Equipment listing and identification. The second permit condition lists the equipment covered by the permit. This is simple in the case of a new source, but more complex when adding a new emission unit, otherwise modifying an existing source, and/or superseding an existing permit. Each

emission unit should be listed as described in the application with sufficient detail to distinguish it from other emission units. Using reference numbers from the application can add clarity. It may be helpful to group the equipment into*: equipment to be added, equipment to be modified, existing equipment to be removed, and existing equipment to remain*, especially when modifying an existing source or superseding an existing permit. It is also important to demarcate which equipment is subject to NSPS, MACT, or NESHAP requirements in this listing. The equipment listing may be as detailed as necessary to facilitate later inspection of the facility and delineate the responsibilities of the permit holder. The equipment listing provisions in the permit are the only ones which do not require a reference to the regulations; all other conditions must have a specific regulatory basis.

(3) Control technology limitations (BACT, MACT, etc.)

(A) *Control measures.* The next series of conditions usually specify the required control measures, if any, for each emission unit and/or each pollutant. Both the type and level of control must be clearly specified. A measure of the operational status of the control equipment needs to be specified as well; examples would include: differential pressure, flow rate, and combustion temperature. When a meter or device is needed to monitor these it should be noted how often the device should be recorded and whether it should be continually recorded.

(B) *Continuous Emission Monitors/Continuous Opacity Monitors (CEMs/COMs).* If CEMs/COMs are required by a MACT standard, an NSPS, or a BACT determination, the permit must specify which ones are required, where they are required, and what standards must be met.

(4) Emission and Operational Limitations.

(A) *Emission limits.* An emissions limit is needed for each criteria pollutant which is emitted at more than 0.5 tons per year. Limits may also be needed for each emission unit. At a minimum, a short-term and long-term limit are required. The short-term limit can be in pounds per hour, grains per dry cubic standard feet, pounds per million Btu or any other appropriate measurement. The short-term limit should represent the maximum hourly emission rate and is usually important for the state toxics review and when stack testing is required. The long-term limit should represent maximum allowable annual emissions and is used mainly for inventory purposes and compliance with major source regulations. The annual limit should not normally be the hourly limit multiplied by the maximum operating hours, but the limit based on the annual throughout/production or other measurable limiting factor.

(B) *Multiple permit conditions addressing one pollutant.* When multiple conditions are used to limit the same pollutant, they frequently conflict. The permit writer should decide what has to be limited, review the options available, and select the best limit (typically the most stringent), rather than imposing every limit that can apply. This decision should be documented in the Engineering Analysis.

(C) *NSPS/NESHAP/MACT Limits.* If a New Source Performance Standard (NSPS) or a National Emission Standard for Hazardous Air Pollutants (NESHAP) or a Maximum Achievable Control Technology requirement (MACT) is involved, it may also be necessary to include rate or concentration limits. The pollutant, averaging period and unit of measure may all be specified in the NSPS, NESHAP, or MACT. For instance, boiler and furnace NO_x, CO and SO_2 limits are specified in terms of pounds per million Btu and internal combustion engine emissions are specified in terms of grams per brake horsepower-hour. If the NSPS, NESHAP, or MACT specifies an unusual averaging period, such as 3, 8, or 24 hours, it must be reflected in the limit.

(D) *Opacity and visible emissions limits.* Most permits also include a limit on opacity and require a visible emissions evaluation. Frequently, the opacity limit is specified in a NSPS. Justification is required for opacity limits that are more stringent than what is required in 9 VAC 5-50-60 (Rule 5-1) (20 percent opacity except for one six-minute period of not more than 30 percent). For example, if NSPS or BACT requirements for a facility require a lower opacity limit than 20%, that would become the limit.

(E) *Operational limits.* Operational limits are often placed on process parameters as well as emissions. When limits are placed on process parameters, the parameter is being used as a limiting factor for a pollutant, or in a way to calculate the emissions. Some operating parameters that may be limited are hours of operation, material throughput, type of material, fuel usage and production rates. Process parameters should only be limited when they have a direct impact on a pollutant being regulated. As an example, limiting operating hours has little benefit when emissions are not produced at a constant rate; emissions from a boiler are a typical case. Limiting fuel consumption of the boiler gives a more accurate estimate of the emissions than would a limitation on the operating hours.

(5) Testing. If testing is required, the permit must specify which pollutants to test for, the conditions under which the test should be conducted and the appropriate test method(s). It is acceptable to allow the source to use another method, with

approval. If the testing is specified in an NSPS or NESHAP, however, approval to deviate from the specified method must be obtained through the Office of Air Permit Programs (OAPP) or the EPA. Care must be used in specifying and approving VOC test methods. The VOC test methods are not all equally appropriate under all conditions. With destruction technologies for the removal of pollutants, it is also important to note whether the emissions, the control efficiency, or both are to be measured by the testing.

(A) *Stack tests.* The decision on whether a stack test will be required of a new or modified source is dependent upon the Regulations and case-by-case determinations. This is true especially for minor sources since testing is an expensive undertaking and may be burdensome to small sources. Some minor sources may be required to have a stack test under special circumstances such as verification of toxic emissions that need to be quantified. Stack testing protocols may be required for method applicability review.

(B) *NSPS testing time frame.* If a source is subject to NSPS requirements or to 9 VAC 5-50-10 et seq., the facility will have 60 days from achieving maximum production but no later than 180 days from startup for all testing and reporting to the EPA, unless otherwise noted in the specific NSPS subpart.

(C) *Additional precautions.* The general provisions of the NSPS and MACT rules (40 CFR Part 60 and 40 CFR Part 63, respectively) establish many specific requirements associated with testing. The permit writer should review these sections before writing the testing requirement into the permit.

(D) *Test format.* If an emission test is required, a Source Testing Report Format must be attached (see **Appendix R**). The permittee must submit a test protocol for the Department's approval prior to performing the actual testing. The permittee must notify the appropriate Regional Office of the testing schedule in advance.

(6) Reporting requirements. Reporting requirements are usually included in the permit, and may include reporting to both DEQ and the EPA. Usually the start of construction, the start of production, and the dates of any testing need to be reported to the DEQ. What needs to be reported to the EPA will depend on the NSPS subpart or the MACT standard to which the source is subject. The general provisions sub-parts of the NSPS or the MACT standard must be reviewed for their requirements with respect to notification and reporting.

(7) Record-keeping requirements. Record-keeping requirements in the permit assist enforcement personnel in determining compliance with the permit

conditions established for the plant. Elements of this part include but are not limited to continuous emissions monitoring data, process operating parameters such as process rates, control equipment operating parameters such as gas flow rate, temperature, pressure drop, reagent injection rate, and records of equipment or work practice standards. The permittee must submit a compilation of these records, as applicable, to the Regional Office.

(A) *Averaging periods.* Record-keeping is used to demonstrate compliance, so the averaging period used must coincide with the limit being enforced and the records must be taken in a corresponding interval. For annual limits to be federally enforceable, they must be computed at least monthly, as the sum of the preceding twelve months. The boilerplate generally states: *Annual throughput of fuel, calculated monthly as the sum of each consecutive 12-month period.*

(B) *Record-keeping detail.* The permit should specify what records should be kept by the source, for how long and that they should be kept on site. The permit should also specify what reports should be submitted, whom to submit them to, and how often. Some reporting is specified and required in the NSPS and NESHAPS. Remember to check the requirements of NSPS Subpart A, as well as the specific subpart.

C. General Conditions

General conditions include, but are not limited to: right of entry, permit kept at the facility, change of ownership, permit invalidation, registration update, and the time limit to commence modification or construction. Also, the general conditions usually include malfunction reporting, and requirements for keeping an inventory of spare parts for air pollution control equipment. These conditions rarely require many changes to fit the specific facility, however not all of them will necessarily be appropriate. These conditions will generally be at the end of the permit, and are included in the boilerplate.

D. Boilerplates

Boilerplates have been developed in order to provide consistency and timeliness in permitting. The boilerplates contain general conditions that are standard in all permits as well as conditions specific to certain source types. Bracketed conditions contained in the boilerplates are considered optional. They are not to be used with all sources. The most recent version of an appropriate boilerplate should be used. While boilerplates do not and cannot cover every possible situation, it is easier to use a boilerplate and carefully modify its language than to craft a new permit condition from scratch. Boilerplates are generally kept on K:\AGENCY\BP_REVW, and if you download them onto a local drive, you should frequently check that you still have the most recent

versions. Boilerplates should be frequently updated to stay current with all changes in regulations and interpretation. 1SKEL.CND contains the current skeleton boilerplate containing all of the standard conditions. Other boilerplates, including 1GENERIC.CND, contain conditions that can be used (as appropriate) for all of the sections mentioned in this chapter. The specific boilerplate is inserted into the skeleton boilerplate to create a starting document which is merged with the appropriate source-specific information and then tailored to fit the source.

At the time of promulgation of this Manual, the CEDS will include permit boilerplate conditions.

Chapter 12

Public Participation

Introduction

This chapter describes the public participation rules and practices applicable to minor new source review permits, with some reference to differing requirements for state major new source review permits. Public participation means the advertisement of a pending permit issuance in newspaper notices and other notification requirements, receipt of written comments from the public, and the holding of public hearings where required to hear oral comments from the public.

A. Minor NSR Requirements

(1) Applicability of public notice and hearing requirements. A new source review permit requires public notice and a public hearing in any of the following situations (9 VAC 5-80-10 G.4.):

(A) if the source is a "state major" (as defined in section **C.** below);

(B) if the source "has potential for public interest" as defined in section **B.** below (see 9 VAC 5-80-10 G.4.c.(1) through -G.4c.(4));

(C) if the source emits hazardous air pollutants (HAPs) that make it subject to a NESHAP requirement (Title 40, Code of Federal Regulations (CFR), Part 61); see 9 VAC 5-80-10 C.1.b. as well as 9 VAC 5-80-10 G.4.a.);

(D) if the source is a HAP source subject to a MACT requirement (40 CFR Part 63); or

(E) if the source is to be subject to permit provisions based on GEP stack heights exceeding those allowed by paragraphs 1 and 2 of the GEP definition (see 9 VAC 5-10-20). (In such a case, the demonstration required by paragraph 3 of that definition must be available for public review during the public comment period.)

(2) The public notice requirement. "State major sources," as defined, are subject to two public notice requirements. The first, undertaken by the source, gives a brief notice of the permit action following the Department's notification to the source of application status. The second is the notice of hearing, written by the

regional office for the source categories in sub-section **A.**(1) above. See section **E.**, below, for details.

(3) Public hearing requirements. See section **F.**, below.

(4) Public briefing. The Department recommends a public briefing for all permits requiring a public hearing. The public briefing is usually arranged for a time just before the public hearing is held, and in the same place as the public hearing. The Department makes the presentation at the briefing and answers questions; the source assists by addressing questions. The applicant may hold a public briefing before the hearing, by agreement with the Department, or at any other time, if it chooses to do so.

B. Controversial Permits and Public Interest

Public hearings are required for new source review permits in situations where public comment, or other sources of information, may have indicated a controversy, and none of the other criteria for public notice and hearing in 9 VAC 5-80-10 G.4. is met. This section describes the optional early "information session" and the criteria for " public interest."

(1) Information session. A permit applicant may announce an information session in its public notice pursuant to 9 VAC 5-80-10 G.1. The information session should be scheduled for a time and place convenient to people who live in the vicinity of the new facility or modification for which the permit is sought. The applicant typically administers the information session, and regional office staff may attend. The permit file should indicate that the information session was held, but the session itself need not be a matter of record.

(2) Criteria for "public interest." The information session held by the applicant is one way of finding out whether these criteria apply.

(A) "Whether the project is opposed by any person (9 VAC 5-80-10 G.4.c.(1)). "Person" can also mean "business" or "organization" or "government entity."

(B) "Whether the project has resulted in adverse media" (9 VAC 5-80-10 G.4.c.(2)). This means news coverage critical of the project.

(C) "Whether the project has generated adverse comment through any public participation or governmental review process initiated by any other government agency" (9 VAC 5-80-10 G.4.c.(3)). This criterion takes account of such things as environmental impact review at any

level of government; local zoning reviews or hearings; permit proceedings or hearings at any level; etc.

(D) "Whether the project has generated adverse comment by a local official, governing body, or advisory board" (9 VAC 5-80-10 G.4.c.(4)). An advisory body may have particular expertise related to a given area or facility which should be considered. Similarly, a local official or a governing body, elected by the public in the affected area, needs to be taken seriously when he or she (or it) undertakes to express an opinion about the subject of a pending air permit.

(3) Using the criteria for determining "potential for public interest." Where minor sources appear newsworthy or controversial, the following guidelines may be helpful to the regional office in deciding whether to hold a public hearing.

(A) Two or more of the criteria in 9 VAC 5-80-10 G.4.c. (sub-section **B.**(1) above), applied together to a situation, may make the decision easier than if only one of the criteria applies.

(B) Adverse comments in a governmental review process may be instructive on the air quality questions in a permit review, especially if they come from government agencies having some responsibility or expertise relating to air quality.

(C) When doubts remain, decide in favor of public participation and the public hearing. This may delay the permitting process, but the open process and the accommodation of ideas that may result will enhance the legitimacy of the permit.

C. Permit Applications with No Public Participation Requirements

There are three situations in which minor new source review permit actions do not require public notice or public participation. Two of these situations are qualified; the third is not.

(1) Cases in which public participation is not required, if provisos are met.

(A) New "greenfield" sources that are not state majors;

(B) Existing minor sources making modifications resulting in a net emissions increase of less than 100 tons per year of any pollutant.

(2) Qualifiers for the cases not requiring public participation. The two situations above do not require public participation, provided that all four of statements (A) through (D) below are correct:

(A) No standard for hazardous air pollutants applies under 9 VAC 5 Chapter 60; and

(B) The regional office determines that the application does not have "potential for public interest" as described in Section **B.** of this chapter; and

(C) The application will not require a permit provision based on a stack height which exceeds the heights allowed by paragraphs 1 and 2 of the Good Engineering Practices definition in 9 VAC 5-10-20; and

(D) No federal requirement for public participation applies.

(3) Case in which public participation is not required, in any event. Where a source has applied for a permit amendment which does not involve an emission rate increase or result in relaxation of any permit requirement or standard. (See the Air Division Guidance Document APG-96-239, dated August 26, 1996 and signed by John Daniel, at K:\AGENCY\PERGUIDE\MEMOS\96-239.APG.rescission.doc.)

An additional idea for the public participation chapter is to add a provision which covers anticipated situations where a public notice is required but a public hearing is not. The Regulations don't contemplate this. However, some NSPSs might, in cases where they apply but the source is still not subject to the public hearing and notice requirements in 9 VAC 5-80-10 G.4. and –G.5. I would draft a new section, D (to be inserted after the new section C above), as follows.

D. Public Notice, but no Public Hearing Required

There may be cases where a minor NSR permit should be given public notice because of anticipated controversy, because the permit writer or regional office wants the public informed concerning some or all of the permit details, or because an applicable NSPS contains a public notice requirement. The Regulations do not contemplate public notice without also requiring public hearings, and then only for the circumstances enumerated in sub-sections **A**(1)(A) through **A**(1)(E) of this chapter. This section provides for a consistent approach to limited public notice in cases where it is determined to be desirable.

(1) Rationales for public notice but no public hearing. The permit writer, or the regional office, may want to notify the public about the permit for one or more reasons, including but not limited to the following:

(A) The modification or "greenfield source" for which the permit is sought is known or suspected to be controversial;

(B) The public should be informed concerning some or all of the details of the permit. As an example, the source may seek to classify a piece of control equipment as a "pollution control project" (pursuant to EPA's July 1, 1994 guidance memo, "Pollution Control Projects and New Source Review Applicability," found in K:\AGENCY\EPABULL\AIR\ GUIDANCE\PCPGUIDE.WP5).

(C) The source may be subject to an NSPS which has public notification requirements. To the extent such requirements are stricter than the procedures given in this section, they should be followed.

(2) Providing public notice without a public hearing. Take the following steps.

(A) Prepare a notice which includes the following information:

(i) Source name, location, and the nature of the operation and control requirements to be permitted;

(ii) Announcement of the opportunity for public comments to the regional office; give address, deadline for comments.

(iii) The location where the permit application may be reviewed during the public review period;

(iv) The location of other information open to review, including the Department's analysis and preliminary decision on the permit;

(v) Means by which a public hearing may be requested.

(B) Send the notice to at least one general circulation newspaper in the vicinity of the source location.

(C) Optional step: Provide the notice to the public by other means, including but not limited to press release, placement on the DEQ web site (see sub-section **F.**(2)(C)(vi) of this chapter), publication in the Virginia Register

(see sub-section **F.**(2)(C)(v) of this chapter), provision to a public library, etc.

(D) At the end of the comment period stated in the notice, review the comments and prepare written responses to substantive comments. Whether and to what extent the permit requires revision depends on the nature of the source and of the comments, as analyzed by the regional office. Similarly, the regional office determines whether a request for a public hearing will be granted, using the criteria from other permit program rules (i.e., significant public interest and substantial, disputed air quality issues; see 9 VAC 5-80-270 E.3. or 9 VAC 5-80-1020 D.) The next step will be one or more of the following:

(i) Develop a comments and response document and make it available to the public when asked, or by way of another public notification;

(ii) Revise the permit if necessary in light of the comments received and any further analysis thereof;

(iii) Issue the permit;

(iv) Decide whether to hold a public hearing. If one is held, proceed as in section **I. Public Hearing**. If not, prepare a public notice, or a letter to the seeker(s) of the public hearing, to explain why not.

E. State Major Sources

"State major sources" are one of the categories of sources for which 9 VAC 5-80-10 G requires public participation.

(1) Definition. While "state major" is not defined as such anywhere in the Regulations, it is used to mean a source of criteria pollutants with a potential to emit that is 100 TPY or more, but that does not qualify as a PSD source or a non-attainment major source. It is one of the criteria warranting public notice and hearing for new source review permits; see 9 VAC 5-80-10 G.4.b.

(2) Consequences of "state major" status. Public notice and a public hearing are required as pre-requisites to the issuance of a new source review permit to a state major source.

(3) "State major" examples. Examples of state majors, for purposes of public comment periods and public hearing requirements, are:

(A) New sources with PTE of 100 TPY or more; and

(B) Modifications to minor sources with net emission increases of 100 TPY or more.

(See 9 VAC 5-80-10 G.4.a. and –G.4.b.)

F. Public Notification

As indicated in sub-section **A.**(2) above, there are two types of public notice in new source review. The shorter version, written by the applicant and subject to the Department's approval, is required for state major sources and major modifications following the applicant's receipt of initial notification from the Department. The longer version, written by the Department, is required for several source categories after the Department has prepared a draft permit. Table 12-1, presenting the comparison between these types of notice, appears in sub-section **D.**(3) below.

(1) Applicant's public notification.

(A) Required for state major sources as defined in 9 VAC 5-80-10 G.1. (See sub-section **C.**(3) above (see sub-section **C.**(3) above).

(B) The applicant prepares this notice within 15 days following its receipt of the Department's initial notification, and submits it to the Department's regional office for approval.

(C) Following approval, the applicant provides this notice to at least one general circulation newspaper in the region where the source is located, or to be located.

(D) The notice must include at least the following elements (9 VAC 5-80-10 G.2):

(i) source name, location, and type;

(ii) identification and quantification (estimates) of pollutants to be emitted, and their impact on ambient air quality;

(iii) proposed control technology;

(iv) name and telephone number of a contact person for the applicant.

(2) Department's public notice.

(A) Required for the categories of sources listed in sub-section **A.**(1) above (see also 9 VAC 5-80-10 G.4.). Note that these include state majors.

(B) The regional office prepares this notice once it has completed its review and analysis of the application and drafted a permit, but before a public hearing is held or the permit issued.

(C) The notice should be sent to the following (9 VAC 5-80-10 G.5.):

(i) at least one general circulation newspaper in the region where the source is located, or to be located;

(ii) local air pollution control agencies with State Implementation Plan responsibilities. Note: the only such agencies in Virginia are in the jurisdiction of the DEQ Northern Virginia Regional Office.

(iii) states sharing the affected air quality control region (see **Appendix S** for the addresses);

(iv) EPA Region III (see **Appendix T** for the address);

(v) the DEQ Office of Policy and Legislation, for submission to the Virginia Register (this submission requires use of Form RR06, available from that Office or from the Registrar of Regulations);

(vi) the DEQ Office of Public Affairs, for posting on the DEQ web site; and

(vii) in cases where the source is located within 100 kilometers (62.14 miles) of either the James River Face Wilderness Area in the Jefferson National Forest or the Shenandoah National Park, the appropriate Federal Land Manager (see **Appendix U** for these addresses). This commitment carries out provisions of Memoranda of Understanding which the Department of Air Pollution Control, the predecessor agency to the DEQ Division of Air Programs Coordination, signed with both the U.S. Forest Service (for the James River Face Wilderness Area) and the

National Park Service (for Shenandoah National Park) in early 1993.

(D) The notice must include at least the following information elements (9 VAC 5-80-10 G.5):

(i) the opportunity for public comments, in writing and at the public hearing, and also by e-mail (include mail and e-mail addresses of the agency, and the requirement that a writer of e-mailed comments must provide name, phone number, and address);

(ii) the date, time, and location of the public hearing to be held (this date must be at least 30 days after the publication of the public notice);

(iii) the date, time, and location of the optional public briefing (for state major sources and major modifications) which precedes the public hearing;

(iv) the location where the permit application may be reviewed during the public comment process;

(v) the location of other information open to review, including the Department's analysis and preliminary decision on the permit;

(vi) the deadline for comments on the application and the recommended permit decision (the deadline date must be at least 15 days after the public hearing for state majors and major modifications; it may be as of the end of the hearing for other sources); and

(vii) (if desired) restrictions pertaining to the conduct of the hearing, such as time limits for speakers.

In cases where the type of source is other than a state major, the Department's public notice should also include the four components listed above in sub-section **D.**(1)(D).

(3) Comparison of public notification requirements for new source review. Table 12-1 provides a handy comparison between the two public notification requirements described above.

Table 12-1. Public Notifications Comparison

Requirement	Applicant's Public Notice	Department's Public Notice
Who writes the notice	Applicant, subject to Department approval	Department (regional office)
Source categories requiring public notice	state majors	state majors
	major modifications (included within "state majors" definition)	major modifications (included within "state majors" definition)
		NESHAP sources
		MACT sources
		sources with the "potential for public interest" (i.e., controversy)
		sources with stack heights exceeding allowable heights in GEP definition ...
Timing of public notice	within 15 days after receiving Initial Notification	after permit drafted, before public participation
Contents	name, location	name, location*
	pollutants/impact	pollutants/impact*
	control technology	control technology*
	contact person	contact person*
		comment opportunity
		briefing date, time, place
		hearing date, time, place
		info on application
		info on analysis, recommended decision
		comment deadline

*These elements go into the public notice by the Department in cases where there was not a public notice by the applicant, i.e., in cases other than state majors.

G. Public Briefings

Public briefings fall into two categories. First, a permit applicant may hold a public briefing at any time. Secondly, the Department recommends a public briefing be held just before the public hearing for state major sources and other sources requiring a public hearing (9 VAC 5-80-10 G.4.). This section addresses the second type of public briefing. The Department recommends that regional offices conduct public briefings just before public hearings, for "state major" sources and any other permit actions that require public hearings. Regional offices may also hold a public briefing at any other time at their discretion. As with the information session, the public briefing is not a

matter of record, although permit files should indicate that it was held.

(1) Procedures. A hearing officer and a permit writer from the regional office conduct the briefing. The applicant's role is to be prepared to assist the regional office in answering questions; the applicant may want to prepare a presentation of facts concerning the proposed project (see **Appendix V**). At a minimum, the source should be instructed to provide qualified personnel to answer questions concerning the proposed facility or modification. However, the briefing is to be run by the Department, and is to be focused on air quality issues. Reliance upon the applicant is to be avoided.

(2) Required information. The information provided in the briefing may include, but is not limited to:

(A) information on pollutants and the estimated total quantity of each that will be emitted;

(B) proposed control technology;

(C) relevant source information taken from the public notice.

(D) results of air quality analysis, if any;

(E) assessment of air quality impacts of the source;

(F) permitting procedures, requirements, and limitations.

H. Public Hearing

Public hearings must be advertised and conducted in accordance with these procedures. Public hearings are required if the pre-requisites are met, whereas public briefings are held at the discretion of the regional office. See **Appendix W** for a copy of the DEQ Policy on public hearings. An informal guideline on their conduct and preparation appears in **Appendix X**.

(1) Public notice and advertisement. As indicated above (sub-section **E.**(2)(C)(i)), public notice of the hearing is to be provided in a newspaper of general circulation. The notice must be published at least 30 days before the date of the public hearing (9 VAC 5-80-10 G.5.).

(2) Time of the public hearing. It is recommended that the public hearing (and briefing, if one is scheduled with the hearing) be held in the evening hours so as not to interfere with the working hours of citizens who may wish to attend the hearing.

(3) Conduct of the public hearing. DEQ staff people conducting public hearings should be well-informed concerning the source, the facilities to be constructed or modified, and the nature of the permit that is the subject of the hearing. It is recommended that regional office staff prepare for the hearing by discussing, amongst themselves, situations that may arise, particularly in the case of "high-profile" projects.

(A) *Hearing officer.* The hearing officer, who is the regional director or designated staff person, administers the public hearing.

(B) *Agenda.* The hearing officer should announce, and then abide by, an agenda. A sample agenda follows:

(i) Brief description of the source or modification and main features of the permit, for the benefit of people who missed the briefing (or if there was none). This should take about five minutes and may be delegated to DEQ staff and/or source personnel. A sample opening statement by the Department appears in **Appendix Y**; a sample fact sheet by the applicant appears in **Appendix V**.

(ii) Public comments: speakers may sign up to speak, and should be called on in the order in which they signed up, except that elected officials should be allowed to speak first.

(iii) Announcement by the hearing officer of the deadline for submission of written comments (normally 15 days after the hearing).

(iv) Adjournment of the hearing.

(C) *Restrictions.* The hearing officer may set reasonable restrictions on the time allowed for each speaker's comments. For example, many public hearings have limits of three minutes for an individual speaker and five minutes for a speaker representing an organization. These restrictions may be published in the public notice if desired (see sub-section **E.**(2)(D)(vii) above).

(D) *Transcription.* Regional office or Department staff should keep a record of what is said at the hearing. One or more of the following methods is acceptable:

(i) written notes;

(ii) audiotape of the hearing;

(iii) court reporter or other stenographer making a transcription of the hearing.

I. Incorporating Public Comments

Regional staff must consider written comments and comments delivered at the public hearing in determining whether and how to revise new source review permits. The Department must respond to all comments. Because the comments and the responses are a matter of public record, they must both be made available to the public after the public review period.

(1) Comments and responses. Depending on the circumstances, there are at least two ways to make public comments, and the reply of the Department, a matter of public record:

(A) *Individual responses.* The regional office may choose to make individual responses to the written and/or spoken comments received. In such case, each commenter receives a letter responding to her or his comment(s). The letters are public information and may be requested by anyone; they should, in any case, be shared with EPA and the source. (See **Appendix Z** for an example.)

(B) *Comments and responses document.* In a permit action involving a large number of comments, the Department may benefit itself and the public by preparing a "comments and responses" document. This document reprints or paraphrases all the comments (minus any repetition), organizes them as appropriate, and develops replies to each. This document is then mailed to all commenters, and becomes available to the source, EPA, and the public as well. This approach allows the Department to answer each comment once, rather than reprinting or repeating answers when comments are repeated. It also ensures a common knowledge of all of the comments and responses.

(2) Incorporating the comments. While the Department must respond to all comments, it is normally not obligated to incorporate what it learns from public comments into any permit. However, if a technical error is attributable to the Department, the regional office should correct the error in the final version of the permit.

J. Reviewing the Revised Permit

A permit that is revised on account of the comments received during the public review may need additional public review before its issuance. If the comments on a permit are limited to insignificant matters such as a spelling or typographical error (which does not change the meaning of the permit), then those matters may be remedied and the permit

issued without further notice to the public. Otherwise, the regional office must decide whether to put the revised permit out for another round of public review, possibly including a public hearing. Some guidelines follow.

(1) When permit terms are made more stringent because of public review. If the public review and the Department's analysis resulted in revision of permit terms to make them more stringent, the permit engineer should notify the source. ("More stringent" means more frequent or more extensive monitoring or record-keeping; more frequent reporting; or lower limits on emissions, throughput, fuel use, or operating hours.)

(2) When permit terms are made less stringent. If the permit terms were made less stringent after the public review than they were before, it may be necessary to send the permit out for another public comment period.

(A) *Regional office decision.* Whether this is necessary is a regional office decision, which is made in consultation with the central office.

(B) *Decision criteria.* Factors to consider in making this decision include, but are not limited to, the permit requirements involved. For example, relaxing a record-keeping requirement is probably (but not necessarily) less apt to require a new public review than relaxing an emissions limit or operating restriction, or determining that a control technology no longer applies.

(C) *Document the decision.* The permit engineer should document a determination not to conduct additional public review in the engineering analysis, so that the permit files show why the additional public review was not offered when the permit terms were relaxed. (A decision in favor of additional review will, of course, produce its own documentation because of a new public notice, comment and response effort, and possibly public hearing.)

Chapter 13

Permit Issuance

A. Signature Authority and Document Distribution

(1) Permit Signature Authority. Most permit actions are signed by the Regional Director or another person in the regional office. The chart which follows depicts the authority of different individuals in this regard.

A. Table 13-1. Permit Signature Authority

Permit action	**Signed by...**	**If person to the left is not present, then signed by...**	**If person to the left not present, then signed by...**
Minor new source review permit	Regional Director (RD)	Regional Permit Manager (RPM)	Air Permit Manager (APM)
Major new source review permit	RD	RPM	
Granting or denying a request for a public hearing or public meeting	RD	RPM	
Granting or denying a petition for permit review	Director	[*not given in memo*]	[*not given in memo*]

All of these permit actions must be signed by the appropriate individual "for the Director." The Chief Deputy Director may sign permits and other documents necessary to carry out the Department's statutory responsibilities.

(2) Document Distribution.

(A) *Issued permit.* When the permit is issued, copies of the permit and cover letter are to be sent electronically to the Office of Air Permit Programs (OAPP) and the Office of Data Analysis (ODA). Electronic copies of the permits are maintained by OAPP and kept in I:\APS\COMMON\PFILES for easy reference.

(B) *Permitting information for an audit.* If the permit is chosen for an audit, OAPP will request additional information from the regional

office issuing the permit. The requested information (permit package) may include the following:

1. Local government certification;

2. Form 7, with supplementary documents (process description, flow diagram, copy of MSDS if 10 or fewer compounds or list of compounds in MSDS if more than 10, etc.);

3. Certification by responsible company official of the accuracy and completeness of the information submitted;

4. Copy of the signed permit;

5. Letter notifying the applicant of permit status;

6. Letter notifying the applicant of any deficiency;

7. Engineering analysis or minor source checklist;

8. Emission calculations;

9. Letter notifying federal land manager (FLM) if source is (a) within 10 kilometers (km) of a Class I area or (b) subject to PSD, emits 100 TPY, and is within 100 km of a Class I area;

10. Letter from the FLM if the FLM made comments, and response to comments, if any;

11. For non-attainment area or PSD permits, certification that all major sources in the state owned, operated, or controlled by the applicant are in compliance with regulations (or on approved compliance schedule);

12. If boilerplate is changed, copy of authorization;

13. Copy of Letter of Determination, if PSD;

14. Copy of comments from EPA and public, and agency responses to comments;

15. Modeling protocol (if PSD), hard copy of screening model run for toxic pollutants, if performed;

16. Final findings/recommendation on modeling by OAPP, if performed;

17. Proof of public notice and briefing by applicant;

18. Copy of stack test summary, if required and already completed;

19. Copy of public comment and hearing package, including comments and agency responses to comments.

B. Permit Issuance

New source review permits are issued with a dated cover letter indicating the permit□s effective date (the date of issuance is the effective date). The cover letter is signed by the regional director (RD) or by a person designated to sign for the RD. The permit document itself is dated and signed as well.

(1) Pre-requisites. New source review permits may not be issued until the Department has completed its review and analysis of a complete NSR permit application and public participation requirements, if applicable, have been met.

(2) Standards for issuance. The Regulations specify several general standards which must be met in issuing permits (9 VAC 5-80-10 H.). These include:

(A) Construction and operation in compliance with performance standards in 9 VAC 5 Chapter 50, which include Best Available Control Technology (9 VAC 5-50-260);

(B) Construction and operation in compliance with hazardous air pollutant emission standards in 9 VAC 5 Chapter 60 (if applicable);

(C) Construction and operation so as not to interfere with attainment or maintenance of any ambient air quality standard, and without causing or exacerbating a violation of any air quality standard; and

(D) Permitted stack height reductions are subject to the limitations in item (C) above, according to 9 VAC 5-80-10 H.3.

(3) Issuing a permit. The Department, in issuing a NSR permit, must notify the applicant in writing. See **Appendix H** for a sample cover letter for NSR permits.

D. C. Permit Appeals

Any person, be it the permittee or member of the general public, may petition for a review of any condition of the permit if the person filed comments on the draft permit or participated in the public hearing. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition only for administrative review of changes from the draft permit.

(1) Deadline for permit appeal petition. All petitions must be received by the DEQ Director no later than 30 days from the date the permit was issued.

(2) Contents of permit appeal petition. The petition for review must include a statement of the reasons supporting that review, including:

(A) A demonstration that any issues being raised were raised during the public comment period and the public hearing; and when appropriate,

(B) A showing that the contested portion of the permit is based on:

(i) A finding of fact or conclusion of law which is clearly erroneous; or

(ii) An exercise of discretion or an important policy consideration which the Director should, in his or her discretion, review.

(3) Address. All requests for administrative review must be sent to:

Director
Virginia Department of Environmental Quality
P.O. Box 10009
Richmond, Virginia 23240-0009

(4) DEQ response. The central office, in consultation with the regional office issuing the permit, will issue an order granting or denying any petition for review. If the review is denied, the final permit decision becomes the final agency action. If the review is granted, DEQ must issue a public notice that sets forth a schedule for the appeal.

D. Permit Tracking – Comprehensive Environmental Data System (CEDS)

The activities associated with the issuance of a permit will be tracked in CEDS on the Events Screen. The Program and Permit Types entered in the Air Permit Screen will

determine the list of events that will automatically be displayed in the Events Screen. The permit writer will have the ability to modify the list of events by adding or deleting a code field as needed. He or she will also have the ability to view the events by permitting activities specifically related to permitting, compliance, or enforcement. Anticipated dates for Inspections and Compliance Reports will be entered into and tracked in CEDS. Inspection results/findings will also be stored in CEDS.

E. E. Source Action Reports

[NOTE:** This section will become obsolete when CEDS, described briefly above, is fully implemented.**]

A Source Action Report (SAR) must be filled out for each permit issued. Electronic copies of the SAR, which is accompanied by the permit, are sent to the Office of Air Permit Programs (OAPP), Office of Data Analysis (ODA) and Office of Audit & Enforcement (OAE). Information gleaned from this report is used to track the numbers and types of permits issued each month. Information contained in the SAR consists of the following:

1. Region - a three- or four-letter word identifying the administrative region responsible for processing the permit.

2. Region Contact - the initials of the regional engineer responsible for completing the permit and SAR.

3. Registration Number - a five-digit air quality regional identification number of a facility assigned by ODA.

4. Standard Industrial Classification (SIC) Code - a statistical classification standard established by the Federal Government to classify industry.

5. Source Name - the name of the permitted facility.

6. County or City - the name of the county or city in which the permitted facility is located.

7. Primary Process Type - the primary process type code for the facility.

8. Permit Issued Type - the identification of the appropriate permit type.

9. Determination Section - the identification of the type of determination for the permit limitation data. This includes:

a. the type of technology used (LAER, BACT),

b. whether a reduction that is greater than the allowed amount occurred,

c. whether an emission reduction occurred at the same site,

d. whether the potential emissions are below all applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations,

e. whether toxics monitoring or continuous emissions monitoring (CEM) is included in the permit,

f. the identification of any subparts associated with NSPS, NESHAP or MACT in the permit.

If the permit is PSD (new or modified) or non-attainment, then the following information must also be provided on the SAR, as well as for inclusion into the EPA RACT-BACT-LAER Clearinghouse database:

1. Unit Size & Description - list of equipment involved in a manufacturing process or operation of a facility that emits or has the potential to emit any pollutant subject to regulation.

2. Unit Process Type Code - a code assigned to each process used to categorize determinations

3. Throughput - the maximum design capacity of the unit per hour and the maximum allowed throughput per year.

4. Pollutants Emitted - list of the pollutants specified in the permit.

5. Emission Limit - list of requirements established which limits the quantity, rate, or concentration of continuous emissions of air pollutants.

6. Control Method or Strategy - the method or strategy used to ensure pollution control goals (for example, fabric filter, scrubber, or other control devices).

7. Control Efficiency % - the efficiency percentage of the control method or strategy.

Once this information is received by Central Office personnel, it is then disseminated and compiled into various reports for internal use (by DEQ management) and external use (by EPA).

F. F. Testing Performed after Permits are Issued

(1) Performance testing.

(A) *Mandate.* If testing is required, it must be performed by the owner within 60 days after achieving the maximum production rate at which the new or modified source will be operating, but no later than 180 days after initial start-up of the source. Within 60 days after the testing has been completed, the owner must provide at least one copy of a written report of the results of the tests to the regional office; the regional office may ask for additional copies if they are necessary.

(B) *NSPS, NESHAP requirements and exceptions.* All NSPS sources subject to the provisions of 9 VAC 5 Chapter 50, Article 5 (9 VAC 5-50-400 et seq.) and NESHAP sources subject to 9 VAC 5 Chapter 60, Article 1 (9 VAC 5-60-60 et seq.) must fulfill the testing requirements in the preceding paragraph (section **E.**(1)(A) above). Exceptions may be allowed by EPA (the Department does not have the authority to waive these provisions) when the Department seeks to do any of the following:

1. Specifies or approves, in specific cases, the use of a reference method with minor changes in methodology;

2. Approves the use of an equivalent method;

3. Approves the use of an alternative method, the results of which the Board has determined to be adequate for indicating whether a specific source is in compliance;

4. Waives the requirement for testing because, based on a technical evaluation of the past performance of similar source types, using similar control methods, the Board reasonably expects the new or modified source to perform in compliance with applicable standards (note: this is highly unlikely); or

5. Waives the requirement for testing because the owner of the source has demonstrated by other means, to the satisfaction of the Department, that the source is in compliance with the applicable standard.

The provisions for granting a waiver are intended for use in determining the initial compliance status of a source. The waiver cannot be used for determining compliance once a source has been in operation more than one year beyond the initial start-up date.

(2) Post-construction monitoring. In order to determine the effect on air quality of emissions from a major stationary source or a major modification, the owner may be required to conduct ambient air monitoring. In that event, the owner must meet the Quality Assurance Requirements for PSD Air Modeling (40 CFR Part 58, Appendix B) during the operation of the monitoring stations.

Chapter 14

Post-Issuance Processing

A. Permit Rescission

(1) Defining terms. Rescinding a permit is to be distinguished from revoking, suspending, or invalidating a permit, as follows:

(A) *Rescinding* is accomplished by the Department or the Board pursuant to a request by the source, or in mutual agreement with the source. The authority for rescinding a permit is found in the shut-down provisions of the new source review rule, at 9 VAC 5-80-10 N.4. Once a permit is rescinded, the source may not operate or construct, and a new permit must be applied for and issued to allow construction or operation. (Note: in order to delete or change a portion of a permit, we *amend* it. If we withdraw the entire permit, we *rescind* it.)

(B) *Revoking* a permit is accomplished by the Department or the Board, over the objection of the source. The authority for revocation is found in the shut-down provisions at 9 VAC 5-80-10 N.2 and -N.3, and also in the enforcement provisions at 9 VAC 5-80-10 K, sub-sections -4, -6, and -8. Again, once a permit is revoked, the source may not operate or construct, and a new permit must be applied for and issued to allow construction or operation.

(C) *Invalidating* a permit is accomplished by operation of the Regulations. The Department need take no action to make a permit invalid, but must take action to postpone or reverse an invalidation. The authority for invalidation of permits is found in the new source rules at 9 VAC 5-80-10 K.1 through -K.3.

(D) *Suspending* a permit is accomplished by the Department or the Board, over the objection of the source. The authority for suspension is found in 9 VAC 5-80-10 K.7, which allows the Department to suspend a permit for any period of time, for any of the grounds of a revocation found in -K.6, i.e., those specified in sub-sections (A), (C), (D), (E), and (F) of item (3) below.

(2) How to rescind a permit. A regional office may rescind a permit because a source requested rescission or as a result of a mutual determination with the source. Typical steps are:

(A) The source requests permit rescission, in writing. The letter from the source should indicate the permit issuance date, the source registration number, and the emission unit(s) to which the permit applies. The request may incorporate the permit by reference in order to list the emission units if the source so desires.

Alternative: The source and the Department discuss the matter of permit rescission and come to an agreement on it. The source either makes a written request as above, or waits for the Department to correspond first and signs its agreement to the Department□s correspondence (below).

(B) The Department issues a letter to the source which rescinds the permit. This letter may be a variation on the shutdown boilerplate letter used for mutual determinations of a shut-down source; see K:\AGENCY\DTE\PERMAST\SHUTDOWN\JEDMUT.WPD, which is also displayed as **Appendix Z** of these Guidelines. (The other two shut-down letters are **Appendices AA** and **BB**; see section **F.** of this chapter.)

(3) When to revoke a permit. The Regulations set out circumstances in which the Department is allowed to revoke a permit (9 VAC 5-80-10 K.). These are:

(A) The permittee knowingly makes material misstatements in the permit application or amendments to it;

(B) The permittee constructs or operates a new or modified source not in accordance with the application;

(C) The permittee fails to comply with the terms and conditions of the permit;

(D) The permittee causes emission from the source which result in violations of, or interfere with the attainment and maintenance of, any ambient air quality standard;

(E) The permittee fails to operate in accordance with any applicable control strategy in effect at the time an application is submitted;

(F) The permittee fails to comply with the provisions of 9 VAC 5-80-10;

(G) The permittee fails to comply with other applicable provisions of the Regulations.

(4) How to revoke or suspend a permit. The Department revokes a permit by issuing written notification, in a manner similar to that employed for final shutdown notices of inoperative plants (see 9 VAC 5-80-10 N.2. and also the shutdown procedures in K:\AGENCY\DTE\PERMAST\SHUTDOWN\PROCDURE; the final shut-down letter model is found in K:\AGENCY\DTE\PERMAST\SHUTDOWN\ FINALLTR.WPD as well as **Appendix CC.** However, the permit revocation letter must also state the reasons for revocation, and, like the shut-down letters, give the source a chance to contest the determination. The procedure follows.

(A) When the regional office determines that one or more of the grounds listed in section (3) above pertains to a source holding a new source review permit, the regional office should send a warning letter to the source. Warning letters are encouraged by the Regulations (see 9 VAC 5-170-120 B.). Informal contact with the source, before the warning letter is sent, may be desirable. The warning letter should indicate the following:

(i) the factual situation which meets one of the grounds for permit revocation or suspension;

(ii) the requirement that the situation be corrected;

(iii) suggested measures by which the situation may be corrected;

(iv) the possibility that the permit may be revoked if the situation is not corrected;

(v) a deadline by which the situation must be corrected.

(B) The regional office should consult with compliance and enforcement staff, and higher officials as appropriate, in the central office to determine a suitable approach to the situation. Approaches might include the following:

(i) pursuit of administrative means such as orders, consent orders, delayed compliance orders, special orders, and emergency special orders to correction of the situation (see 9 VAC 5-170-120 C.);

(ii) suspension of the permit;

(iii) revocation of the permit.

(C) Depending on the reaction of the source to the warning letter, and the outcome of the inter-office consultations, the regional office should proceed with revocation or suspension proceedings.

(D) As with the issuance of a permit, the revocation of a permit constitutes a case decision. As such, it may be appealed; see 9 VAC 5-170-120 D. and the other provisions of the Regulations cited therein.

(E) In regard to case decisions, an informal fact-finding process and a formal hearing process are both available to the Department and the source pursuant to the Administrative Process Act (*Virginia Code* sections 9-6.14:1 *et seq.*; see section 9-6.14:11).

(5) Circumstances invalidating a permit. The Regulations prescribe circumstances which make a new source review permit invalid (9 VAC 5-80-10 K.1. and -K.2.). If the source, upon receiving a permit, fails to begin construction (or reconstruction, or modification) within specified time frames, or stops work on the permitted construction for specified times, the permit becomes invalid. Details follow.

(A) If the source, upon receipt of the permit, fails to start work on the permitted construction or reconstruction or modification within the latest of the following time periods, the permit becomes invalid. The times are:

(i) 18 months from issuance of the permit;

(ii) 9 months from the issuance of the last permit or authorization needed from any other government entity;

(iii) 9 months after the resolution of any litigation concerning either the new source review permit or other governmental permits.

(B) *Example:* XYZ company applies for a new source review permit to construct and operate a new manufacturing plant along a river in ABC county. The permit is issued on January 31, 1999. In June 1999, ABC makes a zoning change which allows XYZ to build closer to the river. A citizens organization, Green Group, sues ABC over the zoning change and also gets the Corps of Engineers to assert permitting jurisdiction for the encroachment on the river. XYZ waits to see what happens. The Corps insists, in its permitting action, upon limitations on the project which make the zoning change unnecessary. The Corps permit is issued on March 15,

2000. The Green Group vs. ABC litigation is settled on April 5, 2000. XYZ begins building its plant on September 10, 2000. Is its NSR permit valid?

Analysis: Yes. The construction is beginning more than 18 months after issuance of the NSR permit. However, the rule says to commence construction □within the latest of the following time frames□ (9 VAC 5-80-10 K.1.). Accordingly, the construction could have begun as late as January 5, 2001, nine months after the litigation was settled, since that is the latest of the three dates. XYZ should be aware, however, that there may also be a deadline for it to start work under its Corps permit.

(C) Other bases of invalidation of a permit include:

(i) Stopping the construction for 18 months or more;

(ii) Failing to complete the construction within a □reasonable time.□ A □reasonable time□ in this instance may be defined as a time within which the BACT determination on which permit terms are based does not change. Thus a regional office may notify a source that its permit has become invalid if the BACT has changed and the source has not yet completed construction; and the permit application process must begin again.

(iii) Where there are approved phases of a construction project, each phase must begin within 18 months of the projected and approved commencement date.

(6) Overcoming an invalidation of a permit. The Department may overcome a permit invalidation, to some extent, by extending the time by which the source must have begun construction (9 VAC 5-80-10 K.3.).

(A) As with the □reasonable time□ to complete construction (paragraph (5)(C)(ii) above), the □reasonable time□ within which to commence construction is dictated by whether a change in the applicable BACT determination would be warranted since the permit was issued. If it would, then the source has taken an unreasonable time to begin construction; the extension must not be given; and the source must reapply for the permit.

(B) During the time of inaction, there must be no substantive changes to any of the following

(i) application information;

(ii) the Department□s review and analysis of the application;

(iii) the Department□s permit decision.

(C) The source must make a □satisfactory demonstration that an extension is justified.□

(D) The Department, through the regional office, may extend the time available to the source to begin or resume construction activity authorized by the permit, such that the period of inactivity is longer than the time frames mentioned above. There is no requirement to subject this extension to public participation.

B. Administrative Permit Amendments (proposed regulation)

C. Minor Permit Amendments (proposed regulation)

D. Significant Permit Amendments (proposed regulation)

E. Re-opening for Cause (proposed regulation)

F. Shutdown and Permit Revocation

(1) Introduction to Shutdown Procedures. The DEQ Division of Air Programs Coordination promulgated a document entitled "Procedures for Shutting Down a Permitted Source," prepared by the Office of Air Permit Programs through Memo Number 99-1003 on June 22, 1999. The text of that Memo and the Procedures to which it refers can be found in K:\AGENCY files as follows:

Memo: K:\AGENCY\AIRGIDE\POLICY\99-1003

Procedures: K:\AGENCY\DTE\PERMAST\SHUTDOWN\PROCDURE

Sample letters to go with these Procedures appear in **Appendices Y** through **AA** and also in K:\AGENCY files (cited in the samples).

(2) Using the model shut-down letters. Directions for the use of these letters is found in the Procedures listed above. They are designed to ensure that the source has fair warning about the possible shutdown through the "tentative decision letter" cited above. The Regulations do not make a distinction between permitted sources and unpermitted sources insofar as shutdown eligibility or procedures are concerned.

Appendix A

How to Retrieve Information

Instructions for Importing the Bookmark File
Located on
K:\agency\epabull\air\internet\websites.htm

For NT Users:

1. Open Netscape Communicator

2. Go to the toolbar located at the top of the screen and select “Communicator.”

3. Next, select “Bookmarks.”

4. Select “Edit Bookmarks.” The “Bookmarks – bookmark.htm” box will appear.

5. Go to the “File” command on the toolbar located a the top of the “Bookmarks-bookmark.htm” box and select “Import.”

6. The “Import Bookmarks File” box should appear on the screen. In the box labeled “File name” type K:\agency\epabull\air\internet\websites.htm. Click on the “open” button. The bookmarks located in the “websites.htm” file will appear at the top of your list of current bookmarks.

Appendix B

Delegation of Authority Memo

January 22, 1999

MEMORANDUM

TO: **All DEQ Staff**

FROM: Dennis H. Treacy

SUBJECT: **Delegations of Authority**

I. GENERAL PROVISIONS

As provided by Sections 2.1-20.01:2 and 10.1-1185 of the Code of Virginia and in accordance with the following conditions, I delegate the powers and duties specified in Parts II, III, and IV of this memorandum:

A. These delegations supersede and rescind any and all previous delegations related to these powers and duties.

B. All actions taken shall comply with the applicable laws and regulations, and the policies of the Department of Environmental Quality.

C. Delegations to regional staff apply only to matters within the jurisdiction of the region in which the staff member is employed.

D. For purposes of exercising authority under this document, a person is considered absent when he or she is not available at his or her regular place of work for more than one working day.

E. For the purposes of this document the term "process" refers to all activities necessary to complete an action including, but not limited to, receiving applications, signing, issuing, denying, terminating, modifying, and revoking. No summary of actions taken pursuant to these delegations is required, unless specifically requested by me (ref. 2.1-20.01:2).

II. GENERAL DIRECTION AND MANAGEMENT

A. Subject only to my ultimate authority, the Chief Deputy (P1104) shall have the authority and responsibility to direct all Agency functions and make any decisions necessary to carry out the statutory responsibilities of the Department.

B. Subject only to my ultimate authority, the Director of Program Coordination (P1152) shall have the authority and responsibility to direct all Agency functions for the Division of Waste Program Coordination, Division of Air Program Coordination, and Division of Water Program Coordination and to make decisions necessary to carry out the statutory responsibilities of those programs.

III. CENTRAL OFFICE DELEGATIONS

A. Permitting

1. The Director of Water Program Coordination (P4014) and the Director of Water Permit Programs (P4016) shall have the authority to:

   a. process all Virginia Water Protection (VWP) Permits for Virginia Department of Transportation and Minimum In stream Flow projects;

   b. determine the necessity to convene or deny public hearing/meeting requests regarding these projects.

2. In addition, the Environmental Engineer Consultant responsible for the project (P1084) shall have the authority to sign VWP waivers, exemptions and no permit required letters for Virginia Department of Transportation and Minimum In stream Flow projects.

3. The Director of Waste Program Coordination (P4041) and the Director of Waste Permitting (P0537) shall have the authority to process waste permits.

4. The Director of Water Program Coordination (P4014) shall have the authority to grant or deny requests for Special Exceptions to ground water withdrawal permitting requirements.

B. Response and Remediation Programs

1. The Director of Water Program Coordination (P4014), and the Director of Spill Response & Remediation (P0098) shall have the authority in the following matters:

a. to declare an Environmental Emergency[4];

b. to approve the use of up to $100,000 of the Virginia Environmental Emergency Response Fund (VEERF) for the environmental emergency situation;

c. to approve the use of the Virginia Petroleum Storage Tank Fund (VPSTF) up to $250,000 for the purposes of performing or reimbursing costs of investigation or corrective action;

d. to approve Oil Discharge Contingency Plans, regulatory variances and financial assurance demonstration mechanisms, and to make other decisions of the Board as provided in 9VAC 25-91-10 et seq. and 9VAC 25-101-10 et seq.;

e. to make Responsible Person determinations, to approve Corrective Action Plans, to approve Interim Authorizations, and to close sites with petroleum releases.

2. The Director of Water Program Coordination (P4014) and the Director of Spill Response & Remediation (P0098) shall have the authority to sign Oil Discharge Contingency Plan (ODCP) approval memos and transmittal letters.

3. Waste Programs

a. The Director of Waste Program Coordination (P4041) and the Director of Remediation Programs (P1018) shall have the authority to sign Records of Decision for Superfund and Federal Facility projects, Certificates of Satisfactory Completion for the Voluntary Remediation Program, and cooperative and other agreements with EPA, federal agencies and private parties for financial support of remediation oversight costs.

b. In addition, the Manager of Superfund and Voluntary Remediation (P1022) shall have the authority to sign Certificates of Satisfactory Completion for Voluntary Remediation Program projects. Compliance and Enforcement

4. The Director of Enforcement Coordination (P4040) shall have the authority to issue consent orders for air and waste cases.

5. With my prior written approval, the Director of Enforcement Coordination (P4040) shall have the authority to make case decisions and issue unilateral orders (non-consensual orders), after following appropriate administrative procedures, as defined in § 9-6.14:4, and as authorized in § 10.1-1186 (DEQ special orders), § 10.1-1307.01.D (abatement of air pollution and enforcement of regulations), § 10.1-1309 (air special orders), § 10.1-1309.1 (air special orders), and § 10.1-1455 (waste orders requiring compliance). This delegation

[4]As defined in the Environmental Emergency Procurement Procedures - □an occurance of a serious and urgent nature that demands immediate action.□

excludes special orders under the authority of § 10.1-1186 which contain penalty provisions.

D. Financial Programs

1. Grants Awarded to DEQ

The Director of Administration (P0008) and the Budget & Grant Manager (P0647) shall have the authority to approve and sign federal grant applications, revisions and notices of awarding for grants for the Department of Environmental Quality.

2. Grants awarded by DEQ to other organizations

a. The Director of Environmental Enhancement (P4044) and the Coastal Resources Environmental Program Manager (P0879) shall have the authority to sign grant awards made by the Department to other agencies and organizations.

b. The Director of Environmental Enhancement (P4044) shall have the authority to sign grant awards made by the Department to other agencies and organizations pertaining to projects funded in accordance with the provisions of the Litter Control and Recycling Fund.

3. Waste Tire End User Reimbursements

The Director of Environmental Enhancement (P4044) shall have the authority to approve Waste Tire end user reimbursement requests for payment.

4. Certifications of Consistency

The Director of Environmental Enhancement (P4044) shall have the authority to approve certifications of consistency for land acquisition and construction pertaining to projects funded under the provision of the Coastal Resources Management Program.

5. Revolving Loan Fund

The Director of Water Program Coordination (P4014) shall have the authority to approve any necessary adjustment to the Board-approved loan amounts and/or interest rates for the Virginia Water Facilities Revolving Loan Fund following the receipt of bids.

6. Tax Certifications

a. The Director of Waste Program Coordination (P4041) and the Director of Waste Permitting (P0537) shall have the authority to process certifications of pollution control equipment related to the operation of landfills.

b. The Director of Waste Program Coordination (P4041) and the Director of Waste Programs (P4035) shall have the authority to process certifications for recycling equipment.

c. The Director of Water Program Coordination (P4014) and the Director of Spill Response and Remediation (P0098) shall have the authority to process certifications of petroleum pollution abatement equipment.

E. Air Program Regulations

The Director of Air Program Coordination (P4013) and Director Air Quality Programs (P4010) shall have the authority to sign consent orders and permits to implement source specific state implementation plan requirements under the federal Clean Air Act.

F. Administrative Processing of Regulations

In my absence, the Regulatory Coordinator (P0024) shall have the authority to sign documents for submittal to the Registrar of Regulations.

IV. REGIONAL OFFICE DELEGATIONS

A. General

The Regional Directors (P0027, P0029, P0030, P0031, P0032, and P0054) shall have the authority and responsibility to take such actions as may be necessary to implement the programs over which they have been given direct management authority.

B. Permitting

1. The Regional Directors and the Regional Permit Managers (P0026, P0035, P0038, P0041, P0044, P1014) shall have the authority to process the following permits:

Virginia Pollution Abatement (VPA)

Virginia Water Protection Permits and Waivers

Air Permits

Ground Water Withdrawal Permits

2. In addition, the Remediation Managers (P0036, P0428) shall have the authority to process Ground Water Withdrawal Permits.

3. The Regional Directors and the Regional Permit Managers shall have the authority to grant or deny public hearing/meeting requests.

4. In the absence of Regional Directors and Regional Permit Managers, Air Permit Managers, Water Permit Managers, and Planning Managers (P0072, P0320, P0873, P0607, P0875, P1113, P0065, P0877, P0172, P0323, P0870, P0494, P0381, P1039, P0173, P0342, P0878, P0876, P0241, and P0376) shall have the authority to process the following permits over which they have programmatic responsibility:

Virginia Pollution Abatement Permits

Virginia Water Protection Permit Waivers

Virginia Water Protection Permits (Category II and III)

Minor Air Permits

C. Compliance and Enforcement

1. The Regional Directors and, in their absence, the Regional Compliance and Enforcement Managers (P0040, P0043, P0037, P0274, P0046, P1013) shall have the authority to issue air and waste consent orders.
2. With my prior written approval, the Regional Directors shall have the authority to make case decisions and issue unilateral orders (non-consensual orders), after following appropriate administrative procedures, as defined in Va. Code § 9-6.14:4, and as authorized in Va. Code § 10.1-1186 (DEQ special orders), § 10.1-1307.01.D (abatement of air pollution and enforcement of regulations), § 10.1-1309 (air special orders), § 10.1-1309.1 (air special orders), and § 10.1-1455 (waste orders requiring compliance). This delegation excludes special orders under the authority of § 10.1-1186 which contain penalty provisions.

D. Remediation

1. The Regional Directors and, in their absence, the Remediation Managers (P0036, P0428, P1015) or the Compliance and Enforcement Managers shall have authority to:

a. declare an Environmental Emergency;

b. approve the use of up to $25,000 from the VEERF for the environmental emergency situation;

c. approve the use of up to $25,000 from VPSTF for the environmental emergency situation;

e. approve Oil Discharge Contingency Plans and Administrative Fees.

2. The Remediation Managers or the Compliance and Enforcement Managers (P0040, P0043, P0046) and, in their absence, the professional remediation staff assigned to the

project, shall have the authority to process Corrective Action Plans (CAP) Permits and general permit coverage letters, approve Interim Authorizations and Corrective Action Plans, and to close sites with petroleum releases.

E. Tax Certification

The Regional Permit Managers and the Compliance and Enforcement Managers shall have the authority to issue Certification of Pollution Control Equipment for Tax Exemptions, except those related to the operation of a landfill.

F. Local Burning Ordinances

The Regional Directors and the Compliance and Enforcement Managers shall have the authority to approve local open burning ordinances in accordance with the provisions of 9 VAC 5-40-5641 and waivers from Article 40, Part II, of 9 VAC 5 Chapter 40 in accordance with the provisions of 9 VAC 5-40-5645.

G. Mobile Source Programs

1. The Inspection/Maintenance Program Manager (P1105), Compliance and Enforcement Manager (P1013), and Northern Office Regional Director (P0031) shall have the authority to issue Emissions Inspection Station Permits and Emissions Repair Facility Certifications.2. The Enforcement/Compliance Specialist (P1068), Inspections/Maintenance Program Manager (P1105), Compliance and Enforcement Manager (P1013) and Northern Office Regional Director (P0031) shall have the authority to conduct informal fact findings and make case decisions (including penalties pursuant to MSO regulations and Schedule of Penalties).

3. The Northern Regional Director (P0031) and Compliance and Enforcement Manager (P1013) shall have the authority to decide appeal of penalties imposed pursuant to informal fact findings.

4. The Northern Regional Director (P0031) shall have the authority to make case decisions pursuant to formal hearings conducted regarding MSO regulations in accordance with the Administrative Process Act.

5. The Inspections and Maintenance Manager (P1105), Compliance and Enforcement Manager (P1013) and Northern Regional Director (P0031) shall have the authority to suspend an emission station inspection permit without a formal hearing pursuant to 46.2-1185 of the Virginia Motor Vehicle Emissions Control Law and 9 VAC 5-91-600.

6. The Director of the Office of Air Quality Programs (P4010) and the Northern Regional Director (P0031) shall have the authority to issue Certifications for emissions inspection equipment meeting the Northern Virginia Analyzer Systems requirements in accordance with Article 22 of Title 46.2 of the Code of Virginia and 9 VAC 5-91-680.

7. The Director of the Office of Air Quality Programs and the Northern Regional Director shall have the authority to certify vehicle emission inspection systems for tax credit as authorized by Section 58.1-438.1 of the Code of Virginia.

Appendix C

MOU with Shenandoah National Park

MEMORANDUM OF UNDERSTANDING

between

Shenandoah National Park

and

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF AIR POLLUTION CONTROL

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to establish mutually acceptable guidelines for the effective management and protection of air quality related values within the Shenandoah National Park and the Commonwealth of Virginia. It is not intended to be a contract or to create any rights, duties or obligations which may be enforced by one party or the other. These guidelines address operational procedures for management and policy review, data collection and transfer, permit and regulation review, and impact analysis. The primary objective of this agreement is to provide for the greatest degree of cooperation between agencies consistent with their respective mandates and responsibilities as determined by the Clean Air Act as amended and subsequent regulation. This will be accomplished through the effective execution of the regulatory and statutory authorities granted to each agency.

II. Background and Objectives

Under the Clean Air Act (CAA) and its amendments, the Superintendent of Shenandoah National Park has the affirmative responsibility of protecting the air quality of the area and preventing significant impacts to the air quality related values (AQRVs).

The Department of Air Pollution Control (DAPC) is the State regulatory authority charged with carrying out the provisions of the CAA, and State Implementation Plan (SIP). The mission of the DAPC is to provide for the greatest degree of protection of air quality and AQRVs within the Commonwealth of Virginia consistent with existing law and regulation.

Because of the mutual responsibilities of the DAPC and the National Park Service under the CAA, and because of shared programmatic interests in air quality issues, this MOU is initiated between the two agencies.

This MOU is authorized, in part, by the Clean Air Act, 42 U.S.C. S 7401 et seq. In addition, the DAPC is empowered to cooperate with the Federal government in matters related to air quality management pursuant to S 10.1-1307A. of the Code of Virginia (1950), as amended.

III. Statement of Work

Planning

The DAPC will notify the Superintendent when new regulations or SIP revisions are proposed. In turn, for proposals that may affect the air quality or AQRVs in Shenandoah National Park, the Superintendent will review and comment on the proposed regulations to assist in air management for the Commonwealth.

Permitting

As directed by the CAA, the Superintendent will be afforded the opportunity to review and comment on permit applications and draft state air pollution control permits according to the following guidelines:

A. For applications for permits not subject to the requirements of the Prevention of Significant Deterioration (PSD) regulations:

(1) Once received, the appropriate regional office of the DAPC will provide copies of the Permit Application (DAPC Form 7 and accompanying information) to the Superintendent within one week of receipt for: a) all major new sources or major modifications, either of which would result in a net increase if 100 tons per year of any one pollutant within 100 kilometers of the Park, and b) all sources within ten kilometers of the Park.

(2) The DAPC will notify the permit applicant that the Superintendent (or his representative) is available for pre-application or pre-hearing meetings upon request. Superintendent participation in meetings depends on reasonable notification so that schedules can be arranged. Where appropriate, DAPC personnel will arrange and attend the meetings. However, nothing in the this MOU prohibits the Superintendent or his representative from meeting with an applicant without DAPC personnel present.

(3) The Superintendent will notify the DAPC Regional Office if the Best Available Control Technology (BACT) analysis, engineering analysis, modeling or the draft permit is requested. Such notification must be made as soon as possible, but not later than two weeks after receipt by the Superintendent of the information identified in Paragraph 1. above.

(4) The DAPC will provide the Superintendent with copies of all requested documentation pertaining to the application within ten working days of the request, if available, or within ten working days after the requested document becomes available.

(5) For permits for which the Superintendent has requested information (as in paragraphs 3 and 4 above), when public hearings are required, the regional office of the DAPC will provide the Superintendent with a copy of the public hearing notice at least 30 days prior to the hearing.

For permits for which there is no required public hearing, the Superintendent shall notify the DAPC within 5 working days of receiving the permit application and draft permit whether a public hearing is desired.

B. For applications for permits anywhere in the state subject to the requirements of the PSD regulations.

(1) The DAPC will provide notifications to the Superintendent that discussions have been held with representatives of a company, or companies, proposing to apply for a permit likely to be subject to the provisions of the PSD regulations; such notification shall be given within 30 days of the date on which the discussions were held. This is not to be interpreted to mean that the DAPC will notify the Superintendent as a result of inquiries from companies on permit requirements within the Commonwealth, even if the company indicates that the facility it is considering may be subject to PSD review. However, once the company indicates to the DAPC that it has decided to submit an application which will likely be subject to the provisions of the PSD regulations, the DAPC will provide to the Superintendent basic information on the proposed source; this information will included the following:

a. The name of the company.
b. The type of facility proposed.
c. The general location of the proposed facility.
d. As much information regarding equipment and emissions as is available.
e. An estimate of when a formal application is expected.

(2) The DAPC will notify the permit applicant that the Superintendent (or his representative) is available for pre-application or pre-hearing meetings upon request. Superintendent participation in meetings depends on reasonable notification so that schedules can be arranged.

Where appropriate, DAPC personnel arrange and attend the meetings. However, nothing in this MOU prohibits the Superintendent from meeting with an applicant without DAPC personnel present.

(3) The DAPC will provide to the Superintendent a copy of all PSD Letters of Determination and the PSD permit application information as listed below:

a. Permit Application (Form 7).
b. BACT analysis.
c. Modeling analysis.
d. Visibility analysis.
e. Other impact analyses.
f. Draft PSD permit.

(4) Items specified in Paragraph 3., a. through e., will be transmitted to the Superintendent as soon as possible after receipt from the applicant. After providing all information specified in Paragraph 3. (Items a. through f.), the DAPC (Regional Director) will notify the Superintendent, in writing, when the Superintendent's 60-day review period will start.

(5) After all information identified in Paragraph 3. has been provided to the Superintendent, it may be subject to minor modifications and additions during the DAPC review process. Any such additional information will be provided to the Superintendent as soon as possible, but will not change the 60-day review period as established in Paragraph 4. above.

If the applicant submits additional information during the review period which represents a significant change to the permit application or draft permit, additional review time will be allowed as agreed by the DAPC and the Superintendent.

(6) All remaining PSD permit application information, including the engineering analysis report and the modeling analysis report prepared by the DAPC, and the final draft permit will be provided to the Superintendent no later than 30 days prior to the public hearing.

a. The DAPC Regional Director will provide all PSD permit information to the Superintendent except air quality analysis information.

b. Division of Technical Evaluation (DTE) will provide air quality analysis information for all PSD permits to the Superintendent.

(7) The Superintendent may provide, and the DAPC shall consider when announcing the required 30-day comment period, any analysis performed by the Superintendent and received by the DAPC within 30 days of the notification required by paragraph 4. This analysis would show that a proposed source may have an adverse impact on AQRVs, (including visibility) in Shenandoah National Park.

If the DAPC disagrees with the Superintendent's determination, the DAPC will, in the notice of public hearing, either explain this decision or give notice as to where the explanation can be obtained.

Ambient Air Monitoring

A. Subject to the availability of funds and funding agencies' priorities, Shenandoah National Park agrees to:

(1) Maintain and operate at least one gaseous pollutant monitoring station. Ozone will be monitored at a minimum of one site.

(2) Operate and maintain the IMPROVE visibility network at one site in the Park.

(3) Operate and maintain the National Dry Deposition Network (NDDN, or CASTNET) and National Atmospheric Deposition Network (NADP) at one site in the Park.

(4) Operate three meteorological (MET) stations to record data on wind speed, direction, temperature, and humidity.

(5) As appropriate, other associated monitoring such as NOx, solar radiation, etc. may also be operated independent of this agreement.

(6) Notify the DAPC (DTE) as soon as possible by telephone when any monitoring instrument records an exceedance of any ambient air quality standard.

B. The Department of Air Pollution Control agrees to:

(1) Provide Shenandoah National Park air quality monitoring with the DAPC-recommended calibration and maintenance procedures.

(2) Perform two quality assurance audits on the Park's existing gaseous pollutant (sulfur dioxide and/or ozone) monitors on a schedule as mutually agreed

during two separate quarters each year in accordance with Environmental Protection Agency (EPA) protocol as stated in 40 CFR, Part 58.

Data Exchange

A. Shenandoah National Park agrees to:

(1) Provide gaseous pollutant monitoring data to the data to the DAPC in a mutually acceptable format.

(2) Provide data summaries and analysis on the IMPROVE, NADP, and NDDN (CASTNET) programs as they become available; to the extent possible, also provide data to DAPC upon request.

B. The Department of Air Pollution Control agrees to:

Provide pollutant data summaries from other sites in the Commonwealth to the Superintendent upon request.

Research

A. The DAPC will assist the Superintendent, within budget limitations, in carrying out research evaluations needed to determine air pollution impacts to sensitive resources in Shenandoah National Park.

B. Both agencies will cooperate in using available information to assess air pollution impacts in Shenandoah and surrounding lands and to make joint recommendations to the responsible State and Federal agencies as to management strategies that may be undertaken to reduce threats of unacceptable impacts.

IV. Key Officials

Shenandoah National Park

Superintendent
Chief Natural Resources & Science Division
Environmental Protection Specialist

Department of Air Pollution Control

Executive Director
Assistant Executive Director, Technical Operations
Assistant Executive Director, Regional Operations
Director, Division of Monitoring
Director, Division of Technical Evaluation
Director, Division of Data Analysis

Regional Directors

IV. Required Clauses

Officials Not to Benefit

No member of, delegate to Congress or President's Commissioner shall be admitted to any share or part of this agreement or to any benefit to arise therefrom, but this provision shall not be construed to extend to the agreement if made with a corporation for its general benefit.

Nondiscrimination

During the performance of this agreement, the cooperators agree to abide by the terms of Presidential Executive Order 11246 on non-discrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The cooperators will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

V. Termination

This MOU will become effective on the date of the last signature and stay in effect until August 31, 1998. At that time both parties to the agreement will reassess the benefits that have accrued and determine if the agreement should be reaffirmed. If both parties resolve that it has produced the desired results of mutual cooperation and should be continued as is, they need only sign a reaffirmation memorandum, and the agreement will be continued for another one year period. This agreement may be modified or discontinued at the request of either party provided the request for any major change is submitted to the other party for consideration not less than 60 days in advance of the effective date of the desired modification or termination.

Signature Obtained	Signature Obtained
J. W. Wade	Wallace N. Davis
Superintendent	Executive Director
Shenandoah National Park	Dept. of Air Pollution Control
	Commonwealth of Virginia
March 30, 1993 (date)	March 31, 1993 (date)

Appendix D

MOU with Jefferson National Forest

MEMORANDUM OF UNDERSTANDING

between

JEFFERSON NATIONAL FOREST

and

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF AIR POLLUTION CONTROL

I. Purpose

The purpose of this Memorandum of Understanding is to establish mutually acceptable guidelines for the effective management and protection of air quality related values within the Jefferson National Forest and the Commonwealth of Virginia. It is not intended to be a contract or to create any rights, duties or obligations which may be enforced by one party or the other. These guidelines address operational procedures for management and policy review, data collection and transfer, permit and regulation review, and impact analysis. The primary objective of this agreement is to provide for the greatest degree of cooperation between agencies consistent with their respective mandates and responsibilities as determined by the Clean Air Act as amended and subsequent regulation. This will be accomplished through the effective execution of the regulatory and statutory authorities granted to each agency.

II. Background and Objectives

Under the Clean Air Act (CAA) and its amendments, the Forest Supervisor of the Jefferson National Forest, as the delegated Federal Land Manager (FLM), has the affirmative responsibility to protect the air quality related values (AQRVs) of the James River Face Wilderness, a Class I area.

The Department of Air Pollution Control (DAPC) is the State regulatory authority charged with carrying out the provisions of the CAA, and State Implementation Plan (SIP). The mission of the DAPC is to provide for the greatest degree of protection of air quality and air quality related values within the Commonwealth of Virginia consistent with existing law and regulation.

Because of the mutual responsibilities of the DAPC and the USDA Forest Service under the CAA, and because of shared programmatic interests in air quality issues, this Memorandum of Understanding is initiated between the two agencies.

This Memorandum of Understanding is authorized, in part, by the Clean Air Act, 42 U.S.C. S 7401 et seq. In addition, the DAPC is empowered to cooperate with the Federal government in matters related to air quality management pursuant to S 10.1-1307A. of the Code of Virginia (1950), as amended.

III. Statement of Work

Planning

The DAPC will notify the Forest Supervisor, hereafter referred to as the FLM, when new regulations or State Implementation Plan (SIP) revisions are proposed. In turn, for proposals that may affect air quality related values in the James River Face Wilderness, the FLM will review and comment on the proposed regulations to assist in air management for the Commonwealth.

Permitting

As directed by the CAA, the FLM will be afforded the opportunity to review and comment on permit applications and draft state air pollution control permits according to the following guidelines:

A. For applications for permits not subject to the requirements of the Prevention of Significant Deterioration (PSD) regulations:

(1) Once received, the appropriate regional office of the DAPC will provide copies of the Permit Application (DAPC Form 7 and accompanying information) to the FLM within one week of receipt for 1) all major sources (emissions equal to, or greater than, 100 tons per year of any one pollutant) within 100 kilometers of James River Face Wilderness, and 2) all sources within ten kilometers of James River Face Wilderness.

(2) The DAPC will notify the permit applicant that the FLM is available for pre-application or pre-hearing meetings upon request. FLM participation in meetings is based on two conditions: a) reasonable notification so that schedules can be arranged, and b) DAPC personnel arrange and attend the meetings. Nothing in the this MOU prohibits the FLM from meeting with an applicant without DAPC personnel present.

(3) The FLM will notify the DAPC Regional Office if the Best Available Control Technology (BACT) analysis, engineering

analysis, modeling or the draft permit is requested. Such notification must be made as soon as possible, but not later than two weeks after receipt by the FLM of the information identified in Paragraph A.(1) above.

(4) The DAPC will provide the FLM with copies of all requested documentation pertaining to the application within ten working days of the request, if available, or within ten working days after the requested document becomes available.

(5) For permits for which the FLM has requested information (as in paragraphs 3 and 4 above), when public hearings are required, the regional office of the DAPC will provide the FLM with a copy of the public hearing notice at least 30 days prior to the hearing.

For permits for which there is no required public hearing, the FLM shall notify the DAPC within 5 working days of receiving the permit application and draft permit, whether a public hearing is desired.

B. For applications for permits anywhere in the state subject to the requirements of the PSD regulations.

(1) The DAPC will provide notifications to the FLM that discussions have been held with representatives of a company, or companies, proposing to apply for a permit under the provisions of the PSD regulations; such notification shall be given within 30 days of the date on which the discussions were held. This is not to be interpreted to mean that the DAPC will notify the FLM as a result of inquiries from companies on permit requirements within the Commonwealth, even if the company indicates that the facility it is considering may be subject to PSD review. However, once the company indicates to the DAPC that it has decided to submit an application which will likely be subject to the provisions of the PSD regulations, the DAPC will provide to the FLM basic information on the proposed source; this information will included the following:

a. The name of the company.
b. The type of facility proposed.
c. The general location of the proposed facility.
d. As much information regarding equipment and emissions as is available.
e. An estimate of when a formal application is expected.

(2) The DAPC will notify the permit applicant that the FLM is available for pre-application or pre-hearing meetings upon request. Participation in meetings is based on two conditions: a) reasonable notification so that schedules can be arranged, and b) DAPC personnel arrange and attend the meetings. Nothing in this MOU prohibits the FLM from meeting with an applicant without DAPC personnel present.

(3) The DAPC will provide to the FLM a copy of all PSD Letters of Determination and the PSD permit application information as listed below:

a. Permit Application (Form 7).
b. BACT analysis.
c. Modeling analysis.
d. Visibility analysis.
e. Other impact analyses, including AQRVs.
f. Draft PSD permit.

(4) Items specified in Paragraph (3), a. through e., will be transmitted to the FLM as soon as possible after receipt from the applicant. After providing all information specified in Paragraph (3), the DAPC (Regional Director) will notify the FLM, in writing, when the FLM 60-day review period will start.

(5) After all information identified in Paragraph (3) has been provided to the FLM, it may be subject to minor modifications and additions during the DAPC review process. Any such additional information will be provided to the FLM as soon as possible, but will not change the 60-day review period as established in Paragraph (4) above.

If the applicant submits additional information during the review period which represents a significant change to the permit application or draft permit, additional review time will be allowed as agreed by the DAPC and the FLM.

(6) All remaining PSD permit application information, including the engineering analysis report and the modeling analysis report prepared by the DAPC, and the final draft permit will be provided to the FLM no later than 30 days prior to the public hearing.

a. The DAPC Regional Director will provide all PSD permit information to the FLM except air quality analysis information.

b. Division of Technical Evaluation (DTE) will provide air quality analysis information for all PSD permits to the FLM.

(7) The FLM may provide, and the DAPC shall consider when announcing the required 30-day comment period, any analysis performed by the FLM and received by the DAPC within 30 days of the notification required by paragraph (4). This analysis would show that a proposed source may have an adverse impact on air quality related values, including visibility, in James River Face Wilderness.

If the DAPC disagrees with the FLM's determination, the DAPC will, in the notice of public hearing, either explain this decision or give notice as to where the explanation can be obtained.

Research

A. The DAPC will assist the FLM, within budget limitations, in carrying out research evaluations needed to determine air pollution impacts to sensitive resources in James River Wilderness

B. Both agencies will cooperate in using available information to assess air pollution impacts in James River Face Wilderness and surrounding lands and to make joint recommendations to the responsible State and Federal agencies as to management strategies that may be undertaken to reduce threats of unacceptable impacts.

IV. Key Officials

Jefferson National Forest

Forest Supervisor

Department of Air Pollution Control

Executive Director
Assistant Executive Director, Technical Operations
Assistant Executive Director, Regional Operations
Regional Directors
Director, Division of Monitoring
Director, Division of Technical Evaluation
Director, Division of Data Analysis

V. Termination

This Memorandum of Understanding will become effective on the date of the last signature and stay in effect until August 31, 1997. At that time both parties to the agreement will reassess the benefits that have accrued and determine if the agreement should be reaffirmed. If both parties resolve that it has produced the desired results of mutual cooperation and should be continued for another one year period. This agreement may be modified or discontinued at the request of either party provided the request for any major change is submitted to the other party for consideration not less than 60 days in advance of the effective date of the desired modification or termination.

VI. Project Coordination

Administration of this agreement shall be accomplished by:

Pamela Faggert Cindy Huber

Assistant Executive Director, Regional Operations Virginia Department of Air Pollution Control Room 801, Ninth St. Office Bldg. Richmond, VA 23240 (804) 786-5791	Air Resource Specialist USDA Forest Service Jefferson National Forest 2900 Caller Service 210 Franklin Rd., SW Roanoke, VA 24001 (703) 982-6068

IN WITNESS THEREOF, the parties hereto have executed the Agreement as of the last date written below.

Signature Obtained Joy E. Berg Forest Supervisor Jefferson National Forest	Signature Obtained Wallace N. Davis Executive Director Dept. of Air Pollution Control Commonwealth of Virginia
Date 3-29-93	Date 3/30/93

Appendix E

SAPCB Suitability Policy

VIRGINIA STATE AIR POLLUTION CONTROL BOARD

September 11, 1987

It is the policy of the State Air Pollution Control Board (SAPCB) that the suitability of a proposed facility to a specific location be determined by the local governing body, except as to questions involving the air quality regulatory authority of the SAPCB. This position is consistent with the intent of the *Code of Virginia* (section 15.1-427) that encourages and empowers local governments to make use of planning and zoning as a way to govern community development and economic growth in order to protect public health, safety, and welfare. The SAPCB, therefore, shall consider the suitability of a proposed facility, only as it pertains to:

1. Air quality characteristics and performance requirements defined by SAPCB regulations;

2. The health impact of air quality deterioration which might reasonably be expected to occur during the grace period allowed by SAPCB regulations or the permit conditions to fix malfunctioning air pollution control equipment;

3. Anticipated impact of odor on surrounding communities or violation of the SAPCB Odor Rule.

These criteria give the SAPCB considerable latitude in making judgments; however, it is clearly not the intention of the SAPCB to become a step in the appeal process for those who wish to challenge a local government planning or zoning decision or as a way for local governments to avoid zoning or suitability decisions. The SAPCB, therefore, would consider a decision by a local governing body as to the suitability of a proposed new facility or expansion of an existing facility, but would approve or disapprove a permit application only within the context of the three air quality issues enumerated above.

Appendix F

Permit Application Site Evaluation

Applicant _____
Reg. # (or new) _____

Address (Plant site)_____
_____

Proposed Source
_____

_____

Estimate the population density of the area around the proposed site: (Circle one)

Sparsely Populated Moderately Populated Densely Populated

Describe the terrain of the area around the proposed site: (Circle all that apply)

Flat Rolling Valley Mountainous River Lake Ocean

Describe the land use of the area around the proposed site: (Circle all that apply)

Urban Rural Residential Agricultural Forest Commercial Industrial Recreational Institutional

Give approximate distance to nearest: School _____

Hospital/Nursing Home _____

Other Building _____

Name all existing air pollution sources within one mile of proposed site:

_____
_____

If application is for an existing source, is source operating in compliance with applicable regulations or under an approved compliance plan? (Circle one) YES NO N/A

Based on this site evaluation, the proposed source will not have an adverse effect on the ambient air quality in the immediate area of the site:

(Circle one) YES NO UNKNOWN

COMMENTS:_____
_____
_____
_____
_____
_____

Evaluation conducted by _____ Date _____
(Environmental Inspector)

Copy topographic map on back and mark source location

Appendix G

Application Completeness Checklist

A. Basic Checklist

_____ Regional Office
Administratively Complete Checklist

Source/facility name:

Registration no.:

County/plant ID no.:

Greenfield Site		Major Modification		Modeling Required	

These items must be fulfilled for the Department to consider the permit application administratively complete:

FOR ALL FACILITIES

____ 1. Application Information is complete and corresponds to pages indicated on the Document Certification Form.

____ 2. Document Certification Form is signed by a responsible official.

____ 3. Appropriate Form 7 pages are complete and correct.

____ 4. If any pages are marked "confidential information," the applicant must submit written justification to meet the four (4) criteria by which the department determines that the material is confidential (9 VAC 5-170-60.C).

____ 5. Calculations, with justifications, are provided.

____ 6. Enclosed material safety data sheets (MSDS) and other information from the supplier of equipment has sufficient detail to determine emissions from the equipment (or not required).

____ 7. Process flow diagram enclosed which has sufficient detail to evaluate emissions from the facility (or not required).

____ 8. A stack test report is provided to substantiate calculations (or not required).

____ 9. Facility-wide emissions information received (or previously submitted).

FOR NEW FACILITIES/MAJOR MODIFICATIONS

____ 1. A signed local governing body certification form is enclosed.

____ 2. Enclosed site map in sufficient detail to determine latitude and longitude or UTM coordinates.

____ 3. Approvable monitoring protocol and data received (or not required).

____ 4. Approvable BACT/LAER analysis received (or not required).

FOR FACILITIES REQUIRING MODELING

____ 1. Site plan enclosed which includes building dimensions, property and fence lines, and vent and stack locations; as determined necessary by the Department.

____ 2. Approvable modeling protocol and results received demonstrating compliance (or not required).

Engineer _____ Date

Peer Reviewer _____ Date

B. Additional Matters

Additional matters bearing on application completeness are listed here. In addition to proper descriptions and information on the Form 7 and accompanying calculations, a new source review permit application should contain the following items.

(A) A source location map, preferably a U.S. Geological Survey topographic map, allowing the reader to determine UTM coordinates for the site of the source;

(B) A diagram of existing and proposed facilities, including all buildings, locations of stacks and other emission points by identification number, location of property and fence lines. If modeling is necessary, the dimensions of buildings may be required.

(C) Process flow diagrams/schematic, with each throughput/output and narrative description; emission routing through emission controls and/or stacks (individual, combination, or multiples).

(D) Environmental data sheets, product data sheets, and material safety data sheets (MSDS) showing the percent, by weight, of each ingredient;

(E) Emission estimate calculations and/or stack test reports, if applicable. For coatings, the source should include the VOC content in pounds per gallon, excluding water and exempt solvents. For VOCs, the same measurement, as delivered by the coating applicator, should also be included.

(F) An approvable BACT/LAER analysis for all new major sources and major modifications, and for other sources if required.

(G) An approvable air quality analysis and secondary impact analysis, if applicable.

(H) An approvable ambient or meteorological monitoring protocol and results, if applicable.

(I) For modifications to existing facilities, sufficient data regarding historical emissions to determine whether net emissions increases trigger applicability of the PSD rule (9 VAC 5-80-1700 et seq.) or the rule on major sources in non-attainment areas (9 VAC 5-80-2000 et seq.).

Appendix H

Sample Cover Letter for Issued Permits

(LETTERHEAD - REGIONAL ADDRESS - DATE)

_____
_____
_____
_____

Location:
Registration No: _____
County-Plant No: ___-

Dear _____ :

Attached is a permit to [construct **or** install **or** modify **or** reconstruct **or** relocate] and operate _____
in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. [This permit supersedes your permit dated _____.]

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on _____ [and solicited written public comments by placing a newspaper advertisement in the _____ on _____. The thirty day comment period (provided for in 9 VAC 5-80-10 G4) expired on _____].

This approval to [construct **or** install **or** modify **or** reconstruct **or** relocate] and operate shall not relieve _____ of the responsibility to comply with all other local, state and federal permit regulations.

9 VAC 5-170-200 [formerly Section 5-20-90] of the Board's Regulations provides that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Dennis H. Treacy, Director
Department of Environmental Quality
P.O. Box 10009
Richmond, Virginia 23240-0009

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please call the regional office at (_____) _____ - _____ .

Sincerely,

_____
Regional Director or designee

(reg dir)/(permit engr)/(typist)/(file name)

Attachment: Permit
[NSPS, Subpart __]

cc: Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)
[Chief, Air Enforcement Branch (3AT20), U.S. EPA, Region III]

Appendix I

Interpretation Memo on "Designed to Accommodate"

[Memo copied from I:\APS\COMMON\READFILE\024.98.]

OAPP-024-98

DEPARTMENT OF ENVIRONMENTAL QUALITY
Division of Air Program Coordination
Office of Air Permit Programs

MEMORANDUM

TO: Terrance J. Godar
Air Permit Manager, NVRO

FROM: Robert L. Beasley
Assistant Division Director, DAPC-OAPP

SUBJECT: Interpretation of "Designed to Accommodate" in the New Source Review Definition of "Modification"

Copies: John M. Daniel, Jr., P.E., DEE
Director, Division of Air Program Coordination

Regional Air Permit Managers

DATE: October 16, 1998

This is in response to your memo, same subject, dated September 22. In that memo, you asked, on behalf of yourself and the other Air Permit Managers, whether I agreed with your interpretation of the term "designed to accommodate" as it appears in sub-section (4) of the definition of "Modification" in the new source review permitting rule, 9 VAC 5-80-10 B.3. in the Regulations. You also asked for my preference on who should respond to the source which raised the question to you.

The short answers to your questions are:

(1) I agree with your interpretation of the term "designed to accommodate" as described below.

(2) I recommend that you respond directly to the source which contacted you with this question.

Discussion

As you discussed with Charlie Ellis of my staff on October 5, the provision is essentially aimed at sources which would face permitting for a modification if a change in fuel or raw material is one which the emissions unit in question were not "designed to accommodate." The question was raised to you because there is a divergence of opinion around the nation on how to interpret the term "designed to accommodate." A recent case in Florida stated that the facility was not capable of using the alternative fuel or raw

material unless the material was specifically named in final design documents. In another case, the facility owner could change the material handling equipment so long as the equipment itself did not require a permit and the unit using the material did not require modification.

In deciding whether an emissions unit is designed to accommodate an alternative fuel or raw material, we might ask the following questions:

(1) Does the alternative fuel or raw material need to be named, either in the permit if there is one, or in the final specifications for the emissions unit, in order for the emission unit to be "designed to accommodate" the alternative?

Answer: Not if no physical changes were needed in order to burn the fuel or process the material.

(2) Does the use of the alternative fuel or raw material require any change in the emissions unit or its control equipment?

Answer: If it does, then the change in the emissions unit needs to be evaluated to determine permit applicability or the applicability of the coal preparation NSPS. New material handling equipment would need to be evaluated, as well. However, the change in the control equipment would not require permit evaluation but might require control technology evaluation if it is connected to a unit requiring a permit.

Your memo provided adequate discussion of applicable cases. It went on to recommend that a unit be considered to be "designed to accommodate" an alternative fuel or raw material if (a) the fuel could be combusted without making a physical change to the combustion unit, or (b) the fuel handling system was included in final construction specifications for the unit. If a change in the fuel handling system is required to accommodate the change in fuels, it would require evaluation to determine PSD applicability and also to determine whether the change is a modification under the coal preparation NSPS (40 CFR Part 60, subpart Y). As indicated above, we agree with these conclusions.

Please note that previously issued permits may establish less flexible conditions. Where previous permits exist, their conditions affecting alternative fuels or raw materials would need to be evaluated case by case.

The question of the possible need for permitting of increased emissions attributable to changes in fuels or raw materials does not arise in the analysis of "designed to accommodate." That is because it is effectively addressed, as you agreed in the telephone conversation, by (a) the PSD applicability evaluation, (b) the coal preparation NSPS applicability evaluation, and (c) the other provisions of the definition of "modification" in 9 VAC 5-80-10 B.3.

I hope this discussion is helpful to you in resolving the question asked by your source.

Appendix J

Memo 01-1002 on PM Exemption Levels

MEMORANDUM

TO: REGIONAL DIRECTORS

FROM: John M. Daniel, Jr. P.E., DEE
Director, Division of Air Program Coordination

SUBJECT: Memo Number 01-1002. Guidance on Permit Applicability - PM and PM-10 Sources

COPIES: David K. Paylor

Regional Permit Managers

Air Permit Managers

DATE: November 2, 2001

Background and Purpose

Total Suspended Particulate (TSP) has been dropped by DEQ and EPA as a criteria pollutant, and an ambient air quality standard for TSP no longer exists.

9 VAC 5-80-11 contains exemption levels for permits for various pollutants. A value is included for PM-10 but not for Particulate Matter (PM). This guidance clarifies what should be done in making permit applicability decisions until such time as the regulations have been amended to address the inadvertent exclusion of PM from 9 VAC 5-80-11. It also addresses “state major”, major NSR, and Title V permitting. The “state major”, major NSR, and Title V permitting determinations will remain unchanged by the minor NSR permit program revisions.

This memo incorporates and supercedes memo 99-1001 “Guidance on Fixing 9 VAC 5-80-11D and 9 VAC 5-80-11E”.

Minor NSR

Proposed revisions to 9 VAC 5-80-11D (New Sources) would change the exemptions as follows, and you should be governed accordingly in making permit applicability decisions.

The term Particulate Matter will have two components: PM-10 and PM as follows:

PM-10 -- 15 tons per year
PM -- 25 tons per year

The PM-10 number is the primary one for determining whether the source is exempt from permitting, and the PM number would only be used as a surrogate in case you are not able to quantify PM-10 emissions.

Proposed revisions to 9 VAC 5-80-11E (Modified Sources) would change the exemptions as follows, and you should be governed accordingly in making permit applicability decisions.

As in Section 11D, Particulate Matter will have two components: PM-10 and PM as follows:

PM-10 -- 10 tons per year
PM -- 15 tons per year

Where PM-10 can be quantified, that will be the basis for making permit exemption decisions. PM will only be used as a surrogate in those instances where PM-10 emissions cannot be quantified.

It should also be noted that some sources are subject to NSPS’s regulating PM emissions. In those cases, applicability of an NSPS may also make a facility subject to permitting even if PM/PM-10 emissions are below the thresholds listed above.

State Major Determination

Once a facility has been determined to be subject to minor NSR permitting for PM / PM-10, PM emissions must be considered as well as PM-10 emissions for determination of whether or not the permit is state major.

Major NSR

In determining applicability of PSD, both PM and PM-10 emissions must be considered.

Of course, only pollutants for which an area is non-attainment need to be reviewed for non-attainment NSR. Currently, no areas of Virginia are non-attainment for PM-10. At this time, PM-10 is the only particulate matter criteria pollutant, so non-attainment major NSR does not apply anywhere in the state for any form of particulate matter.

Title V

DEQ's Title V regulation's applicability section contains the following language:

> "Particulate matter shall be used to determine the applicability of this article to major sources only if particulate matter (PM-10) emissions cannot be quantified in a manner acceptable to the board."
> (9 VAC 5-80-50 F)

Therefore, if the PM-10 contribution to PM is known, a source is subject to Title V only if the source is major for PM-10. Should PM emissions be known but not the PM-10 fraction, the determination of whether or not the source is subject to Title V is based on PM emissions.

Examples – Minor NSR, "state major", PSD, and Title V applicability

In each of the following cases, the following apply:

- the source is a new source with PM/PM-10 emissions,
- there are no other air pollutants emitted,
- there are no other emission sources at the facility,
- all emission numbers are uncontrolled emissions (and PTE),
- there are no other issues that would trigger minor NSR permitting requirements (such as NSPS applicability), and
- the source is not in one of the 28 listed source categories for PSD. Therefore the source would only be subject to PSD if emissions were greater than 250 tons per year.

Case 1

Source 1 has 110 tons annual uncontrolled PM emissions. It is known that 5 tons are PM-10 and the rest is larger PM (PM but not PM-10). Because PM-10 emissions are known, that number is used to determine minor NSR permit applicability.

Because the 5 tons per year of PM-10 emissions is below the new source threshold of 15 tons per year, the source is not subject to minor NSR permitting. Since the source is not subject to minor NSR permitting requirements for PM / PM-10, it is not "state major" either, since state major only applies when minor NSR applies.

Emissions of both PM and PM-10 are below PSD applicability levels.

Because the contribution of PM-10 to PM emissions is known, the PM-10 emissions are used to determine Title V applicability. The source is not subject to Title V because the PM-10 emissions of 5 tons per year are below the 100 ton per year threshold.

Case 2

Source 2 has 110 tons annual uncontrolled PM emissions. There is no information on the size distribution of this PM, so it is not known how much of it is PM-10. In this case, since there is no information on the PM-10 content of the PM, the minor NSR permit applicability is based on the 110 tons per year of PM. Since 110 tons exceeds the 25 tons per year exemption level, the facility is subject to minor NSR permitting for PM. It is also "state major" for PM, since the 110 tons per year exceeds the 100 ton per year threshold for state major permits. PM emissions are below PSD applicability levels.

Because the PM-10 fraction of PM emissions is unknown, PM emissions must be used to determine Title V applicability. The source is subject to Title V permitting because its 110 tons per year of PM emissions is above the 100 tons per year major source level.

Case 3

Source 3 has 150 tons annual uncontrolled PM emissions. It is known that 30 tons are PM-10 and the rest is larger PM (PM but not PM-10). Because PM-10 emissions are known, PM-10 emissions are used to determine minor NSR permit applicability.

Because the 30 tons per year of PM-10 emissions exceeds the new source exemption level of 15 tons per year, the source is subject to minor NSR permitting. Because the source is subject to minor NSR permitting for PM-10, the determination of whether or not it is state major needs to be made for both PM and PM-10. Since PM and PM-10 are both pollutants, it must be determined whether the permit will be a state

major permit for PM and/or for PM-10. Because PM emissions exceed 100 tons per year, the source is state major for PM. The source is not state major for PM-10 because its PM-10 uncontrolled emissions are less than 100 tons per year.

Both PM and PM-10 emissions are below PSD applicability levels.

Because the PM-10 fraction of PM emissions is known and PM-10 emissions are less than 100 tons per year, the source is not subject to Title V permitting because its 30 tons per year of PM-10 emissions is below the 100 tons per year major source level.

Case 4

Source 4 has 300 tons annual uncontrolled PM emissions. It is known that 10 tons are PM-10 and the rest is larger PM (PM but not PM-10). Because the PM-10 emissions are known, that number is used to determine minor NSR permit applicability. Since the 10 tons per year of PM-10 emissions is below the new source threshold of 15 tons per year, the source is not subject to minor NSR permitting. Since the source is not subject to minor NSR permitting for PM/PM-10, it is not state major either.

PSD applicability must be evaluated separately. Since the 300 tons per year of PM (assuming uncontrolled emissions are equal to the PTE) emissions exceed the major source threshold of 250 tons per year, the facility is subject to PSD for PM. However, the 10 tons per year of PM-10 is below the 250 tons per year major source threshold. Therefore the facility is not subject to PSD for PM-10.

In this case the PM-10 contribution to PM emissions is known. Because PM-10 emissions are below 100 tons per year, the source is not subject to Title V permitting.

Appendix K

B. Policy Guidance Memo on Non-Road Engines

OAPP-043-99

MEMORANDUM

TO: Karen Sismour
Regional Permit Manager, Tidewater Regional Office

FROM: C. L. Turner
Director, Office of Air Permit Programs

SUBJECT: Permitting and Compliance Issues for Non-road Internal Combustion Engines

DATE: December 1, 1999

Copies: John M. Daniel, Director, Division of Air Programs Coordination
John E. Schubert, Air Inspections Coordinator

Background and Issues Raised

A number of facilities are known to employ mobile diesel engines to provide compressed air, high-pressure water, or electricity as an integral part of their processes. These engines vary widely in size and emission rates. Many are at facilities which are permitted, although some are not. Types of sources using these engines include shipyards doing abrasive blasting operations, container cranes and straddle carriers[5] at Virginia Port Authority terminals, certain rides at Busch Gardens, and cement import/export terminals, among others. These engines frequently have uncontrolled or potential emissions above permit exemption levels. Some types of internal

[5] A straddle carrier is a diesel-powered wheeled vehicle that moves cranes and other equipment around on a facility. It is essentially shaped like an upside-down U, hanging over equipment it is carrying.

combustion engines have historically been subject to permitting, such as generators[6] and crushers. Others, such as hydroblasters and portable air compressors, have not traditionally received permits. The aggregate emissions of such engines and the rest of the facility where they are employed may trigger PSD major source levels. Some of these engines are rental units rather than being owned by the facility where they are employed.

The questions addressed by this Memo are: 1. what is the nature of our regulatory jurisdiction relative to these engines, and 2. what courses of action are open to us once the question of regulatory jurisdiction is resolved.

Discussion of Regulatory Jurisdiction

According to the Regulations for the Control and Abatement of Air Pollution (□the Regulations□), a stationary source is □a building, facility, structure, or installation which emits or may emit any air pollutant.□[7] The rules do not specify whether an emission unit which is movable within the facility is stationary. However, the Clean Air Act excludes from its definition of □stationary source□ the emissions □resulting from a non-road engine or non-road vehicle as described in section 216.□[8] Section 216, in turn, defines □non-road vehicle□ as a vehicle that is powered by a non-road engine and that is NOT:

-- a motor vehicle, or

-- a vehicle used solely for competition.[9]

Thus, internal combustion engines at shipyards that meet the definition of □non-road engines□ cannot be regulated as stationary sources. However, if they are not non-road engines, they could be either stationary or mobile sources. For this reason, it is worth examining the □non-road engines□ definition in federal rules.

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[6] See Memo No. 97-1001, dated January 22, 1997, subject: □Emergency Generators -- Permit Exemption Guidance.□ This is available at □K:\AGENCY\AIRGIDE\POLICY\97-1001.□ It is based on an EPA guidance memo issued the preceding year to help determine the potential to emit of seldom-used emergency generators.

[7] See the definitions of □stationary source□ in the permit program rules, as follows: for minor new source review, 9 VAC 5-80-10 B.; for PSD, 9 VAC 5-80-1710 C.; for non-attainment major, 9 VAC 5-80-2010 C.; for state operating permits, 9 VAC 5-80-810 C.; and for Title V, 9 VAC 5-80-60 C.

[8] Section 302(z) of the Clean Air Act, as cited in an EPA letter to the South Coast Air Quality Management District, dated March 30, 1993, page 2. This appears in Title III of the Act, pertaining to general provisions.

[9] Clean Air Act Amendments of 1990, Title II, part A, section 216(11). Title II of the Act pertains to □Emission Standards for Moving Sources.□ Section 216 is one of the authorities for 40 CFR Part 89, the federal rules governing emissions from non-road engines.

Non-Road Engines under Federal Rules

The federal rules on emissions from non-road engines appear in Title 40, Code of Federal Regulations, Part 89. These rules mandate EPA certification for the manufacture of "non-road engines" that "have a gross power output at or above 37 kilowatts and that are used for any purpose."[10] Non-road engines are defined as:

-- engines in or on a piece of equipment that is self-propelled and also accomplishes another function, such as lawn mowers;

-- engines that, by themselves or on a piece of equipment, are portable or transportable from one location to another.

Engines used in mining, aircraft, marine vessels, and some other uses are exempted.[11]

The definition in Part 89 provides several "indicia of transportability," which include but are not limited to 1) skids, 2) a carrying handle, 3) a dolly, 4) a trailer, or 5) a platform.[12] The definition continues to specify things that are not non-road engines:

-- engines used for motor vehicles or competition vehicles;

-- engines subject to an NSPS;[13] and

-- engines which are portable, but which stay at one location for 12 consecutive months (including replacement engines) or more (or full seasons at seasonal sources).[14]

Based on these definitions:

(1) **self-propelled cranes, straddle carriers, and other moving or movable machinery with internal combustion engines** are not stationary sources because they are powered by "non-road engines" as defined above;

(2) **Hydroblasters and portable air compressors** are powered by "non-road" engines if they possess any of the indicia of transportability mentioned above, and as such are not stationary sources;

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[10] Part 89, Sub-part A, section 89.1(a).

[11] Part 89, Sub-part A, section 89.2, definition of "non-road engine," sub-section (1).

[12] See sub-section (1)(iii).

[13] These are limited to stationary gas turbines. See the NSPS at 40 CFR Part 60, sub-part FF.

[14] Part 89, Sub-part A, section 89.2, definition of "non-road engine," sub-section (2).

(3) **If a piece of equipment is powered by an internal combustion engine but does not possess indicia of transportability**, it may, though it is portable, be treated as a stationary source if it stays in place for 12 consecutive months or more.

(4) **Sources which are movable** only through temporary construction or placement of rails and wheels for their movement, or through disassembly, are stationary sources.

Courses of Action

We have three essential interests in addressing the emissions from these internal combustion engines that can move around industrial or shipyard sites. The first interest is in having these engines meet requirements or standards which may apply to them. The second is in making sure adequate records are kept, so that the Department can tell when or whether the emissions budget is exceeded, or a PSD (or other) threshold is reached. The third is the collection of permit fees, based on annual emissions, from sources that happen to be Title V sources or sources subject to state operating permits.

Inspectors who find internal combustion engines during site visits should look to see whether the engines possess □indicia of transportability□ as discussed in this Memo and in Part 89. If they do, or if they are in fact movable under their own power, they are mobile sources, and not a matter of concern for stationary source permitting. If the engines can not move under their own power and have been in the same location for more than 12 consecutive months (possibly since the last annual site visit), they are stationary sources and the inspector may inform the source of the need to submit sufficient information to determine if the engine is subject to permitting. If the engines are discovered during permit review, the permit writer should request sufficient information to determine if emissions exceed the appropriate exemption level and should communicate the existence of the engine to compliance personnel.

I would like to thank you and your staff for their contributions to the drafting of this memorandum, and for your patience in this matter. If you have any questions regarding the content of this memo, please contact Charlie Ellis at (804) 698-4016.

Appendix L

Checklist for Permit Exemption Review

This step-by-step checklist is applicable to all permit applications. This list may be used to check-off each item as it is completed.

__ 1. Preliminary Meeting - (Optional) Discuss with the source the proposed permit including the regulatory requirements.

__ 2. Source Submits Application - Application may be a Form 7 or a letter.

__ 3. CEDS Entry - Enter application into the Comprehensive Environmental Data System (CEDS).

__ 4. Secondary Document - (Optional) Create a secondary document for the source if necessary.

__ 5. Completeness Review - Within 30 days of receipt of the application, conduct a completeness review. Applications for new sources must have approval from the local government. Applications or letters determined to be exempt do not need the approval letter.

__ 6. Review Letter - Send a Determination of Administratively Complete Letter or a Deficiency Letter to the source also within 30 days. Enter the date to CEDS

__ 7. Preliminary Emissions Calculations - (Optional) Calculate emissions using procedures given in the manual.

__ 8. Complete application - Source submits final information to deem the application complete.

__ 9. CEDS Entry - Enter the date the final information was received into CEDS.

__ 10. Regulatory Review - The exemption review procedures are the first part of the regulatory review and are detailed in the following steps.

__ a. . Identify each emission unit.

___ b. . If the emission unit is part of an existing source, determine whether the emission unit is a new emission unit or a modification to an existing emission unit.

___ c. . If the request is for an existing emission unit and does not qualify as a modification (item 12 above), check to see if it can be processed as an administrative amendment.

___ d. . Identify the emissions from each emission unit.

___ e. . Classify the emissions as Criteria Pollutants, NESHAP Pollutants and Toxic Pollutants, as the case may be.

___ f. . Complete emissions calculations.

___ g. . Check each emission unit to determine whether it is subject to a New Source Performance Standard (NSPS). If the emission unit is subject to an NSPS, it is not exempt and a permit is required with the exception of those units which would be subject only to record-keeping or reporting requirements or both under NSPS.

___ h. . Check each emission unit to determine whether it is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP). Consult 40 CFR Part 61. A source subject to any of these requirements is not exempt and a permit is required with the exception of those facilities which would be subject only to record-keeping or reporting requirements or both under NESHAP.

___ i. . Check each emission unit to determine whether it is subject to a National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT). Consult 40 CFR Part 63 and Chapter 10 of this manual for more guidance on MACT sources.

___ j. . If the emission unit is one of the sources listed in 9 VAC 5-80-11 C or 9 VAC 5-80-11 I 7 no exemption exists and a permit is required.

___ k. . If the emission unit is fuel burning, check the exemption levels listed in 9 VAC 5-80-11 B.1. Note that this section does not apply to internal combustion engines.

__ l. If the emission unit is not a fuel burning unit, check to see if it is listed in 9 VAC 5-80-11 B 2 to 18. Check to determine that the toxics exemption criteria 9 VAC 5-80-11 I are also met.

__ m. If the emission unit is not exempt by 9 VAC 5-80-11 B, compare the criteria pollutant emissions with 9 VAC 5-80-11 D for new emission units and 9 VAC 5-80-11 E for modified units. Check to determine that the toxics exemption criteria 9 VAC 5-80-11 I are also met.

__ 11. Exemption Letter - Write a letter to the applicant informing him that, based upon the information provided in his letter/application, his emission unit/s are exempt and a permit is not required. Advise him if registration is required.

__ 12. CEDS Entry - Enter the date the exemption letter was issued into CEDS.

G. Appendix M

Exemption Letter Boilerplate

[date]

I.D. No. -
Location:
Registration No:

Dear :

This will acknowledge the receipt of your permit application dated received on _____ . The Department of Environmental Quality (DEQ) staff has reviewed your request to construct and operate a _____ located at _____ , Virginia.

Based on this review, it has been determined that the emissions from the _____ are less than the emission rates for 3volatile organic compounds in 9 VAC 5-80-11 of the State of Virginia Regulations for the Control and Abatement of Air Pollution. The _____ is therefore exempt from the permitting requirements in 9 VAC 5-80-10 of the Regulations.

3[However, the is subject to the registration requirements and therefore subject to the Regulations and periodic inspections by the Department.] or [The information submitted will be kept on file as update information.] Any owner claiming that a facility is exempt from the provisions of Article 34 shall keep records in accordance with 9 VAC 5-40-50 F (formerly Section 120-04-05 F) as may be necessary to demonstrate to the satisfaction of the Department its continued exempt status.

Please reference the I.D. No. above on all future correspondence dealing with your facility. If you have any questions concerning this matter please contact at . Your concern for Virginia's air quality is appreciated.

Sincerely,

Jane A. Workman
Air Permit Manager

JAW//.xmt
Attachments:
cc:

Appendix N

Non-Attainment NSR Thresholds/Offset Ratios (as of 1/1/99)

REGION/LOCALITY	POLLUTANT	CLASSIFICATION	MAJOR SOURCE THRESHOLD	MINIMUM SIGNIFICANT	OFFSET
REGION I					
NONE					
REGION II					
NONE					
REGION III					
NONE					
REGION IV					
Stafford County	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
REGION V					
NONE					
REGION VI					
NONE					
REGION VII					
Alexandria City	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Arlington County	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Fairfax City	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Fairfax County	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Falls Church City	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Loudoun County	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Manassas City	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Manassas Park City	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1
Prince William County	VOC, NO_x	Serious	50 TPY	25 TPY	1.2:1

H. Appendix O

Minor NSR Engineering Analysis

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
_____Regional Office

INTRA-AGENCY MEMORANDUM

Permit Writer			
Memo To	Air Permit File	**Date**	
Facility Name			
Registration Number			
County-Plant I.D.			
UTM Coordinates (Zone 17)	**Easting (km)**		**Northing (km)**
Elevation (feet)			
Distance to Nearest Class I Area (select one)	**SNP (km)**		**JRF (km)**
FLM Notification Required (Y/N)			
AIRS Classification (A, SM, B)	**Before permit action**		**After permit action**
Pollutants for Which the Source is Title V Major	**Before permit action**		**After permit action**
PSD Major Source (Y/N)	**Before permit action**		**After permit action**
Pollutants for Which the Source is PSD Major	**Before permit action**		**After permit action**

I. Introduction

- *What is the facility and who is its owner?*
- *Where is the facility located?*
- *What does the facility do (i.e., manufacture, process)?*
- *What is the permit application for?*
- *What is the facility's past permit history?*

II. Emission Unit(s) / Process Description(s)

- *Provide a detailed description of each emission unit or process for which the applicant is requesting a permit, including pollutants being emitted by the process (do not quantify these emissions in this section).*
- *Detailed emission calculations must be provided as an attachment to the memo. Do not include calculations in the body of the memo. Do not discuss regulatory requirements pertaining to individual emission units in this section (i.e., exempt or requires permitting).*
- *Calculations must include emission factors, the source of emission factors (i.e., AP-42, MSDS), and sample calculations which are sufficient for the reviewer to verify results. Spreadsheets are recommended but not required. In the event that a spreadsheet is used do not "hide" emission factors in cell equations. Make certain that these factors are visible for the reviewer.*

III. Regulatory Review

This section must include all of the following regulatory sections. If certain sections do not apply, provide a brief statement of basis on why it is not applicable. In situations where an analysis was required to determine if a facility was subject to or exempt from specific regulatory requirements (i.e., MACT, NSPS, NESHAPS), a more detailed explanation is required.

A. 9 VAC 5-80-10 - Minor New Source Review

Provide a summary of why the facility is subject to or exempt from permitting requirements under this section. Permitting requirements under this section may be triggered ~~to~~ by any of the following.

- *New source size exemption levels, as defined by 9 VAC 5-80-11.B.*
- *New sources with no exemptions, as defined by 9 VAC 5-80-11.C.*
- *New source (i.e., "greenfield" facilities) exemption levels by emission rate, as defined by 9 VAC 5-80-11.D.*
  - *Include a table which provides a summary of uncontrolled emissions from the new emission units(s) and all corresponding minor NSR permit exemption rates. Uncontrolled emissions from units which are considered as part of a single process need to be totaled and compared to the applicable exemption rate(s).*
- *Modified source (i.e., existing facilities) exemption levels by emission rate, as defined by 9 VAC 5-80-11.E.*
  - *Include a table which provides a summary of uncontrolled emissions from the new and/or modified emission unit(s) and all corresponding minor NSR permit exemption rates. Uncontrolled emissions from units which are considered as part of a single process need to be totaled and compared to the applicable exemption rate(s).*
- *Emission unit(s) subject to New Source Performance Standards (9 VAC 5-50-400 et. seq.) or National Emission Standards for Hazardous Air Pollutants (9 VAC 5-60-60).*
- *An increase in uncontrolled toxic emissions in excess of applicable toxic exemption levels, as defined in 9 VAC 5-80-11.1.*
  - *Include a table which provides a summary of uncontrolled toxic emissions from the new and/or modified emission unit(s) and all corresponding toxic exemption levels. Uncontrolled emissions from units which are considered as part of a single process need to be totaled and compared to the applicable exemption rate(s). Toxic pollutants which do not have an associated Threshold Limit Value (TLV) are not required to be evaluated under current Department policy.*

B. 9 VAC 5 Chapter 80, Article 8 - PSD Major New Source Review

Provide a summary of why the facility is subject to or exempt from permitting requirements under this section. In most cases, facilities will be exempt from PSD permitting. In the event that the facility is subject to PSD, additional information will be required in the memo.

In cases where the facility performs a "netting analysis" to demonstrate that an emissions increase is not significant, provide a summary of this analysis and include a copy of the submitted netting analysis as an attachment to the memo.

In cases where the facility performs PSD applicability modeling (i.e., major sources located within 10 km of a Class I area), provide a statement that the net emissions increase does not result in a 24-hour average concentration of any regulated pollutant greater than or equal to 1 $\mu g/m^3$ in the Class 1 area. Exceedance of this threshold triggers PSD review.

C. 9 VAC 5 Chapter 50, Part II, Article 5 - NSPS

Provide a summary of any NSPS requirements which apply to the new or modified emission unit(s).

D. 9 VAC 5 Chapter 60, Part II, Article 1 - NESHAPS

Provide a summary of any NESHAPS requirements which apply to the new or modified emission unit(s).

E. 9 VAC 5 Chapter 60, Part II, Article 2 - MACT

Provide a summary of any MACT requirements which apply to the new or modified emission unit(s).

IV. Best Available Control Technology Review (BACT) (9 VAC 5-50-260)

Provide a summary of the BACT determination for the new and/or modified emission unit(s). A State BACT review typically does not involve a traditional "top-down" analysis; however, in some cases large emission increases may necessitate a more detailed BACT review. A BACT review is conducted on a pollutant-by-pollutant basis.

V. Summary of Controlled Emissions Increase

Provide a summary table of the controlled emissions increase(s). Any detailed calculations should be provided as an attachment to the memo. Units with total controlled emissions less than 0.5 TPY for a specific pollutant do not require a permit limit for that pollutant.

VI. Dispersion Modeling

In the event that modeling is required, each section below must contain a discussion of the following elements:

- *A statement verifying that the modeling analysis was performed in a manner consistent with the EPA Guideline on Air Quality Models (Appendix W of 40 CFR 51 – EPA-450/2-78-027R).*

- *Procedures used in conducting the modeling analysis, including:*

  - *models used and model options selected*
  - *terrain description, including treatment or intermediate terrain*
  - *emissions data and stack parameters modeled*
  - *meteorological data used*
  - *receptor locations*
  - *Good Engineering Practice (GEP) analysis (i.e., downwash)*
  - *rural/urban land use determination (Auer Scheme)*
  - *existence of a fenceline, public access area*

- *A Summary table of the modeling results which demonstrates compliance with all applicable standards (i.e., NAAQS, SAAC).*

In the event that the Central Office performs the modeling analysis, the modeling approval letter must be provided as an attachment to this memo. Under this circumstance, a detailed discussion of modeling procedures is not necessary for this section. However, a summary table is still required. Generally, all modeling other than SCREEN3 is performed by the Central Office.

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A. Criteria Pollutants

Provide a summary of why the facility is subject to or exempt from Department modeling requirements for criteria pollutants. Generally, no criteria pollutant modeling is required for a net emissions increase (i.e., controlled emissions) below the PSD Significant Levels. No modeling is required for ozone, nor for VOCs as criteria pollutants. The following are exceptions to this guidance:

- *Any net emissions increase of a regulated pollutant(s) at a "major" stationary source located within 10 kilometers of a Class I area must be evaluated to determine if its ambient impact is equal to or greater than 1 $\mu g/m^3$ (24-hour average). PSD permitting is required for any pollutant whose ambient impact is equal to or greater than this significance level.*

- *Any emissions increase of a criteria pollutant for which the facility is suspected to be in violation of the applicable National Ambient Air Quality Standard(s) (NAAQS) may need to be modeled.*

Fugitive emissions are not considered for determining the need for modeling, except as provided in the PSD definitions in 9 VAC 5 Chapter 80, Article 8 of the Regulations. Fugitive emissions must be included in modeling analyses for applications determined to be subject to PSD. Fugitive emissions are not to be modeled for non-PSD applications.

B. Toxic Pollutants

Provide a summary of why the facility is subject to or exempt from Department modeling requirements for toxic pollutants. No toxic pollutant modeling is required for a net emissions increase (i.e., controlled emissions) below the exemption rates as defined in 9 VAC 5-80-11 and 9 VAC 5 Chapter 50, Part II, Article 3. Toxic pollutants which do not have an associated Threshold Limit Value (TLV) are not required to be evaluated under the current Department policy.

Additionally, no toxic pollutant modeling is required for any process covered by a source-specific exemption in 9 VAC 5-80-11.B.

VII. Boilerplate Deviations

Discuss which boilerplate was used to develop the permit. List each permit condition which deviates from the standard boilerplate language. Additionally, discuss any deviation from Department boilerplate procedures.

VIII. Compliance Demonstration

Provide a discussion of the permit conditions which have been established to ensure initial and continuing compliance with applicable emission limits. The discussion may include any of the following:

- *stack testing requirements*
- *visible emissions evaluation (VEE)*
- *record-keeping, monitoring and reporting requirements*

IX. Title V Review - 9 VAC 5 Chapter 80, Article 1

Provide a brief discussion of the facility's Title V status, including:

- *the effect of this permit action on the facility's Title V status*
- *Title V permit administrative amendment, minor modification, or significant modification requirements triggered by this permit action*
- *Title V application submittal requirements triggered by this permit action*

In situations where a facility's emissions are in a close proximity to Title V major source thresholds, it is appropriate to include a summary table showing facility-wide emissions with a comparison to the applicable Title V major source thresholds.

X. Other Considerations

Provide a summary of any additional information relevant to the processing of this permit action which has not been discussed in any of the previous sections.

XI. Recommendations

Provide a recommendation of approval or disapproval of this permit action.

Attachments

Remember to include calculations as an attachment. Any relevant supporting documentation may also be included as an attachment to the memo.

Appendix P

Minor Source Permit Review Procedure and Checklist

Minor source permits are usually approved by Regional Directors, if no significant deviations from the boilerplates were made. The minor source checklist is usually used instead of a formal engineering analysis.

A. REFERENCES

1. SAPCB Regulations for the Control and Abatement of Air Pollution.

2. U.S. EPA, New Source Review Workshop Manual -- Prevention of Significant Deterioration and Non attainment Area Permitting, Draft October 1990.

3. Code of Federal Regulations, 40 CFR Part 60 and Appendices.

4. Code of Federal Regulations, 40 CFR Part 61 and Appendices.

5. Code of Federal Regulations, 40 CFR Part 63 and Appendices.

B. APPLICABILITY DETERMINATION

DEFINITION - Minor Sources are sources not exempted by 9 VAC 5-80-11 of the Regulations, but that are not defined as major stationary sources or major modifications in 9 VAC 5-80-10 B.

C. PERMIT PROCESSING

These step-by-step procedures are applicable to state minor permits and minor modifications.

Public hearings or briefings are not normally required for minor permits. In some rare cases, a minor source may be so controversial that a public hearing will be required.

__ 1. Preliminary Meeting - (Optional) Discuss with the source the proposed permit application including the regulatory requirements.

2. Source Submits Application.

__ 3. CEDS Entry - Enter the pertinent information into the Comprehensive Environmental Database System (CEDS).

__ 4. Secondary Merge File - (Optional) Create a secondary merge file that can be merged with the various permit boilerplates and letters.

__ 5. FLM Notification - Under most circumstances, notification to the FLM for minor permits is not required unless the source is within 10 km of a Class I Area. If this is the case, the Form 7 and accompanying information must be sent to the FLM within 7 days after receipt of the application.

__ 6. CEDS Entry - (If required) Enter the date the FLM letter was sent.

__ 7. Completeness Review - Within 30 days of receipt of the application, conduct a completeness review. Applications for new sources must have approval from the local government (local certification form).

__8. CEDS Entry - Enter the date the review letter was sent.

__ 9. Review Letter - Send a Determination of Administratively Complete Letter or a Deficiency Letter to the source within 30 days of receipt of the application.

__ 10. Local History Determination - The regional office notifies the local government of the application by telephone or in writing in those cases that do not automatically go to public hearing.

__ 11. Preliminary Emissions Calculations - Calculate emissions using appropriate methods.

__ 12. Receive All Required Information - Source submits all information necessary for the permit writer to determine that the application is complete.

13. CEDS Entry - Enter the date the final information was received.

__ 14. Regulatory Review - Review the applicable NSPS regulations. Note, more than one NSPS may apply.

__ 15. Minor Permit Checklist - Complete the Minor Permit Checklist (attached)

__ 16. Engineering Evaluation - Although no formal engineering analysis is required for minor permits, it is necessary to document all pertinent calculations and assumptions. Also, BACT needs to be briefly addressed if it is not clearly covered by the permit boilerplate. If modeling was performed it may be summarized here.

__ 17. Draft the Permit - Draft the permit using the appropriate boilerplate conditions found in CEDS also complete boilerplates for source categories and general conditions can be found in K:\AGENCY\BP_REVW\\CND\WORD. Note that the 10A.PER is the generic boilerplate which can be used for most sources. Conditions from different boilerplates can be added to create a hybrid boilerplate. Other pre-approved conditions can be added to boilerplates and still be signed in the Regional Office.

__ 18. Draft Permit Routing - Route the draft permit package through the Regional Office as necessary.

__ 19. Comments from Applicant - Send a copy of the draft permit to the applicant for comments.

__ 20. Permit Issuance - If no comments are received from the applicant, issue the permit with the Regional Director's signature.

__ 21. Source Action Report - Complete the Source Action Report (SAR).

__ 22. CEDS Entry - Enter the date of permit issuance into CEDS.

__ 23. Compliance Tracking & Emissions Tracking - Follow Regional Office procedures for entering the permit data into CEDS.

PERMIT CHECK LIST

The following people have reviewed the permit:
Reviewing Environmental Engineer: _____
Environmental Inspector: _____
Environmental Compliance Manager: _____

Date:
Source Name: Registration No: I.D. No.: -0
Source Location: ,
Mail Address: ,
Source Status: ___ Greenfield ___ Currently operating
Source Classification: ___ Minor ___ SynMinor ___ PSD Major ___ TV Major

Permit Action: (Describe new/modified equipment and/or processes, include maximum rated capacities)
Permit Action Type:
___ Minor ___ State Major ___ PSD ___ NA ___ SOP ___ TV
___New ___ Modification ___ Amendment
___(Y/N) Permit Includes All Emission Units at Source.
___(Y/N) Permit Allows Source to avoid Title V/MACT/etc.
After this permit, source is: ___ Major (A) ___ Minor (B) ___ Synthetic minor (SM)
(____Pollutant, ____Pollutant, ____Pollutant)

Permit Application Review

___ Permit application submitted, or ___ Letter Request
Application Received Date
Application Complete Date
___ Document Certification Form received with Form 7 (9 VAC 5-80-10, D.4.)
___ Confidential information with sanitized copy. If yes, which sections:
___ throughputs ___ individual pollutants ___ flow diagrams ___ calculations
___ process descriptions ___ other (describe)
___ Copy of letter from local official for greenfield, or major modified sources
___ Copy of letter sent to FLM if applicable. (Comments)
This permit supersedes permit(s) dated _____.

Regulatory Review

BACT Determination (check one):
___ [Control Strategy/Equipment] @ ___ % efficiency for the control of ____ meets BACT
(Comments)_____, or
___ TV/SOP or Amendment - BACT not applicable.
___(Y/N) NSPS/MACT/NESHAPS Applicability: If Y, Subpart(s):
_____ NSPS
MACT (if yes, an engineering write-up & public hearing are necessary)
NESHAPs (if yes, an engineering write-up & public hearing are necessary)
___(Y/N) Existing Rules (9 VAC 5 Chapter 40) Applicability: If Y, Rule(s):
Toxic Pollutants (check one):
___ Exempt, or ___ in compliance with 9 VAC 5-50-220, or ___ not evaluated
[Comments: _____]

Regulatory Review (cont.)
Modeling (check one):
___ Attached (including background monitors), or
___ Copy of approval letter from modeling section, or
___ No modeling required by agency policy (< modeling significance levels, etc.)

Site Suitability:
___ Site suitable from an air pollution standpoint, inspection date _____,or no inspection required because _____.

___ Calculation sheet(s) attached
___(Y/N) NSR Netting Comments (Explain Permit History):
Permit includes: ___ Stack Testing ___ CEM ___ VEE by source

Public Participation
___(Y/N) Public Noticed. If yes, Public Notice Date:
___(Y/N) Public Notice Comments. If yes, number and nature of comments: (See attached)
___(Y/N) Public Hearing: If yes, Public Hearing Date:

EPA Review
____(Y/N) EPA Review. If yes, Date proposed permit sent to EPA_____.
____(Y/N) EPA Comments. If yes, give a brief summary_____.

Other Comments and Final Recommendations (attach memo or list below):

Comments:

Final Recommendation: Recommend Approval.

Environmental Engineer's Signature:

Air Permit Manager's Signature:

Appendix Q

C. State Major Source Permit Review Procedure

INTRODUCTION

This appendix addresses the permitting process for state major sources and state major modifications. NESHAP permits must also be processed under these procedures. NSPS permits may be processed under the Minor Source Permit Review Procedures (**Appendix P**) if applicable.

A state major source or state major modification may be subject to Non-attainment review and must be processed under the Non-attainment Major Source Permit Review Procedures. The addition of a new emissions unit at a state major source may be processed under the Minor Source Permit Review Procedures (**Appendix P**) if applicable. Amendments to state major source permits should be processed under the procedures in **Chapter 2**, section **C**.

I. A. REFERENCES

1. SAPCB Regulations for the Control and Abatement of Air Pollution.

2. U.S. EPA, New Source Review Workshop Manual -- Prevention of Significant Deterioration and Non-attainment Area Permitting, Draft October 1990.

3. Code of Federal Regulations, 40 CFR Part 60 and Appendices.

4. Code of Federal Regulations, 40 CFR Part 61 and Appendices.

5. Code of Federal Regulations, 40 CFR Part 63 and Appendices.

6. Summary of New Source Performance Standards provided by OAPP.

J. B. APPLICABILITY DETERMINATION

DEFINITION - State Major Sources or Major Modifications are defined in 9 VAC 5-80-10 of the Regulations.

If the permit limits the emissions to less than 100 tons per year for each regulated pollutant, then the source is not a state major.

"Major modification" means any modification defined as such in 9 VAC 5-80-20 or 9 VAC 5-80-30, as may apply.

C. PERMIT PROCESSING

These step-by-step guidelines are applicable to state major sources and state major modifications. If the source is also subject to Non-attainment major permitting (9 VAC 5-80-30), refer to **Chapter 5**, section **F** for additional requirements.

__ 1. Preliminary Meeting - Discuss with the source the proposed permit including the regulatory requirements. This meeting is not mandatory but may be helpful in clarifying issues.

__ 2. Source Submits Form 7 Application

__ 3. CEDS Entry - Enter the application date received into the Comprehensive Environmental Database Systems (CEDS)

__ 4. Secondary Merge File - (Optional) See K:\AGENCY\DTE\PERMAST\ INSTRUCT.MER for more information on merging.

__ 5. FLM Notification - If the application is for a state major source within 100 km of a Class I area, notify the appropriate Federal Land Manager (FLM) within 7 days after receiving the application.

__ 6. CEDS Entry - Enter the date the FLM letter was sent (if required).

__ 7. Completeness Review - Within 30 days of receipt of the application, conduct a completeness review. Applications for new sources and major modifications must have approval from the local government.

__ 8. Review Letter - Send a Determination of Administratively Complete Letter or a Deficiency Letter to the source within 30 days of receipt of the application.

__ 9. New Registration Number - Submit page 1 of Form 7 to Data Analysis if a new registration number is required.

__ 10. CEDS Entry - Enter the date the review letter was sent.

__ 11. Applicant Public Notice - No later than 15 days after receiving the Department letter (#7 above), the applicant must place a public notice in the local newspaper (see 9 VAC 5-80-10 G.1.). (This is not required for a minor NESHAP.) This is normally done as part of public notice, item #22 below.

__ 12. CEDS Entry - Enter the date the of the public notice.

__ 13. Emissions Calculations - Calculate emissions as appropriate.

__ 14. Complete application - Source submits final information to enable the permit writer to determine that the application is complete.

__ 15. CEDS Entry - Enter the date the final information was received, in the Technically complete block.

__ 16. Regulatory Review - Review the applicability of the air regulations such as NSPS, NESHAP, Non-Attainment, etc. Note: more than one NSPS may apply.

__ 17. Engineering Evaluation - Prepare a written engineering analysis, including emissions calculations, BACT analysis, Modeling (if required) and Toxics Analysis (if required).

__ 18. Draft Permit - Draft the permit using appropriate boilerplate permits or the 10A. Per or Mer in K:\AGENCY\BP_REVW\CND\WORD.

__ 19. Comments from Applicant - Send a copy of the draft permit to the applicant for comments (specify a response date).

__ 20. Route Permit as Appropriate for your Regional Office

__ 21. Permit Package Approval - Submit the following permit package to the Regional Director in order to request approval for a public hearing. Do not proceed to the next step without approval of the permit package.

a. Permit Application
b. Calculations
c. Public Participation Items including opening statement, public hearing notice, Virginia Register notice, and documents concerning public comment period
d. Draft Permit

__ 22. Public Comment Period - Publish the public hearing notice in local or regional newspapers to provide for a 30 day public comment period. Send a copy of the notice to EPA and local and state agencies sharing the region (see Section 9 VAC 5-80-10 G 5.b.). Send out the Virginia Register Form. Where there is an applicant public notice, pursuant to 9 VAC 5-80-10 G.1. and –G.2., follow the same procedure.

__ 23. Public Briefing - May hold a public briefing days in advance or 30 minutes prior to the public hearing.

__ 24. Public Hearing - Hold the public hearing using procedures described in **Chapter 12** of this Manual.

__ 25. Response to Comments - Prepare a hearing summary, respond to comments, prepare a final draft permit, and provide a copy of the draft permit to the applicant for comments.

__ 26. Final Draft - Submit the final draft permit package to the Regional Director for approval. This package should include the hearing summary, response to comments, and final draft permit.

__ 27. Board Review - If Board action is required, prepare Board Book write-up.

__ 28. Permit Signature - The Regional Director signs the approved permit.

__ 29. Source Action Report and Distribution - Complete Source Action Report (SAR) and distribute the signed permit.

__ 30. CEDS Entry - Enter the date the permit was issued.

Appendix R

D. Source Testing Report Format

Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

Certification

1. Signed by team leader / certified observer (include certification date)
* 2. Signed by reviewer

Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
* 4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
* 4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix

* 1. Process data and emission results example calculations
2. Raw field data
* 3. Laboratory reports
4. Raw production data
* 5. Calibration procedures and results
6. Project participants and titles

7. Related correspondence
8. Standard procedures

* Not applicable to visible emission evaluations.

Appendix S

E. Affected States' Addresses

The Eastern Tennessee-Southwestern Virginia Interstate Air Quality Control Region is one which Virginia shares with Tennessee. The contact person for sending notifications to Tennessee is:

Mr. Tupili Reddi
Chief, Operating Permit Program
Tennessee Air Pollution Control
9th floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1531

E-mail: treddi@mail.state.tn.us

The National Capital Interstate Air Quality Control Region is one which Virginia shares with Maryland and the District of Columbia. Contact people are:

for Maryland: Mr. David Mummert
Chief, Technical Support Division
Air Quality Permits
Department of the Environment
2500 Broening Highway
Baltimore, Maryland 21204

E-mail: dmummert@mde.state.md.us

for the District of Columbia:
Mr. Stanley Tracey
D.C. Environmental Health Administration
Air Resources Management Division
51 N Street, N.E.
Washington, D.C. 20002

E-mail: stracey@mail.environ.state.dc.us

Appendix T

EPA Region III Address

The contact person for EPA Region III, for purposes of sending public notices for NSR permits, is:

U.S. Environmental Protection Agency
Region III
Air Protection Division, Attn: Ms. Makeba Morris
Mail Code 3 AP 00
1650 Arch Street
Philadelphia, Pennsylvania 19103

E-mail: morris.makeba@epamail.epa.gov

Appendix U

Addresses of Federal Land Managers

(see also **Chapter 3**, section **C.**)

As indicated in section **E.**(4)(G) of Chapter 12, it is necessary to contact the appropriate Federal Land Manager in cases where a major source is located within 100 kilometers (approximately 60 miles) of either the James River Face Wilderness area in the Jefferson National Forest or the Shenandoah National Park. Similarly, the Federal Land Manager must be contacted in all cases where any source locates within 10 kilometers (approximately 6 miles) of either of these areas.

The Federal Land Manager for the James River Face Wilderness area is the Forest Supervisor of the Jefferson National Forest. Similarly, the Federal Land Manager for Shenandoah National Park is the Park Superintendent. The names and addresses of their staff contacts are:

Cindy Huber
Jefferson National Forest
5162 Valley Pointe Parkway
Roanoke, Virginia 24019

E-mail: chuber/r8_gwjeff@fs.fed.us

Christi Gordon
Shenandoah National Park
Route 4, Box 292
Luray, Virginia 22835

E-mail: christi_gordon@nps.gov

Appendix V

F. Sample Source Fact Sheet

MOUNTAIN VIEW RENDERING

December 14, 1998

PUBLIC HEARING FOR PROPOSED AIR PERMIT MODIFICATION

Currently, the proposed permit contains the following changes:

65% Increase in Production
(from 130,000 to 214,000 tons per year)

- allows full utilization of equipment
- allows for additional material received from changes in wastewater pretreatment
- allows for increased raw material due to further processing of poultry

20% Increase in Hours of Operation
(from 6,240 to 7,488 hours per year)

Change in Log In/Log Out Procedures

- Trucks will log in and out only: 120 minute time limit will now include time required for washing and exiting property

Annual Review of Diversion Plan

Annual Review of Maintenance Plan

Emission Limits Established for Scrubbers

Changes in Odor Monitoring Requirements

- Initially requires more frequent

monitoring
- Allows MVR to request reduction in frequency following 4 successful audits
- Requires initial performance test (never before required)
- Requires initial performance test (never before required)
- Requires more record keeping as indicator of performance

Specified Number of Excursions to Truck

Standing Times

- 2 vehicles per week for not more than 180 minutes, April through October
- 10 vehicles per week for not more than 240 minutes, November through March

Limit Established on Fuel Usage

Limit Established on Visible Emissions from Boilers

Appendix W

DEQ Policy on Public Hearings

[The text below is copied from a 1996 memo signed by John Daniel, the Air Division Director, on public hearings for major permits.]

July 12, 1996

MEMORANDUM

TO: Regional Directors

FROM: John M. Daniel, Jr.

SUBJECT: Public Hearing Policy for Major Permits

Attached is the final version of the Air Division Public Hearing Policy. We appreciate the comments that you submitted, and we incorporated those that we could without violating the language in Section 10.1-1307.01 of the Virginia Code and the Board's regulations.

We tried to find a way to shorten the 45 days, but did not see how we could do that. Our regulations say that the public hearing will be held at the end of the 30-day comment period, and the Code says that written comments must be accepted for 15 days following the hearing.

While this is not spelled out in the policy, you only need to count "Fugitive Emissions" for those 26 source categories specified in Section 120-08-02 B.3. (9 VAC 5-80-20, "Major Stationary Source," (3) of the Board's regulations.

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR DIVISION POLICY STATEMENT NO. 3-96

SUBJECT: Public Hearing Policy for Major Permits

REFERENCES: Code of Virginia, Applicable State Air Pollution Control Board Regulations

EFFECTIVE DATE: July 1, 1996

I. PURPOSE

This policy sets forth the procedures that shall be followed to meet the requirements of Section 10-1.1307.01 of the Code of Virginia on MAJOR air permits.

II. BACKGROUND

This policy is based on Section 10.1-1307.01 of the Air Pollution Control Law of Virginia. This section specifies that after June 30, 1994, certain specific requirements must be met when processing variances, promulgating regulations, and issuing major source permits. Specifically, DEQ must publish or require the source to publish a notice in a local paper of general circulation in the localities particularly affected at least thirty days prior to the close of any public comment period. The notice shall contain a statement of the estimated local impact which, at the minimum, shall provide information on quantity of fuels to be used and quantities of each pollutant to be emitted.

A copy of the public notice must be sent to the chief elected official, the chief administrative officer, and the planning district commission for those localities.

Written comments must be received for at least 15 days following any public hearing.

III. STATEMENT OF POLICY

A. DEFINITIONS:

(1) **Major Air Permit:** A major permit is any permit:

a. for a new stationary source (new registration) or

b. for a change at an existing stationary source that allows emissions of 100 tons or more of any criteria pollutant, except in Northern Virginia, in which case any permit that allows

emissions of 50 tons or more of NO_x or VOC is considered major.

c. for changes at existing PSD and non-attainment sources, which exceed the PSD or non-attainment significance level.

d. statewide, that allows emissions of 10 or more tons of a single HAP or 25 or more tons of a combination of HAPs, as listed in AQP-5.

(2) **Locality Particularly Affected:** Any locality which bears any identified disproportionate material air quality impact not experienced by other localities.

(3) **Disproportionate Material Impact:** The locality in which the source is located or plans to locate and any other locality within a five-mile radius of the source.

B. PUBLIC HEARING NOTICE:

Any notice of a public comment period or hearing for a major air permit as defined above shall contain the following information:

* The quantity of each specific pollutant emitted.

* The quantity of fuels to be used.

The public notice shall be published in a newspaper of general circulation in any localities particularly affected as defined above and shall specify that comments will be accepted for 15 days following the day of the public hearing, if any.

A copy of the public notice shall be mailed to the chief elected office and chief administrative officer of any locality particularly affected and the planning district commission for those localities.

APPROVED:

/S/
John M. Daniel, Jr., Director
Air Division

/S/
Robert G. Burnley, Director
Program Support and Evaluation

Appendix X

G. Public Hearing Guidelines

[The text below is copied from a "Public Hearing Checklist" in the files of at least one DEQ regional office. The date of origin and the author are unknown to the Manual committee.]

Site Reconnaissance

- Seating capacity
- Control of entrances
- Lectern (DEQ)
- Front table and chairs
- Audio
  - Microphone for lectern (DEQ)
  - Microphone for front table
  - Microphone for lectern (public)
- Visual
  - Screen (size appropriate for audience)
  - Slide projector (location, size of projection)
  - Overhead projector (location, size of projection)
  - Spare bulbs
  - Extension cords

Prior to Hearing

- Rehearse
- Preview all graphics
  - concise and understandable
  - readable by entire audience
- Check audio systems (operator)
- Check visual systems (operator)
- Check tape recorder and tapes (operator)
- Prepare sign-up sheets
  - Time, Name, Address, Organization, Request to speak, Title of elected officials
  - Establish system (personnel) to prioritize speakers (elected officials, then by time of sign-in)
  - Establish system (personnel) to notify speakers of time limits

Immediately Prior to Hearing

Check all microphones (personnel to operate)
Check all projectors (personnel to operate)
Prevent entrance of posters and banners
Place sign-up sheets (1/2 hour or 1 hour prior to start)
Assign individual to monitor the sign-up sheets
Check front table, chairs, two lecterns
Obtain prioritized list of speakers
Check tape recorder (personnel to operate)
Check system for timing speakers
Check individual assigned to take notes

Content of Regional Director's Introduction (see sample, **Appendix Y**)

Greeting
Self introduction
Description of draft permit to be discussed
Status of permit
Description of two different parts of proceedings
1. Information briefing and question period
2. Public hearing
Ground rules for each part will be described before that part
General ground rules - applause and other types of audience participation is inappropriate and impolite
Introduction of briefing/hearing officer

Content of Introduction to Information Briefing

Purpose
Sequence of information briefing
Question period at the end of briefing. Please hold questions until that time.
Applause and audience participation is inappropriate.
Testimony should be provided during public hearing which will follow information briefing. Only questions will be addressed in this part of proceeding. Questions must relate to air quality issues.
Debate of issues is not appropriate.
The proceedings during the information briefing will not be recorded and are not part of the public record
Recommend audience members sign in if they have not done so and indicate if they wish to present testimony
Information briefing
Location of facility
History
Description of facilities

Pre-construction monitoring
Controls/BACT
Air quality analysis
Permit conditions

Announcement of break until Public Hearing

Content of Introduction to Public Hearing

Purpose
Ground rules for order of speakers - elected officials and then by order of sign-in
Ground rules for time limit
Applause or other types of audience participation is inappropriate
Other boilerplate

During Hearing

Eliminate applause and demonstrations
Enforce time limits

Appendix Y

Sample DEQ Opening Statement

My name is _____ and I am the Regional Director for the _____ Regional Office of the Department of Environmental Quality. I have been designated by the Board to conduct this hearing.

This public hearing of December 14, 1998, is being held by the State Air Pollution Control Board in accordance with 9 VAC 5-80-10 of its regulations. As required by law, the public was given notice of this hearing in the "Northern Virginia Daily" on November 14, 1998.

The subject of this hearing concerns an application by Mountain View Rendering to increase the allowable number of hours of operation and the production limit in their permit for the rendering plant they now operate at Columbia Furnace.

The increase in pollutants emitted would be 4 tons per year of particulate emissions and 1.7 tons per year of volatile organic compounds (VOC).

Emissions will be controlled by a combination of incineration and chemical scrubbing.

This public hearing serves the purpose of receiving statements and recording the position of the organization you represent or your own personal view on the subject under consideration. All written statements filed with the hearing officer today become part of the official record whether they are read in their entirety in the public hearing or summarized orally. Testimony will be received today only on the subject of this hearing. Because this is not an adversary proceeding as in a court of law, statements need not

be sworn nor will there be cross-examination. Debates between individual speakers will be ruled out of order and will not be included in the official record.

An electronic transcript is being taken of all testimonies at this hearing. When you are called for your statement, please come forward, speak distinctly into the microphone and state your name and the organization that you represent, or the fact that you are speaking as an individual. To conserve time, you are requested to file any lengthy written material for the record and summarize your statement orally at this hearing. It is requested that two copies of your presentation be furnished for entry into the hearing record.

All of you who have not signed the attendance sheet, please do so. Speakers will be called in the order in which they signed in. Additional comments may be submitted in writing, and will become part of the public record just as oral comments will.

Elected state and local officials will be allowed to speak first. Are there any elected state or local officials present who wish to speak? Would you state your name and your position?

Appendix Z

Response to Comments: Model Letter

[Regional Office letterhead]

[Date]

Name
Address
City or Town, State, zip code

Permit for [company name]
[facility name]
[registration number]

Dear [Name]:

The [_____] Regional Office of the Virginia Department of Environmental Quality thanks you for your participation in the public review process for the above-named new source review permit action. We have received and reviewed your comments and have the following analysis.

1. You stated that [_____].

In response, we believe that [_____].

2. You stated that [_____].

In response, we believe that [_____].

[etc.]

Again, thank you for participating in the public review of this permit action.

Sincerely,

[_____]
Regional Director/designate

Appendix AA

Tentative Shutdown Letter

for Tentative Shut-down Decision
[K:\AGENCY\DTE\PERMAST\SHUTDOWN\TENTALTR]

[Regional Letterhead]

(date)

Mr./Ms. (first name, last name)
(Title)
(Source name)
(Source address)
(City or town), Virginia (zip)

Location: (describe)
Registration No. (_____)
County: (_____)
Plant No. (_____)

Dear [Name]:

The Commonwealth of Virginia's Regulations for the Control and Abatement of Air Pollution, at [9 VAC 5-20-220 and 9 VAC 5-80-****], provide a procedure for the Department of Environmental Quality to follow in making a final determination that a source is permanently shut down. The Regulations require the Department to give the owner notice of a tentative determination and to provide an opportunity for the owner to challenge the determination in writing and, if desired, in a formal hearing before the State Air Pollution Control Board. If the determination becomes final, the Regulations require the Department to revoke the applicable permits.

The Department has made a tentative determination that the [facility], located at [address, town or city], Virginia (Registration No. [*****]), is permanently shut down.

This decision will become final if the owner of the [facility] fails to provide, within 3 months of receipt of this letter, a written response informing the Department that the

shut-down of the [facility] is not to be considered permanent. This response shall include (1) the basis for the assertion that the shut-down is not to be considered permanent, and (2) the projected date for re-starting the facility. The response shall also include a request for a formal hearing if the owner wishes to exercise that right. The response should be addressed to:

Director, [name] Regional Office
Virginia Department of Environmental Quality
[address]
[city or town], Virginia [zip code]

If no response is received by this regional office within three months, or if the Department finds that the basis for the assertion is not sound or the projected date for re-starting allows for an unreasonably long period of inoperation, then the decision to consider the shut-down permanent will become final and the applicable permits will be revoked.

If you have any questions concerning this tentative determination or if you have questions concerning the response necessary to challenge this determination, please call this regional office at [telephone number].

Sincerely,

[Regional Director's name]
Regional Director

for

[Director's name]
Director

cc: Director, Office of Air Permit Programs
Manager, Data Analysis Section, Office of Air Quality Programs
Air Inspections Coordinator

Appendix BB

Mutual Shutdown Letter

for Mutual Shut-down Decision
[K:\AGENCY\DTE\PERMAST\SHUTDOWN\JEDMUT.WPD]

[Regional Letterhead]

(date)

Mr./Ms. (first name, last name)
(Title)
(Source name)
(Source address)
(City or town), Virginia (zip)

Location: (describe)
Registration No. (_____)
County: (_____)
Plant No. (_____)

Dear [Name]:

In response to your letter dated [_____], the Department of Environmental Quality is joining you in a mutual determination, pursuant to [9 VAC 5-80-**** and 9 VAC 5-20-220] of Virginia's Regulations for the Control and Abatement of Air Pollution, regarding the shutting down of a source. The Regulations provide that the Department and the owner of a source may make a mutual determination that a stationary source or emissions unit is shut down permanently. The Regulations also require that, upon making a final decision that the source is permanently shut down, the Department revoke the permit (9 VAC 5-80-*****).

In execution of this mutual determination of permanent shut-down, [source name] agrees that:

1. A mutual and final determination has been made that the [facility or emissions unit] at [location] in [city or town], Virginia is permanently shut down;

2. [Source name] is the sole □ owner,□ as defined in the Regulations, of the [facility or emissions unit];

3. [All air permits] [The air permit] issued for the [facility or emissions unit], dated [___ and ___], [is/are] revoked;

4. The Department of Environmental Quality will remove the [facility or emissions unit] from the air emission inventory and will consider its air pollutant emissions to be zero in any future air quality analysis to be conducted; and

5. Upon signature of this document by the Department and by [source name], the [facility or emissions unit] shall cease operations. No future operations shall occur until the owner has obtained a permit pursuant to 9 VAC 5 Chapter 80. Any use of the [facility or emissions unit] after execution of this document shall be considered equivalent to construction and operation of a new emissions unit and will subject [source name] to the requirement to obtain a permit pursuant to applicable provisions of 9 VAC 5 Chapter 80 in the Regulations.

6. The permanent shut-down of [facility or emission unit] will become effective upon signature of this document by both parties.

7. The permanent shut-down of [facility or emission unit] is binding upon [Source name], its successors in interest, designees, and assigns, jointly and severally.

By authorized signature below, and in accordance with the Virginia Regulations for the Control and Abatement of Air Pollution, [Source name] and the Department of Environmental Quality, acting on behalf of the State Air Pollution Control Board, mutually determine that the [facility or emissions unit] is shut down permanently.

Date:_____ _____

Director
Department of Environmental Quality

The terms and conditions of this determination are accepted by [Source name].

Date:_____ _____

[Title]

State of Virginia
City/County of _____

The foregoing instrument was acknowledged before me this _____
by
(Date)

_____, _____ of
(Name) (Title)

[Source name], a _____ corporation, on
(Place of Incorporation)

behalf of the corporation.

_____ _____
(Date) (Notary Public)

My commission expires: _____
(Date)

Appendix CC

Final Shutdown Letter

for Final Shut-down of Source or Unit
[K:\AGENCY\DTE\PERMAST\SHUTDOWN\FINALLTR]

[Regional Letterhead]

(date)

Mr./Ms. (first name, last name)
(Title)
(Source name)
(Source address)
(City or town), Virginia (zip)

Location: (describe)
Registration No. (_____)
County: (_____)
Plant No. (_____)

Dear [Name]:

The Commonwealth of Virginia's Regulations for the Control and Abatement of Air Pollution, at [9 VAC 5-20-220 and 9 VAC 5-80-****], provide a procedure for the Department of Environmental Quality to follow in making a final determination that a source is permanently shut down. In accordance with the Regulations, this office notified you, in a letter dated [date], of the Department's tentative determination that the [facility], located at [location, town/city, etc.], is permanently shut down.

[We did not receive a response to that letter within the three-month period allowed in the Regulations for challenging this determination (see 9 VAC 5-80-*****).] [We received a response, dated [date], challenging the tentative determination.] [The response also requested a formal hearing before the State Air Pollution Control Board pursuant to 9 VAC 5-80-*****.]

[A hearing was held on [date].] [After consideration of the owner's response,] the Department has made a final determination that the [facility] is permanently shut down. Upon making a final decision that a source is permanently shut down, the Department is required by the Regulations to revoke all applicable permits (9 VAC 5-80-*****).

Accordingly, you are hereby notified that:

1. [All air permits] [The air permit] issued for the [facility], registration number [******] and dated [date(s)], [is/are] revoked; and

2. The Department of Environmental Quality will remove the [facility] from the air emission inventory and will consider its air pollutant emissions to be zero in any future air quality analysis; and

3. The [facility], or any portion thereof, shall not re-commence operation unless it is authorized by a new permit issued under the applicable provisions of Chapter 80 of the Regulations.

If you have any questions concerning this final determination or the revocation of the cited permit(s), please call this regional office at [telephone number].

Sincerely,

[Regional Director's name]
Regional Director

for

[Director's name]
Director

cc: Director, Office of Air Permit Programs
Manager, Data Analysis Section, Office of Air Quality Programs
Air Inspections Coordinator

Appendix DD

Pollution Prevention Information

Pollution Prevention and Pollution Control
Know Your Options

Pollution Prevention May Help Your Facility Reduce Air Emissions

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 of any product. In addition to environmental problems, these wastes represent a loss of valuable materials and energy from the production process and may require significant investment in pollution control equipment. In addition, there are costs associated with waste handling, compliance man-hours and liabilities.

Traditional *pollution control* focuses on an end-of-pipe and out-the-back-door viewpoints. *Pollution prevention* emphasizes the elimination or reduction of wastes 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, improving public relations, and concern for the environment are a few of the reasons why proactive Virginia facilities are investing in pollution prevention alternatives.

For example, a small chemical manufacturing facility in Richmond, VA has recently installed state of the art pollution prevention technology that will enable the facility to stay below MACT pharmaceutical and Title V permit thresholds. The company reports the initial investment is justified by the cost savings associated with the decreased compliance activities alone and enjoy the added benefits of reduce waste disposal costs and improved public image .

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:

X Access to engineers trained to assist you in evaluating your processes and needs
X Access to up-to-date information on new and innovative pollution prevention techniques
X P2 training and workshops targeted at specific waste-generating activities

X Industry-specific reports and fact sheets researched and written by Office of Pollution Prevention staff for the benefit of Virginia-based facilities

X On-site assistance in the form of confidential Pollution Prevention Opportunity Assessments

For more information, please contact:

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

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
http://www.epa.gov
North Carolina Pollution Prevention
http://www.p2pays.org
State and Territorial Air Pollution Prevention Administration, Association of Local Air Pollution Control Officials (STAPPA/ALAPCO)
http://www.4cleanair.org
Pollution Prevention Experts: Pollution Prevention referral service developed by the Northeast Waste Management Official□s Office
http://www.p2.org/p2experts
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://ttnwww.rtpnc.epa.gov

Appendix EE

Pollution Prevention Techniques

Pollution Prevention Techniques may be applied to any manufacturing process for a product as simple as a paper clip to as complex as a space shuttle. Available techniques range from easy operational changes to state-of-the-art recovery equipment. The common factor in these techniques generally are used in concerns the reduction of bottom line operational costs.

Waste reduction techniques may be broken down into three major categories: inventory management, volume reduction and process modification. Because the classifications are broad, some overlap occurs. In the actual application of these methods, pollution prevention techniques are used in combination with each other to achieve the maximum at the lowest possible cost.

Inventory Management

Proper control over raw materials, intermediate products, final products and their associated waste streams, is an important waste reduction technique. In many cases, waste is just out-of-date raw materials, spill residues, or damaged final products. The cost of disposing of these materials not only includes actual disposal costs but also the cost of lost raw materials or product. Methods for controlling inventory range from simple changes in ordering procedures to implementation of just-in-time manufacturing techniques. Many companies may help reduce their waste generation by tightening up and expanding their current inventory control programs. This action will significantly impact the three major sources of waste that result from improper inventory control: excess, out-of-date and no-longer -used raw materials.
Purchasing only the amount of raw materials needed for a production run or a set period of time is the key to proper inventory control. Excess inventory often must be disposed of because it becomes out-of-date. Companies may eliminate this problem by more effective application of existing inventory management procedures. This method should be coupled with the implementation of educational programs for purchasing personnel on the difficulties and costs associated with disposal of excess materials. Additionally, set expiration dates should be evaluated, especially for stable compounds, to see if they are too short. For example, if inventory is not available for production because the raw materials have passed an expiration date, the supplier/manufacturer should be contacted in order to improve the situation by getting materials that will last longer. Or, production methods may be varied to use soon-to-expire materials faster.

Developing review procedures for all materials purchased is another step in establishing an inventory control program. Standard procedure should require that all materials be approved prior to purchase. In the approval process, all production materials are evaluated to determine if they contain hazardous constituents, and if so, what alternative non-hazardous substitute materials are available. The development of review procedures may be made either by one person having the necessary chemistry background or by a committee consisting of people that have a variety of backgrounds. Needed information may possibly be obtained from the Material Safety Data Sheets (MSDS) provided by the chemical supplier. Many companies from electronics to textile firms have established successful materials review programs.

The ultimate in inventory control procedures is just-in-time (JIT) manufacturing, since this method eliminated the need for inventory. This process is done by moving raw materials directly from the receiving dock to the manufacturing area for immediate use. The final product is then shipped out without any intermediate storage. Just-in-time manufacturing is a complex program to implement and cannot be used by all facilities; however, this technique may reduce waste significantly. For example, the 3M Company reduced waste generation by 25 to 65% in their individual plants by using JIT techniques.

Production Process Modification

Improving the efficiency of a production process can significantly reduce waste generation at the source of generation. Some of the most cost-effective reduction techniques are included in this category; many methods are simple and consist of relatively inexpensive changes to production procedures. Available techniques range from the elimination of leaks in process equipment to the installation of state-of-the-art production equipment modification.

* Operational Procedures: A wide range of methods are available to operate a production process at peak efficiency. These methods are neither new nor unknown and are usually inexpensive to institute, as little or no capital cost is necessary. For example, a producer of breaded foods instituted a number of operational changes such as dry cleanup, installation or modification of drip trays under process equipment, and development of better systems. Improved operation procedures are quite simply methods that make optimum use of the raw materials employed in the production process. The fist step in instituting such a program is to review all current operation procedures and to examine the production process for ways to improve its efficiency. A review would include all segments of the process, from the delivery area through the production process to final product storage. One important are that is commonly overlooked or is not given proper attention in many manufacturing facilities is material handling procedures. Proper material handling will insure that raw materials will reach the production process without loss of material through spills, leaks or contamination. This method guarantees that the material is efficiently handled in the production process. Once proper operating procedures are established, they must be fully documented and handled in the production process. Once proper operating procedures are established, they must be fully documented and made part of an employee training program. A comprehensive training program is a key element of any effective waste reduction program. Through training, for example, a dairy plant, a semiconductor manufacturer, and a furniture plant reduced waste by 14%, 40%, and 10% respectively. For a program to be effective, all levels of personnel should be included, from the line operator to the corporate executive officer. The goal of any program is to make the employee aware of waste generation, its impact on the company and the environment, and ways that waste may be reduced. Written materials should be prepared and used in conjunction with hands-on training. This process should be employed constantly and review updates and interaction between employees and supervisors should be carried out on a regular basis.

X Maintenance Programs: One company found that one-fourth of its excess waste load was due to poor maintenance. A strict maintenance program that stresses corrective and preventive maintenance can thus reduce waste generation caused by equipment failure. Such a program will help to spot potential problems before any materials are lost. A good maintenance program is important because the benefits of the best waste reduction

program may be wiped out by just one process leak or equipment malfunction. A maintenance program may include maintenance cost tracking and preventive maintenance scheduling and monitoring. To be effective, a maintenance program should be developed and followed for each operational step in the production process, with special attention given to potential problem points. Strict schedules and accurate records of all maintenance activities should be maintained. Computer-based maintenance scheduling and tracking programs are also available from a variety of vendors. A comprehensive program should also include predictive maintenance; this approach provides a means to schedule repairs or replacement of equipment based on the actual condition of the machinery. A number of non-destructive testing technologies are available for making the needed evaluations in this approach.

X Materials Change: Use of solvents such as methanol, toluene, and methyl ethyl ketone (MEK) typically in product formulations and surface cleaning operations, can subject facilities to strict air quality requirements. To prevent or reduce these requirements, a facility should first examine the manufacturing process to determine if a process modification could eliminate or reduce the use of a solvent. If it is determined that a solvent is needed, using the least hazardous material could reduce a facility's environmental requirements, save money, and reduce employees' exposure to hazardous chemicals. Product reformulation is a more difficult waste reduction technique, yet reformulation can be very effective. Examples of product reformulation include the elimination of pigments that contain heavy metals from ink, dyes and paint formulations; the replacement of phenolic biocides with less toxic compounds in metal-working fluids; and the development of new paint, ink and adhesive formulations based on water rather than organic solvents. Hazardous chemicals used in the production process may also be replaced with less hazardous or non-hazardous materials. Changes may range from the use of purer raw materials to the replacement of solvents with water-based products. This method is a very widely-used reduction technique and is applicable to many industries. Many of these changes involve switching from a solvent to a water-based process solution. For example, a diesel engine remanufacturing facility switched from cleaning solvents and oil-based metal-working fluids to water-based products. This change reduced its coolant and cleaning costs by about 40%. Additionally, the company was able to eliminate one cleaning step and machine filters lasted twice as long, thus reducing material and labor costs. One important area that is sometimes overlooked in making a material change is the modification□s impact of the total waste stream. By switching from a solvent-based to a water-based product, a firm may increase wastewater volumes and concentration. This action could adversely affect the current wastewater treatment system, cause effluent limits to be exceeded and possibly increase wastewater treatment sludge production. Thus, before any change is made, its impact on all discharges must be evaluated.

X Process equipment modifications: Waste generation may be reduced by installing more efficient process equipment or by modifying existing equipment to take advantage of better production techniques. New or updated equipment can use process materials more efficiently and thereby produce less waste. In addition, higher efficiency systems may reduce the number of rejected or off-specification products, thereby reducing the amount of material that must be reworked or disposed. Modifying existing process equipment can be a very cost-effective method to reduce waste generation. In many cases this technique may consist of relatively simple and inexpensive changes in the way materials are handled within the process to insure that they are not wasted or lost. This method can be as easy as redesigning parts racks to reduce drag-out in electroplating operations,

installing better seals on process equipment to eliminate leakage, or installing drip pans under equipment to collect leaking process material for reuse. One chemical company reduced its waste from a pump in a production area from 31,750 kg/year to 1,360 kg/year by installing a sight glass, using better pump seals and purchasing a broom. Installing new and more efficient equipment and, in some cases, modifying current equipment, will require capital investment in equipment, facility modifications and employee training. The extent of this investment will vary greatly depending on the type of equipment, facility modifications and employee training. The extent of this investment will vary greatly depending on the type of equipment employed. These investments, however, can have a rapid payback. For example, a power tool manufacturer replaced a spray solvent paint system with a water-based electrostatic immersion painting unit. This modification decreased material costs by $600,000/yr, reduced waste disposal costs by 97% and greatly increased productivity.

Volume Reduction

Volume reduction includes techniques that separate toxic, hazardous and/or recoverable wastes from the waste stream. These methods are usually used to increase recoverability; to reduce the volume of wastes, and thus disposal costs; or to increase management options. Available techniques range from simple separation of wastes at the source to complex concentration technology. These techniques may be divided into two general areas; source separation and waste concentration.

X Source Separation: Separation of wastes is, in many cases, a simple and economical technique for waste reduction. For example, by segregating wastes at the source of generation and by handling hazardous and non-hazardous waste separately, waste volume and thus management costs may be reduced. Additionally uncontaminated or undiluted wastes may be reusable in the production process or may be sent off-site for recovery. This technique applies to a wide variety of waste streams and industries and usually involves simple changes in operational procedures. For example, in metal finishing facilities, wastes that contain different types of metals can be treated separately so that the metal valued in the sludge may be recovered. Keeping spent solvents or waste oils segregated from other solid or liquid waste may allow them to be recycled. Wastewater that contains toxic material should be kept separate from uncontaminated process waste, reducing the volume of water that must be treated. A commonly used waste separation technique is to collect and store for reuse in the production process wash-water or solvents that are used to clean process equipment(such as tanks, pipes, pumps, or printing presses). This technique is used by paint, ink, and chemical formulators as well as by printers and metal fabricators. For example, a printing firm segregates and collects toluene used for press and roller cleanup operations. By segregating the used toluene by color and type of ink contaminant, the solvent may be reused later for thinning inks of the same type and color. The firm now recovers 100% of its waste, toluene, thereby totally eliminating a hazardous waste stream.

X Concentration: Various techniques are available to reduce the volume of a waste through physical treatment. Such techniques usually remove a portion of a waste, such as water. Available concentration methods include gravity and vacuum filtration, evaporation, ultrafiltration, reverse osmosis, freeze vaporization, filter press, heat drying and compaction. Unless the material can be recycled, simply concentrating a waste so that more can be fit into a drum is not waste reduction. In some cases, the concentration of a waste stream may also increase the likelihood that the material can be reused or recycled.

For example, filter presses or sludge dryers can increase the concentration of metals in electroplating wastewater treatment sludge to such a level that the metals become valuable raw material for metal smelters. A printed circuit board manufacturer de-waters its sludge to 60% sludge by using a filter press. The company receives $7,200/year in the sale of the de-watered sludge to copper reclaimers.

Summary

As has been shown, a wide range of pollution prevention techniques currently exist and are available for most manufacturing steps. However, technology alone will not reduce waste generation- only a comprehensive pollution prevention program will be successful. Such a program should include management commitment, data collection, cost-effective technology selection and implementation, employee training and involvement, and program monitoring. The foundation of any successful program is the evaluation of the wastes that are generated and the reasons they are produced. Using this information, a range of reduction techniques can be identified and evaluated, and cost-effective options implemented.

In the final analysis, pollution prevention depends on looking at waste in a different way; not as something that inevitable must be treated and disposed, but rather as a loss of valuable process materials, the reduction of which can have significant economic benefits. One corporation executive summarized it all when he stated that waste is a specialty product for which a market has not yet been found.

For more information please contact:

Virginia Department of Environmental Quality
Office of Pollution Prevention
PO Box 10009
Richmond, VA 23240
804-698-4545
www.deq.state.va.us/opp/opp.html

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Appendix FF

AQP-5 Priority Pollutant Tables

The following table lists the Hazardous Air Pollutants (HAPS) listed under AQP-5. The listed TLVs for most chemical substances are from the 1991-1992 ACGIH handbook. Those chemical substances that were not listed in the 1991-92 ACGIH Handbook (or were listed but without TLV's) are shown in bold. For those chemical substances for which no TLV is given the OAPP should be contacted for the most up-to-date available health effects data on that chemical. The following websites provide more detailed information on chemical substances:

http://www.toxlaw.com/chemtracker/
http://www.chemfinder.com/
http://www.epa.gov/ttn/uatw/hapindex.html
http://www.epa.gov/iris/subst/index.html
http://chem.sis.nlm.nih.gov/chemidplus/
http://www.epa.gov/ttn/uatw/websiteh.html
http://www.ccmr.cornell.edu/helpful_data/msds.html
www.cdc.gov/niosh/npg/pgdstart.html

TABLE 10-1

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³			O. Exemption Levels		P. SAAC	
			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	Acetaldehyde	75070	180	270	-	8.91	26.1	6750	360
VOC	**Acetamide**	60355	32	-	-	2.112	4.64	1600	64
VOC	Acetonitrile	75058	67	101	-	3.333	9.715	2525	134
VOC	**Acetophenone**	98862	49.14	-	-	3.243	7.125	2457	98.28
VOC	**2-Acetylaminofluorene**	53963	-	-	-	-	-	-	-
VOC	Acrolein	107028	0.23	0.69	-	0.02277	0.03335	17.25	0.46
VOC	Acrylamide	79061	0.03	-	-	0.00198	0.00435	1.5	0.06
VOC	Acrylic Acid	79107	5.9	-	-	0.3894	0.8555	295	11.8
VOC	Acrylonitrile	107131	4.3	-	-	0.2838	0.6235	215	8.6
VOC	Allyl chloride	107051	3	6	-	0.198	0.435	150	6
VOC	4-Aminobiphenyl	92671	-	-	-	-	-	-	-
VOC	Aniline	62533	7.6	-	-	0.5016	1.102	380	15.2

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³			O. Exemption Levels		P. SAAC	
			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	0-Anisidine	29191524	0.5	-	-	0.033	0.0725	25	1
VOC	Benzene(inc. from gasoline)	71432	32	-	-	2.112	4.64	1600	64
VOC	**Benzidine**	92875	-	-	-	0.016724	1.08 E-05	12.67	1.49 E-04
VOC	**Benzotrichloride**	98077	-	-	0.8	0.0264	-	20	-
VOC	Benzyl chloride	100447	5.2	-	-	0.3432	0.754	260	10.4
VOC	Biphenyl	92524	1.3	-	-	0.0858	0.1885	65	2.6
VOC	**Bis(2-ethylhexyl) phthalate**	117817	-	-	-	-	-	-	-
VOC	Bis(chloromethyl) ether	542881	0.0047	-	-	0.00031	0.00068	0.235	0.0094
VOC	Bromoform	75252	5.2	-	-	0.3432	0.754	260	10.4
VOC	1,3 Butadiene	106990	22	-	-	1.452	3.19	1100	44
VOC	Calcium cyanamide	156627	0.5	-	-	0.033	0.0725	25	1
VOC	Captan	133062	5	-	-	0.33	0.725	250	10
VOC	Carbaryl	63252	5	-	-	0.33	0.725	250	10
VOC	Carbon disulfide	75150	31	-	-	2.046	4.495	1550	62
VOC	Carbon tetrachloride	56235	31	-	-	2.046	4.495	1550	62
VOC	**Carbonyl sulfide**	463581	0.8	-	-	0.0528	0.116	40	1.6
VOC	Catechol	120809	23	-	-	1.518	3.335	1150	46
VOC	**Chloramben**	133904	-	-	-	-	-	-	-
VOC	Chlordane	57749	0.5	-	-	0.033	0.0725	25	1
	Chlorine	7782505	1.5	2.9	-	0.0957	0.2175	72.5	3
VOC	**Chloroacetic acid**	79118	-	-	-	-	-	-	-
VOC	2-Chloroacetophenone	532274	0.32	-	-	0.02112	0.0464	16	0.64
VOC	Chlorobenzene	108907	46	-	-	3.036	6.67	2300	92
VOC	**Chlorobenzilate**	510156	-	-	-	-	-	-	-
VOC	Chloroform	67663	49	-	-	3.234	7.105	2450	98

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³			O. Exemption Levels		P. SAAC	
			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	**Chloromethyl methyl ether**	107302	-	-	-	-	-	-	-
VOC	Chloroprene	126998	36	-	-	2.376	5.22	1800	72
VOC	Cresols/Cresylic acid (isomers and mixture)	1319773	22	-	-	1.452	3.19	1100	44
VOC	o-Cresol	95487	22	-	-	1.452	3.19	1100	44
VOC	m-Cresol	108394	22	-	-	1.452	3.19	1100	44
VOC	p-Cresol	106445	22	-	-	1.452	3.19	1100	44
VOC	Cumene	98828	246	-	-	16.236	35.67	12300	492
VOC	**2,4-D, (2,4-Dichlorophenoxyacetic Acid) salts and esters**	94757	-	-	-	-	-	-	-
VOC	**DDE (1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene)**	72559	-	-	-	-	-	-	-
VOC	Diazomethane	334883	0.34	-	-	0.02244	0.0493	17	0.68
VOC	**Dibenzofurans**	132649	0.0015	-	-	9.9 E-05	2.18 E-04	0.075	0.003
VOC	**1,2, Dibromo-3-chloropropane**	96128	-	-	-	-	-	-	-
VOC	Dibutyl phthalate	84742	5	-	-	0.33	0.725	250	10
VOC	1,4-Dichlorobenzene(p)	106467	451	661	-	21.813	65.395	16525	902
VOC	**3,3',- Dichlorobenzidene**	91941	0.0388	-	-	0.002561	0.005626	1.94	0.0776
VOC	Dichloroethyl ether (Bis(2-chlorethyl)ether)	111444	29	58	-	1.914	4.205	1450	58
VOC	1,3-Dichloropropene	542756	4.5	-	-	0.297	0.6525	225	9
VOC	Dichlorvos	62737	0.9	-	-	0.0594	0.1305	45	1.8
VOC	Diethanolamine	111422	13	-	-	0.858	1.885	650	26
VOC	Dimethylaniline (N,N-Dimethylaniline)	121697	25	50	-	1.65	3.625	1250	50
VOC	**Diethyl sulfate**	64675	2.5	-	-	0.165	0.3625	125	5
VOC	**3,3 Dimethoxybenzidine**	119904	-	-	-	-	-	-	-
VOC	**4-Dimethyl aminoazobenzene**	60117	-	-	-	-	-	-	-
VOC	**3,3'-Dimethyl benzidine**	119937	-	-	0.02	0.00066	-	0.5	-
VOC	**Dimethyl carbamoyl chloride**	79447	-	-	-	-	-	-	-

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			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	Dimethyl formamide	68122	30	-	-	1.98	4.35	1500	60
VOC	1,1-Dimethyl hydrazine	57147	1.2	-	-	0.0792	0.174	60	2.4
VOC	Dimethyl phthalate	131113	5	-	-	0.33	0.725	250	10
VOC	Dimethyl sulfate	77781	0.52	-	-	0.03432	0.0754	26	1.04
VOC	4,6-Dinitro-o-cresol,and salts	534521	0.2	-	-	0.0132	0.029	10	0.4
VOC	**2,4-Dinitrophenol**	51285	0.1	-	-	0.0066	0.0145	5	0.2
VOC	**2,4-Dinitrotoluene**	121142	1.5	-	-	0.099	0.218	75	3
VOC	1,4-Dioxane (1,4-Diethyleneoxide)	123911	90	-	-	5.94	13.05	4500	180
VOC	**1,2-Diphenylhydrazine**	122667	0.0039	-	-	0.000257	0.000566	0.195	0.0078
VOC	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106898	7.6	-	-	0.5016	1.102	380	15.2
VOC	**1,2-Epoxybutane**	106887	20.6	-	-	1.3596	2.987	1030	41.2
VOC	Ethyl acrylate	140885	20	61	-	2.013	2.9	1525	40
VOC	Ethyl benzene	100414	434	543		17.917	62.93	13575	868
VOC	**Ethyl carbamate (Urethane)**	51796	-	-	-	-	-	-	-
VOC	Ethyl chloride(Chloroethane)	75003	2640	-	-	22.8	100	132000	5280
VOC	**Ethylene dibromide(Dibromoethane)**	106934	0.346	1	-	0.033	0.05017	25	0.692
VOC	Ethylene dichloride (1,2 –Dichloroethane)	107062	40	-	-	2.64	5.8	2000	80
VOC	Ethylene glycol	107211	-	-	127	4.191	-	3175	-
VOC	Ethylenimine(Aziridine)	151564	0.88	-	-	0.05808	0.1276	44	1.76
VOC	Ethylene oxide	75218	1.8	-	-	0.1188	0.261	90	3.6
VOC	**Ethylene thiourea**	96457	-	-	-	-	-	-	-
VOC	Ethylidene dichloride (1,1 Dichloroethane)	75343	810	1010	-	22.8	100	25250	1620
VOC	Formaldehyde	50000	1.2	2.5	-	0.0825	0.174	62.5	2.4
VOC	Heptachlor	76448	0.5	-	-	0.033	0.0725	25	1
VOC	**Hexachlorobenzene**	118741	0.002	-	-	0.000132	0.00029	0.1	0.004

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			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	Hexachlorobutadiene	87683	0.21	-	-	0.01386	0.03045	10.5	0.42
VOC	Hexachlorocyclopentadiene	77474	0.11	-	-	0.00726	0.01595	5.5	0.22
VOC	Hexachloroethane	67721	9.7	-	-	0.6402	1.4065	485	19.4
VOC	Hexamethylene-1,6-diisocyanate	822060	0.034	-	-	0.002244	0.00493	1.7	0.068
VOC	Hexamethyl phosphoroamide	680319	-	-	-	-	-	-	-
VOC	Hexane	110543	176	-	-	11.616	25.52	8800	352
	Hydrazine	302012	0.13	-	-	0.00858	0.01885	6.5	0.26
	Hydrochloric acid (Hydrogen Chloride)	7647010	-	-	7.5	0.2475	-	187.5	-
	Hydrogen fluoride (Hydrofluoric acid)	7664393	-	-	2.6	0.0858	-	65	-
VOC	Hydroquinone	123319	2	-	-	0.132	0.29	100	4
VOC	Isophorone	78591	-	-	28	0.924	-	700	
VOC	Lindane(all isomers)	58899	0.5	-	-	0.033	0.0725	25	1
VOC	Maleic anhydride	108316	1	-	-	0.066	0.145	50	2
VOC	Methanol	67561	262	328	-	10.824	37.99	8200	524
VOC	Methoxychlor	72435	10	-	-	0.66	1.45	500	20
VOC	Methyl bromide (Bromomethane)	74839	19	-	-	1.254	2.755	950	38
VOC	Methyl chloride (Chloromethane)	74873	103	207	-	6.831	14.935	5175	206
	Methyl chloroform (1,1,1-Trichloroethane)	71556	1910	2460	-	22.8	100	61500	3820
VOC	Methyl ethyl ketone (2-Butanone)	78933	590	885	-	22.8	85.55	22125	1180
VOC	Methyl hydrazine	60344	-	-	0.38	0.01254	-	9.5	-
VOC	Methyl iodide (Iodomethane)	74884	12	-	-	0.792	1.74	600	24
VOC	Methyl isobutyl ketone (Hexone)	108101	205	307	-	10.131	29.725	7675	410
VOC	Methyl isocyanate	624839	0.047	-	-	0.003102	0.006815	2.35	0.094
VOC	Methyl methacrylate	80626	410	-	-	22.8	59.45	20500	820
VOC	**Methyl tert butyl ether**	1634044	-	-	-	-	-	-	-

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³			O. Exemption Levels		P. SAAC	
			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	4,4'-Methylene bis (2-chloroaniline)	101144	0.22	-	-	0.01452	0.0319	11	0.44
	Methylene chloride (Dicloromethane)	75092	174	-	-	11.484	25.23	8700	348
VOC	Methylene diphenyl diisocyanate (MDI)	101688	0.051	-	-	0.003366	0.007395	2.55	0.102
VOC	4,4- Methylene dianiline	101779	0.81	-	-	0.05346	0.11745	40.5	1.62
VOC	Naphthalene	91203	52	79	-	2.607	7.54	1975	104
VOC	Nitrobenzene	98953	5	-	-	0.33	0.725	250	10
VOC	**4-Nitrodiphenyl**	92933	-	-	-	-	-	-	-
VOC	**4-Nitrophenol**	100027	1	-	-	0.066	0.145	50	2
VOC	2-Nitropropane	79469	36	-	-	2.376	5.22	1800	72
VOC	**N-Nitroso-N-methylurea**	684935	-	-	-	-	-	-	-
VOC	**N-Nitrosodimethylamine**	62759	-	-	-	0.003142	0.0000518	2.38	7.14 E-4
VOC	**N-Nitrosomorpholine**	59892	-	-	-	-	-	-	-
VOC	Parathion	56382	0.1	-	-	0.0066	0.0145	5	0.2
VOC	Pentachloronitrobenzene (Quintobenzene)	82688	0.5	-	-	0.033	0.0725	25	1
VOC	Pentachlorophenol	87865	0.5	-	-	0.033	0.0725	25	1
VOC	Phenol	108952	19	-	-	1.254	2.755	950	38
VOC	p-Phenylenediamine	106503	0.1	-	-	0.0066	0.0145	5	0.2
VOC	Phosgene	75445	0.4	-	-	0.0264	0.058	20	0.8
	Phosphine	7803512	0.42	1.4	-	0.0462	0.0609	35	0.84
	Phosphorus	7723140	0.1	-	-	0.0066	0.0145	5	0.2
VOC	Phthalic anhydride	85449	6.1	-	-	0.4026	0.8845	305	12.2
VOC	Polychlorinated biphenyls (Aroclors, Chlorodiphenyl)	1336363	0.5	-	-	0.033	0.0725	25	1
VOC	1,3- Propane sultone	1120714	-	-	-	-	-	-	-
VOC	beta-Propiolactone	57578	1.5	-	-	0.099	0.2175	75	3
VOC	**Propionaldehyde**	123386	-	-	-	-	-	-	-

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³			O. Exemption Levels		P. SAAC	
			Q. TWA	R. STEL	S. CEIL	T. HOUR lb/hr	U. YEAR T/yr	V. HOUR µg/m³	W. YEAR µg/m³
VOC	Propoxur (Baygon)	114261	0.50	-	-	0.033	0.0725	25	1
VOC	Propylene dichloride (1,2-Dichloropropane)	78875	347	508	-	16.764	50.315	12700	694
VOC	Propylene oxide	75569	48	-	-	3.168	6.96	2400	96
VOC	1,2-Propyleneimine (2-Methyl aziridine)	75558	4.7	-	-	0.3102	0.6815	235	9.4
VOC	**Quinoline**	91225	-	-	-	-	-	-	-
VOC	Quinone	106514	0.44	-	-	0.02904	0.0638	22	0.88
VOC	Styrene	100425	213	426	-	14.058	30.885	10650	426
VOC	**Styrene oxide**	96093	-	-	-	-	-	-	-
VOC	**2,3,7,8- Tetrachlorodibenzo –p-dioxin**	1746016	-	-	-	-	-	-	-
VOC	1,1,2,2-Tetrachloroethane	79345	6.9	-	-	0.4554	1.0005	345	13.8
	Tetrachloroethylene (Perchloroethylene)	127184	339	1357	-	22.8	49.155	33925	678
	Titanium tetrachloride	7550450	-	-	-	-	-	-	-
VOC	Toluene	108883	377	565	-	18.645	54.665	14125	754
VOC	**2,4 Toluene diamine**	95807	0.1	-	-	0.0066	0.0145	5	0.2
VOC	2,4- Toluene diisocyanate	584849	0.0369	0.14	-	0.00462	0.00522	3.5	0.072
VOC	o-Toluidine	95534	8.8	-	-	0.5808	1.276	440	17.6
VOC	Toxaphene (chlorinated camphene)	8001352	0.5	1	-	0.033	0.0725	25	1
VOC	1,2,4-Trichlorobenzene	120821	-	-	37	1.221	-	925	-
VOC	1,1,2-Trichloroethane	79005	55	-	-	3.63	7.975	2750	110
VOC	Trichloroethylene	79016	269	1070	-	22.8	39.005	26750	538
VOC	**2,4,5- Trichlorophenol**	95954	50	-	-	3.3	7.25	2500	100
VOC	**2,4,6- Trichlorophenol**	88062	0.31	-	-	0.02046	0.04495	15.5	0.62
VOC	Triethylamine	121448	41	62	-	2.046	5.945	1550	82
VOC	**Trifluralin**	1582098	-	-	-	-	-	-	-
VOC	**2,2,4- Trimethylpentane**	540841	350	-	-	22.8	50.75	17500	700

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³ Q. TWA	R. STEL	S. CEIL	O. Exemption Levels T. HOUR lb/hr	U. YEAR T/yr	P. SAAC V. HOUR µg/m³	W. YEAR µg/m³
VOC	Vinyl acetate	108054	35	70	-	2.31	5.075	1750	70
VOC	Vinyl bromide	593602	22	-	-	1.452	3.19	1100	44
VOC	Vinyl chloride	75014	13	-	-	0.858	1.885	650	26
VOC	Vinylidene chloride (1,1,-Dichloroethylene)	75354	20	79	-	2.607	2.9	1975	40
VOC	Xylenes(isomers and mixture)	1330207	434	651	-	21.483	62.93	16275	868
VOC	o-Xylene	95476	434	651	-	21.483	62.93	16275	868
VOC	m-Xylene	108383	434	651	-	21.483	62.93	16275	868
VOC	p-Xylene	106423	434	651	-	21.483	62.93	16275	868
	COMPOUNDS								
PM	Antimony compounds	7440360	0.5	-	-	0.033	0.0725	25	1
PM	Arsenic compounds (Inorganic including arsine)	-	0.2	-	-	0.0132	0.029	10	0.4
PM	Beryllium compounds	7440417	0.002	-	-	0.000132	0.00029	0.1	0.004
PM	Cadmium compounds	-	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	Chromium II &III compounds	-	0.5	-	-	0.033	0.0725	25	1
PM	Chromium VI compounds	-	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	Cobalt compounds	_	0.05	-	-	0.0033	0.00725	2.5	0.1
VOC	**Coke oven emissions**	-	0.2	-	-	0.0132	0.029	10	0.4
VOC	Cyanide compounds[1]	-	5	-	-	0.33	0.725	250	10
VOC	**Glycol ethers with TLV's[2]**								
	Butoxyethanol	111-76-2	121			7.986	17.545	6050	242
	2-Ethoxyethanol	110-80-5	27			1.782	3.915	1350	54
	Isopropoxyethanol	109-59-1	106			6.996	15.37	5300	212
	2-Methoxyethanol	109-86-4	18			1.188	2.61	900	36
PM	Lead compounds		0.15	-	-	0.0099	0.02175	7.5	0.3

ALPHABETICAL LIST OF PRIORITY POLLUTANTS (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

K. Classified as VOC OR PM	L. Chemical Name	M. CAS No	N. TLV mg/m³ Q. TWA	R. STEL	S. CEIL	O. Exemption Levels T. HOUR lb/hr	U. YEAR T/yr	P. SAAC V. HOUR µg/m³	W. YEAR µg/m³
PM	lead chromate(Pb)		0.05	-	-	0.0033	0.00725	2.5	0.1
PM	lead chromate (Cr)		0.012	-	-	0.00079	0.00174	0.6	0.024
PM	Manganese compounds	-	5	-	-	0.33	0.725	250	10
PM	Mercury compounds (Alkyl)		0.01	0.03	-	0.00099	0.00145	0.75	0.02
PM	(Aryl & inorganic)		0.1	-	-	0.0066	0.0145	5	0.2
PM	(All other forms)		0.05	-	-	0.0033	0.00725	2.5	0.1
PM	Nickel Compounds (Soluble)	-	0.1	-	-	0.0066	0.0145	5	0.2
PM	(Insoluble)	_	1	-	-	0.066	0.145	50	2
VOC	**Polycyclic organic matter[3]**	-	-	-	-	-	-	-	-
PM	Selenium compounds	7782492	0.2	-	-	0.0132	0.029	10	0.4

NOTE: For all listings above which contain the word “compounds” and for the glycol ethers, the following applies:

Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

1 X’CN where X = H’ or any other group where formal dissociation may occur. For example, KCN or $Ca(CN)_2$

2 Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R(OCH2CH2)_n$ – OR’ where

n = 1,2 or 3
R = alkyl or arylgroups
R’ = R, H, or groups which, when removed, yield glycol ethers with the structure: $R(OCH2CH)_n$ –OH.
Polymers are excluded from the glycol category.

Under AQP-5 we only look at four glycol ethers:

2-methoxyethanol -TWA 16mg/m³
2-ethoxyethanol -TWA 18mg/m³
2-butoxyethanol (EGBE)- TWA 121 mg/m³
Isopropoxyethanol – TWA 106mg/m³

3 Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C. (See K:/Agency/TitleIII.out for list of POM)

TABLE 10-2

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	50000	Formaldehyde	1.2	2.5	-	0.0825	0.174	62.5	2.4
VOC	51285	**2,4-Dinitrophenol**	0.1	-	-	0.0066	0.0145	5	0.2
VOC	51796	**Ethyl carbamate (Urethane)**	-	-	-	-	-	-	-
VOC	53963	**2-Acetylaminofluorene**	-	-	-	-	-	-	-
VOC	56235	Carbon tetrachloride	31	-	-	2.046	4.495	1550	62
VOC	56382	Parathion	0.1	-	-	0.0066	0.0145	5	0.2
VOC	57147	1,1-Dimethyl hydrazine	1.2	-	-	0.0792	0.174	60	2.4
VOC	57578	beta-Propiolactone	1.5	-	-	0.099	0.2175	75	3
VOC	57749	Chlordane	0.5	-	-	0.033	0.0725	25	1
VOC	58899	Lindane(all isomers)	0.5	-	-	0.033	0.0725	25	1
VOC	59892	**N-Nitrosomorpholine**	-	-	-	-	-	-	-
VOC	60117	**4-Dimethyl aminoazobenzene**	-	-	-	-	-	-	-
VOC	60344	Methyl hydrazine	-	-	0.38	0.01254	-	9.5	-
VOC	60355	**Acetamide**	32	-	-	2.112	4.64	1600	64
VOC	62533	Aniline	7.6	-	-	0.5016	1.102	380	15.2
VOC	62737	Dichlorvos	0.9	-	-	0.0594	0.1305	45	1.8
VOC	62759	**N-Nitrosodimethylamine**	-	-	-	0.003142	5.18 E-5	2.38	7.14 E-4
VOC	63252	Carbaryl	5	-	-	0.33	0.725	250	10
VOC	64675	**Diethyl sulfate**	2.5	-	-	0.165	0.3625	125	5
VOC	67561	Methanol	262	328	-	10.824	37.99	8200	524
VOC	67663	Chloroform	49	-	-	3.234	7.105	2450	98
VOC	67721	Hexachloroethane	9.7	-	-	0.6402	1.4065	485	19.4
VOC	68122	Dimethyl formamide	30	-	-	1.98	4.35	1500	60
VOC	71432	Benzene(inc. from gasoline)	32	-	-	2.112	4.64	1600	64

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
	71556	Methyl chloroform (1,1,1-Trichloroethane)	1910	2460	-	22.8	100	61500	3820
VOC	72435	Methoxychlor	10	-	-	0.66	1.45	500	20
VOC	72559	**DDE (1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene)**	-	-	-	-	-	-	-
VOC	74839	Methyl bromide (Bromomethane)	19	-	-	1.254	2.755	950	38
VOC	74873	Methyl chloride (Chloromethane)	103	207	-	6.831	14.935	5175	206
VOC	74884	Methyl iodide (Iodomethane)	12	-	-	0.792	1.74	600	24
VOC	75003	Ethyl chloride(Chloroethane)	2640	-	-	22.8	100	132000	5280
VOC	75014	Vinyl chloride	13	-	-	0.858	1.885	650	26
VOC	75058	Acetonitrile	67	101	-	3.333	9.715	2525	134
VOC	75070	Acetaldehyde	180	270	-	8.91	26.1	6750	360
	75092	Methylene chloride (Dicloromethane)	174	-	-	11.484	25.23	8700	348
VOC	75150	Carbon disulfide	31	-	-	2.046	4.495	1550	62
VOC	75218	Ethylene oxide	1.8	-	-	0.1188	0.261	90	3.6
VOC	75252	Bromoform	5.2	-	-	0.3432	0.754	260	10.4
VOC	75343	Ethylidene dichloride (1,1 Dichloroethane)	810	1010	-	22.8	100	25250	1620
VOC	75354	Vinylidene chloride (1,1,-Dichloroethylene)	20	79	-	2.607	2.9	1975	40
VOC	75445	Phosgene	0.4	-	-	0.0264	0.058	20	0.8
VOC	75558	1,2-Propyleneimine (2-Methyl aziridine)	4.7	-	-	0.3102	0.6815	235	9.4
VOC	75569	Propylene oxide	48	-	-	3.168	6.96	2400	96
VOC	76448	Heptachlor	0.5	-	-	0.033	0.0725	25	1
VOC	77474	Hexachlorocyclopentadiene	0.11	-	-	0.00726	0.01595	5.5	0.22
VOC	77781	Dimethyl sulfate	0.52	-	-	0.03432	0.0754	26	1.04
VOC	78591	Isophorone	-	-	28	0.924	-	700	
VOC	78875	Propylene dichloride (1,2-Dichloropropane)	347	508	-	16.764	50.315	12700	694
VOC	78933	Methyl ethyl ketone (2-Butanone)	590	885	-	22.8	85.55	22125	1180

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	79005	1,1,2-Trichloroethane	55	-	-	3.63	7.975	2750	110
VOC	79016	Trichloroethylene	269	1070	-	22.8	39.005	26750	538
VOC	79061	Acrylamide	0.03	-	-	0.00198	0.00435	1.5	0.06
VOC	79107	Acrylic Acid	5.9	-	-	0.3894	0.8555	295	11.8
VOC	79118	**Chloroacetic acid**	-	-	-	-	-	-	-
VOC	79345	1,1,2,2-Tetrachloroethane	6.9	-	-	0.4554	1.0005	345	13.8
VOC	79447	**Dimethyl carbamoyl chloride**	-	-	-	-	-	-	-
VOC	79469	2-Nitropropane	36	-	-	2.376	5.22	1800	72
VOC	80626	Methyl methacrylate	410	-	-	22.8	59.45	20500	820
VOC	82688	Pentachloronitrobenzene (Quintobenzene)	0.5	-	-	0.033	0.0725	25	1
VOC	84742	Dibutyl phthalate	5	-	-	0.33	0.725	250	10
VOC	85449	Phthalic anhydride	6.1	-	-	0.4026	0.8845	305	12.2
VOC	87683	Hexachlorobutadiene	0.21	-	-	0.01386	0.03045	10.5	0.42
VOC	87865	Pentachlorophenol	0.5	-	-	0.033	0.0725	25	1
VOC	88062	**2,4,6- Trichlorophenol**	0.31	-	-	0.02046	0.04495	15.5	0.62
VOC	91203	Naphthalene	52	79	-	2.607	7.54	1975	104
VOC	91225	**Quinoline**	-	-	-	-	-	-	-
VOC	91941	**3,3',- Dichlorobenzidene**	0.0388	-	-	0.002561	0.005626	1.94	0.0776
VOC	92524	Biphenyl	1.3	-	-	0.0858	0.1885	65	2.6
VOC	92671	4-Aminobiphenyl	-	-	-	-	-	-	-
VOC	92875	**Benzidine**	-	-	-	0.016724	1.08E-05	12.67	1.49 E-4
VOC	92933	**4-Nitrodiphenyl**	-	-	-	-	-	-	-
VOC	94757	**2,4-D, (2,4-Dichlorophenoxyacetic Acid) salts and esters**	-	-	-	-	-	-	-
VOC	95476	o-Xylene	434	651	-	21.483	62.93	16275	868
VOC	95487	o-Cresol	22	-	-	1.452	3.19	1100	44

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	95534	o-Toluidine	8.8	-	-	0.5808	1.276	440	17.6
VOC	95807	**2,4- Toluene diamine**	0.1	-	-	0.0066	0.0145	5	0.2
VOC	95954	**2,4,5- Trichlorophenol**	50	-	-	3.3	7.25	2500	100
VOC	96093	**Styrene oxide**	-	-	-	-	-	-	-
VOC	96128	**1,2- Dibromo-3-chloropropane**	-	-	-	-	-	-	-
VOC	96457	**Ethylene thiourea**	-	-	-	-	-	-	-
VOC	98077	**Benzotrichloride**	-	-	0.8	0.0264	-	20	-
VOC	98828	Cumene	246	-	-	16.236	35.67	12300	492
VOC	98862	**Acetophenone**	49.14	-	-	3.243	7.125	2457	98.28
VOC	98953	Nitrobenzene	5	-	-	0.33	0.725	250	10
VOC	100027	**4-Nitrophenol**	1	-	-	0.066	0.145	50	2
VOC	100414	**Ethyl benzene**	434	543		17.919	62.93	13575	868
VOC	100425	Styrene	213	426	-	14.058	30.885	10650	426
VOC	100447	Benzyl chloride	5.2	-	-	0.3432	0.754	260	10.4
VOC	101144	4,4'-Methylene bis (2-chloroaniline)	0.22	-	-	0.01452	0.0319	11	0.44
VOC	101688	Methylene diphenyl diisocyanate (MDI)	0.051	-	-	0.003366	0.007395	2.55	0.102
VOC	101779	4,4- Methylene dianiline	0.81	-	-	0.05346	0.11745	40.5	1.62
VOC	106423	p-Xylene	434	651	-	21.483	62.93	16275	868
VOC	106445	p-Cresol	22	-	-	1.452	3.19	1100	44
VOC	106467	1,4-Dichlorobenzene(p)	451	661	-	21.813	65.395	16525	902
VOC	106503	p-Phenylenediamine	0.1	-	-	0.0066	0.0145	5	0.2
VOC	106514	Quinone	0.44	-	-	0.02904	0.0638	22	0.88
VOC	106887	**1,2-Epoxybutane**	20.6	-	-	1.3596	2.987	1030	41.2
VOC	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	7.6	-	-	0.5016	1.102	380	15.2
VOC	106934	**Ethylene dibromide(Dibromoethane)**	0.346	1	-	0.033	0.05017	25	0.692

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	106990	1,3 Butadiene	22	-	-	1.452	3.19	1100	44
VOC	107028	Acrolein	0.23	0.69	-	0.02277	0.03335	17.25	0.46
VOC	107051	Allyl chloride	3	6	-	0.198	0.435	150	6
VOC	107062	Ethylene dichloride (1,2 –Dichloroethane)	40	-	-	2.64	5.8	2000	80
VOC	107131	Acrylonitrile	4.3	-	-	0.2838	0.6235	215	8.6
VOC	107211	Ethylene glycol	-	-	127	4.191	-	3175	-
VOC	107302	**Chloromethyl methyl ether**	-	-	-	-	-	-	-
VOC	108054	Vinyl acetate	35	70	-	2.31	5.075	1750	70
VOC	108101	Methyl isobutyl ketone (Hexone)	205	307	-	10.131	29.725	7675	410
VOC	108316	Maleic anhydride	1	-	-	0.066	0.145	50	2
VOC	108383	m-Xylene	434	651	-	21.483	62.93	16275	868
VOC	108394	m-Cresol	22	-	-	1.452	3.19	1100	44
VOC	108883	Toluene	377	565	-	18.645	54.665	14125	754
VOC	108907	Chlorobenzene	46	-	-	3.036	6.67	2300	92
VOC	108952	Phenol	19	-	-	1.254	2.755	950	38
VOC	110543	Hexane	176	-	-	11.616	25.52	8800	352
VOC	111422	Diethanolamine	13	-	-	0.858	1.885	650	26
VOC	111444	Dichloroethyl ether (Bis(2-chlorethyl)ether)	29	58	-	1.914	4.205	1450	58
VOC	114261	Propoxur (Baygon)	0.50	-	-	0.033	0.0725	25	1
VOC	117817	**Bis(2-ethylhexyl) phthalate**	-	-	-	-	-	-	-
VOC	118741	**Hexachlorobenzene**	0.002	-	-	0.000132	0.00029	0.1	0.004
VOC	119904	**3,3 Dimethoxybenzidine**	-	-	-	-	-	-	-
VOC	119937	**3,3'-Dimethyl benzidine**	-	-	0.02	0.00066	-	0.5	-
VOC	120809	Catechol	23	-	-	1.518	3.335	1150	46
VOC	120821	1,2,4-Trichlorobenzene	-	-	37	1.221	-	925	-

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	121142	**2,4-Dinitrotoluene**	1.5	-	-	0.099	0.218	75	3
VOC	121448	Triethylamine	41	62	-	2.046	5.945	1550	82
VOC	121697	N,N- Dimethylaniline (N,N-Dimethylaniline)	25	50	-	1.65	3.625	1250	50
VOC	122667	**1,2-Diphenylhydrazine**	0.0039	-	-	0.000257	0.000566	0.195	0.0078
VOC	123319	Hydroquinone	2	-	-	0.132	0.29	100	4
VOC	123386	**Propionaldehyde**	-	-	-	-	-	-	-
VOC	123911	1,4-Dioxane (1,4-Diethyleneoxide)	90	-	-	5.94	13.05	4500	180
VOC	126998	Chloroprene	36	-	-	2.376	5.22	1800	72
	127184	Tetrachloroethylene (Perchloroethylene)	339	1357	-	22.8	49.155	33925	678
VOC	131113	Dimethyl phthalate	5	-	-	0.33	0.725	250	10
VOC	132649	**Dibenzofurans**	0.0015	-	-	9.9 E-5	2.18 E-4	0.075	0.003
VOC	133062	Captan	5	-	-	0.33	0.725	250	10
VOC	133904	**Chloramben**	-	-	-	-	-	-	-
VOC	140885	Ethyl acrylate	20	61	-	2.013	2.9	1525	40
VOC	151564	Ethylenimine(Aziridine)	0.88	-	-	0.05808	0.1276	44	1.76
VOC	156627	Calcium cyanamide	0.5	-	-	0.033	0.0725	25	1
	302012	Hydrazine	0.13	-	-	0.00858	0.01885	6.5	0.26
VOC	334883	Diazomethane	0.34	-	-	0.02244	0.0493	17	0.68
VOC	463581	**Carbonyl sulfide**	0.8	-	-	0.0528	0.116	40	1.6
VOC	510156	**Chlorobenzilate**	-	-	-	-	-	-	-
VOC	532274	2-Chloroacetophenone	0.32	-	-	0.02112	0.0464	16	0.64
VOC	534521	4,6-Dinitro-o-cresol,and salts	0.2	-	-	0.0132	0.029	10	0.4
VOC	540841	**2,2,4- Trimethylpentane**	350	-	-	22.8	50.75	17500	700
VOC	542756	1,3-Dichloropropene	4.5	-	-	0.297	0.6525	225	9
VOC	542881	Bis(chloromethyl) ether	0.005	-	-	0.00033	0.000725	0.25	0.01

LIST OF PRIORITY POLLUTANTS SORTED BY CAS NO. (FROM AQP-5 AND 1991-92 ACGIH HANDBOOK)

X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
VOC	584849	2,4- Toluene diisocyanate	0.0369	0.14	-	0.00462	0.00522	3.5	0.072
VOC	593602	Vinyl bromide	22	-	-	1.452	3.19	1100	44
VOC	624839	Methyl isocyanate	0.047	-	-	0.003102	0.006815	2.35	0.094
VOC	680319	**Hexamethyl phosphoroamide**	-	-	-	-	-	-	-
VOC	684935	**N-Nitroso-N-methylurea**	-	-	-	-	-	-	-
VOC	822060	Hexamethylene-1,6-diisocyanate	0.034	-	-	0.002244	0.00493	1.7	0.068
VOC	1120714	1,3- Propane sultone	-	-	-	-	-	-	-
VOC	1319773	Cresols/Cresylic acid (isomers and mixture)	22	-	-	1.452	3.19	1100	44
VOC	1330207	Xylenes(isomers and mixture)	434	651	-	21.483	62.93	16275	868
VOC	1336363	Polychlorinated biphenyls (Aroclors)	0.5	-	-	0.033	0.0725	25	1
VOC	1582098	**Trifluralin**	-	-	-	-	-	-	-
VOC	1634044	**Methyl tert butyl ether**	-	-	-	-	-	-	-
VOC	1746016	**2,3,7,8- Tetrachlorodibenzo –p-dioxin**	-	-	-	-	-	-	-
	7550450	**Titanium tetrachloride**	-	-	-	-	-	-	-
	7647010	Hydrochloric acid (Hydrogen Chloride)	-	-	7.5	0.2475	-	187.5	-
	7664393	Hydrogen fluoride (Hydroflouric acid)	-	-	2.6	0.0858	-	65	-
	7723140	Phosphorus	0.1	-	-	0.0066	0.0145	5	0.2
	7782505	Chlorine	1.5	2.9	-	0.0957	0.2175	72.5	3
	7803512	Phosphine	0.42	1.4	-	0.0462	0.0609	35	0.84
VOC	8001352	Toxaphene (chlorinated camphene)	0.5	1	-	0.033	0.0725	25	1
VOC	29191524	0-Anisidine	0.5	-	-	0.033	0.0725	25	1
		COMPOUNDS							
PM	7440360	Antimony compounds	0.5	-	-	0.033	0.0725	25	1
PM	-	Arsenic compounds (Inorganic including arsine)	0.2	-	-	0.132	0.029	10	0.4

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X. Classified as VOC OR PM	Y. CAS No	Z. Chemical Name	AA. TLV mg/m³			BB. Exemption Levels		CC. SAAC	
			DD. TWA	EE. STEL	FF. CEIL	GG. HOUR lb/hr	HH. YEAR T/yr	II. HOUR µg/m³	JJ. YEAR µg/m³
PM	7440417	Beryllium compounds	0.002	-	-	0.000132	0.00029	0.1	0.004
PM	-	Cadmium compounds	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	-	Chromium II &III compounds	0.5	-	-	0.033	0.0725	25	1
PM	-	Chromium IV compounds	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	_	Cobalt compounds	0.05	-	-	0.0033	0.00725	2.5	0.1
VOC	-	**Coke oven emissions**	0.2	-	-	0.0132	0.029	10	0.4
VOC	-	Cyanide compounds[1]	5	-	-	0.33	0.725	250	10
VOC		Glycol ethers[2]							
	111-76-2	2-Butoxyethanol	121			7.986	17.545	6050	242
	110-80-5	2-Ethoxyethanol	27			1.782	3.915	1350	54
	109-59-1	Isopropoxyethanol	106			6.996	15.37	5300	212
	109-86-4	2-Methoxyethanol	18			1.188	2.61	900	36
PM	-	Lead compounds	0.15	-	-	0.0099	0.02175	7.5	0.3
PM	-	lead chromate (Pb)	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	-	lead chromate (Cr)	0.012	-	-	0.00079	0.00174	0.6	0.024
PM	-	Manganese compounds	5	-	-	0.33	0.725	250	10
PM		Mercury compounds (Alkyl)	0.01	0.03	-	0.00099	0.00145	0.75	0.02
PM		(Aryl & inorganic)	0.1	-	-	0.0066	0.0145	5	0.2
PM		(All other forms)	0.05	-	-	0.0033	0.00725	2.5	0.1
PM	-	Nickel Compounds (Soluble)	0.1	-	-	0.0066	0.0145	5	0.2
PM	_	(Insoluble)	1	-	-	0.066	0.145	50	2
VOC	-	**Polycyclic organic matter**[3]	-	-	-	-	-	-	-
PM	7782492	Selenium compounds	0.2	-	-	0.0132	0.029	10	0.4

NOTE: For all listings above which contain the word “compounds” and for the glycol ethers, the following applies:

Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

1 X'CN where X = H' or any other group where formal dissociation may occur. For example, KCN or $Ca(CN)_2$

2 Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R(OCH2CH2)_n$ – OR' where

n = 1,2 or 3
R = alkyl or arylgroups
R' = R, H, or groups which, when removed, yield glycol ethers with the structure: $R(OCH2CH)_n$ –OH. Polymers are excluded from the glycol category.

Under AQP-5 we only look at four glycol ethers:

2-methoxyethanol -TWA 16mg/m^3
2-ethoxyethanol -TWA 18mg/m^3
2-butoxyethanol (EGBE)- TWA 121 mg/m^3
Isopropoxyethanol – TWA 106mg/m^3

3 Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C

Appendix GG

CEDS -Permit Process Tracking

As stated in **Chapter 4**, section **D**, the Department has decided that all activities associated with a given permit (i.e., permit application processing, permit issuance, enforcement, and compliance, etc.) will be tracked using the Comprehensive Environmental Data System 2000 (CEDS 2000) database.

(1) Using the database. Once a user has opened the CEDS 2000 database, she or he will be able to add or modify a source entry as needed.

(2) Mandatory fields. When entering data into CEDS 2000 the user will have to pay close attention to all Cyan-colored (a greenish blue color) entry fields which can be found throughout the database screens. The Cyan shading denotes mandatory data entry fields. All mandatory fields must be completed before a record will be saved.

(3) CEDS screens encountered during permit application processing. The following is a brief description of the different CEDS screens which a user will encounter during the processing of a permit application:

(A) *Air Permits Screen* -
General information (i.e. Plant Name, Permit Type, Region, etc) about a source will be entered into this screen. When navigating from the Air Facility Screen to the Air Permit Screen, the Registration Number, Plant Name, and Location will automatically be displayed. The Events shown at the bottom of the air permits screen are for display only. Modification of the Events table can only be done in the Events Screen.

(B) *Events Screen* -
A list of activities or events (i.e. date application received, date of public hearing, date additional information requested/received from source, etc.) showing what has occurred or is anticipated will be entered into this screen. The Program and Permit Types entered in the Air Permit Screen will determine the list of events that are automatically displayed in the Events Screen. The Events list can be modified by adding or deleting events on this screen.

(C) *Regulatory Review* -
Some of the federal reporting requirement information which currently appears on the Source Action Report (SAR), such as whether the source is subject to BACT, CEM/COM, Offset, or Netting will be entered into this screen. By double-clicking on the

comment fields (for BACT, Toxics, and Modeling) and the Permit Netting History field, the user is able to pull up an editor which allows a scrollable multi-line view of the field.

(D) *Permit Comments* -
Permit writers must indicate whether a source is a synthetic minor by typing the words SYNTHETIC MINOR (in all caps) on the first line of the comment field. Other information about the permit can be entered in the comment field as needed.

(E) *Emissions Unit Data* -
Emission data (i.e., equipment, capacity, subparts for NSPS, NESHAPS, and MACT, etc) for each unit being permitted is entered into this screen.

(F) *Permit Conditions* -
Permit conditions (i.e., pollutant(s), control device, method/frequency, etc.) associated with a particular piece of equipment are entered into this screen. Individual boilerplate conditions can be selected by the permit writer in order to customize the permit. *Narrative conditions must be edited in CEDS (using the editor available on this screen) in order to maintain accurate records of the conditions found in the permit*.

(G) *Emission and Throughput/Consumption* -
Emission and Throughput/Consumption (i.e., pollutant(s), control device, method/frequency, etc.) associated with a particular piece of equipment are entered into this screen.

(H) *Air Facilities* -
This screen allows the user to define whether:

(i) the source is a Stage II facility;

(ii) the permit contains confidential information;

(iii) the source is portable;

(iv) the source is in compliance or it is a High Priority Violator (HPV); and

(v) the source is subject to an operating permit fee.

Information from this screen will be uploaded to AIRS on a regular basis.

(4) Additional information. For additional information on CEDS 2000 and the data being entered into the various fields, please consult the CEDS 2000 Users' Manual (see the central office version, K:\AGENCY\CEDS2000\doc or the regional versions, I:\[region]\COMMON\CEDS2000\doc.

Appendix HH

Memo - Incidental CO Emissions Increases

DEPARTMENT OF ENVIRONMENTAL QUALITY
INTRA-AGENCY MEMORANDUM

TO: Karen J. Sismour, Regional Permit Manager, TRO

FROM: John M. Daniel, Jr., PE, DEE, Director, Division of Air Program Coordination

SUBJECT: Incidental CO Emission Increases for Utility NOx Control Efforts

DATE: July 19,1999

The decision to permit incidental emissions increases of carbon monoxide resulting from required NOx control efforts at electric utility power plants should be left to the owner. No compliance or enforcement efforts should be directed against any facility choosing not to seek a permit for such increases.

Our permit rule (9 VAC 5-80-1100) addresses such issues by excluding the addition of pollution control systems from the definition of "modification". While this does not strictly apply to major modifications under the PSD or non-attainment provisions, such increases are exempted under federal regulations in the form of the "WEPCO Rule"(57 FR 32314). Further, EPA issued a guidance document July 1,1994 (John S. Seitz, Director EPA OAQPS, memo titled "Pollution Control Projects and New Source Review(NSR) Applicability"; see electronic file located at K:\AGENCY\EPABULL\AIR\GUIDANCE\PCPGUIDE.WP5) which extended the concept of the pollution control project exclusion to non-utility facilities. Our lack of adoption of the WEPCO Rule is simply a matter of timing. We had intended to incorporate it at the same time we adopted changes to major source permit rules following EPA's adopting its new source review reform package. Unfortunately, that reform effort stalled. In hindsight, we probably should have adopted our version of the WEPCO rule separately.

While the July 1,1994, EPA document does say its for non-utility facilities only, it also mentions that for years prior EPA had exempted pollution control projects from major source permit requirements on a case by case basis. In that vein, I consider all changes made at Virginia utility plants solely to comply with tighter NOx emission limits imposed by us to qualify for exclusion from both minor and major modification permit requirements as far as increases in carbon monoxide emissions are concerned. The trade-off of modest amounts of CO for substantial amounts of NOx is clearly beneficial from an environmental standpoint.

However, should a utility feel uncomfortable with this determination and insist on obtaining a PSD permit for the CO increase, I would reluctantly say to go ahead and process the application.

cc: Regional Directors
Director, Office of Enforcement Coordination
Director, Office of Air Regulatory Development
Director, Office of Air Permit Programs

Appendix II

Significance Levels and PSD/NA Applicability

As stated in **Chapter 5**, section **F**, the determination of PSD/NA NSR permitting applicability is a complex topic. A complete discussion of the issues is beyond the scope of this Manual. However, because state minor NSR often involves understanding the intricacies of major NSR, the topic warrants at least a general discussion, which is presented here.

The PSD and NA regulations contained in 9 VAC 5 Chapter 80, Articles 8 and 9, respectively, are both federal pre-construction review and permitting programs. PSD regulations apply in classified PSD areas, or those areas that achieve attainment with the National Ambient Air Quality Standards (NAAQS). NA area regulations apply in those areas which do not meet or achieve compliance with the NAAQS. Both permitting programs apply only to major sources and major modifications as the terms are defined under the respective regulations.

The NA and PSD permitting programs are not mutually exclusive. For example, a facility proposing to locate in an ozone non-attainment area which will emit SO_2, NO_x, and CO at rates exceeding the major source thresholds established in the regulations would be subject to the permitting requirements of both PSD and NA rules. In this case, PSD permitting provisions would apply for SO_2 and CO, and NA permitting would apply for NO_x. If the same source emitted VOCs at rates below the NA major source threshold, but above the permitting exemption thresholds for new sources established in the state NSR regulations, state permitting requirements would also apply. In this case, only one permit would be issued, but it would contain requirements established by all three regulations.

(1) PSD/NA applicability. The PSD and NA rules apply to the following:

(A) newly constructed major sources, or greenfield sources, considering the pollutant-specific major source thresholds defined in the rules;
(B) modifications at major sources which result in a significant net emissions increase of a regulated pollutant; or,
(C) a physical change at a source if the change would constitute a major source by itself.

(2) PSD Major Source Levels and Significance Levels[15] The threshold for

15 The article entitled “The New Source Review Reform Proposal: On Target or Near Miss?” by

determining whether a new or existing source is major under the PSD program depends on the type of source and the pollutant(s) emitted. There are 28 source categories listed in the major stationary source definition in 9 VAC 5-80-1710; the threshold is 100 tons per year potential to emit or actual emissions. If a source falls within one of the categories on the list, and has the potential to emit 100 tons per year or more of any regulated pollutant, then it is a major source. If a source type is not found on the list, then it must have the potential to emit 250 tons per year, or more, of a regulated pollutant to be classified as major. Note that the fugitive emissions of a source are only counted in determining its potential to emit if the source type is one of the listed 28 categories, or if the source type was subject to regulation under NSPS or NESHAP prior to August 7, 1980.

A new major source is subject to PSD review. An existing major source would become subject to PSD review if a physical change or a change in the method of operation results in a significant net emissions increase. A "significant net emissions increase" is defined in the Regulations at 9 VAC 5-80-1710 for the PSD pollutants. Additionally, the Regulations state that for any regulated pollutant which does not have a significance level listed, any increase in emissions is considered significant. Also, major sources located within 10 kilometers of a Class I area which have an impact of 1 microgram per cubic meter (24-hour average) as a result of any emissions rate or a net emissions increase is considered significant. **Table II-1** on the next page provides a comparison of significance levels under the PSD and NA regulations.

Gary D. McCutchen and William Palermo, published in the September 1998 edition of the AWMA publication EM, was used as a reference for compiling the discussion on PSD and NA applicability.

Table II-1. Comparison of Significance Levels for the PSD and NA Permitting Programs

Pollutant	PSD Significance Level Tons/yr	NA Significance Level for Serious or Severe Ozone Non-attainment Areas[1] Tons/yr
Carbon Monoxide	100	100
Nitrogen Oxides	40	25
Sulfur Dioxide	40	40
Particulate Matter	25	25
PM_{10}	15	---
Ozone	40 (VOC)	25 (VOC)
Lead	0.6	0.6
Fluorides	3	---
Sulfuric Acid Mist	7	---
Total Reduced Sulfur (including H_2S)	10	---
Reduced Sulfur Compounds (including H_2S)	10	---
Municipal Waste Combustor Organics (dioxins/furans)	3.5×10^{-6}	---
Municipal Waste Combustor Metals	15	---
Municipal Waste Combustor Acid Gases	40	---
Municipal Solid Waste Landfill Gases (as NMOC)[2]	50	---
Any other regulated pollutant under the CAA	any increase	----

Notes:

[1] The significance levels for other non-attainment areas are the same as the PSD significance levels for CO, NO_x, SO_2, PM, ozone, and lead.

[2] The significance levels for the MSW Landfill Gases (as NMOC) are not included in the Regulations. This significance level is established in 40 CFR 52.21(b)(23)(i).

(3) Non-attainment Major Source Levels and Significance Levels. The NA area permitting program applicability is similar in concept to the PSD program. However, the major source thresholds are defined differently depending on the attainment classification of the geographic region. NA area permitting applies to the construction of major sources, or major modifications at existing major sources in non-attainment areas. A non-attainment area designation is pollutant-specific.

The major source PTE threshold for all regulated pollutants under the NA program is 100 tons per year, except for specific non-attainment pollutants. The major source threshold for a non-attainment pollutant is dependent on severity of the NAAQS violation in that region. The major source thresholds for the non-attainment pollutants are listed below in **Table [Appendix letter]-2**. **Appendix N** contains a listing of the non-attainment regions in Virginia and the non-attainment classifications (see 9 VAC 5-20-204 for the official list).

Table II-2. Major Source Thresholds of Non-attainment Pollutants

NA Area Classification	Pollutant	Threshold (tons/yr)
Unclassifiable	VOC, CO, PM_{10},NO_x	100
Marginal	VOC, NO_x, CO, PM_{10}	100
Moderate	VOC, NO_x, CO, PM_{10}	100
Serious	VOC, NO_x	50
Severe	VOC, NO_x	25
Extreme	VOC, NO_x	10
Ozone Transport Region	VOC	50
Ozone Transport Region	NO_x	100
Serious	CO	50
Serious	PM_{10}	70

As with the PSD program, the fugitive emissions of a facility are only counted in determining the potential to emit if the source type is one of the listed 28 categories, or if the source type was subject to regulation under NSPS or NESHAP prior to August 7, 1980.

Similar to the PSD program, an existing major source would become subject to NA review if a physical change or a change in the method of operation results in a significant net emissions increase. A significant net emissions increase is defined in the regulations at 9 VAC 5-80-2010 for the NA permitting program pollutants. **Table [ ]-1** (page A-___ above) provides a comparison of significance levels under the PSD and NA regulations.

Appendix JJ

Netting

As stated in **Chapter 5**, section **H**, netting is the use of an emission reduction credit plant-wide at an expanding or modernizing major source to lower the net emissions increase below "significant" levels at the same source and thus to avoid PSD and non-attainment review. Emission reductions used for netting are always internal to the source seeking credit. The emission reductions must be permanent, surplus, quantifiable, and practically enforceable. The baseline for calculating an emission reduction credit is the lower of actual or allowable emissions, generally the average of the most recent two years. If a source subject to Reasonably Available Control Technology (RACT) requirements submits an application for a permit to modify proposing netting, then the lower of actual emissions or SIP allowable emissions (including RACT allowable emissions) is used to establish the baseline for netting.

(1) Calculating emissions for netting. Actual emissions calculations use historical measured parameters, such as sulfur content of fuel, not the allowable or permit limit. Note that Virginia uses the "plant-wide" definition of a stationary source which is "any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under the Federal Clean Air Act." Netting out of non-attainment review is allowed, even if the proposed emission unit or modification is major provided the net emissions increase is less than the non-attainment significance level.

(2) Netting and minor sources. Emission reduction credit anywhere in a contiguous plant may compensate for potential emission increases at individual emitting units within the plant. Netting may exempt modifications of existing major sources from major source review, as long as the net increase falls below significance levels. Minor sources can not "net out" of PSD or non-attainment review. For example, a 50 tpy source with a proposed modification of 260 tpy can not "net out" by shutting down a 20 tpy unit and claiming a net increase of 240 tpy. For major sources, by "netting out," the modification is not considered major. The modification must nevertheless meet applicable NSPS, NESHAP, and preconstruction applicability review requirements under 40 CFR 51.160(a) - (e) and 51.161 - 51.164, and SIP requirements, and would be subject to permit requirements under 9 VAC 5-80-10. Netting out of BACT is not allowed. Instead, the source must conduct either PSD BACT analysis or minor NSR BACT analysis.

(3) "Contemporaneous" emission increases and decreases. All increases and decreases must be accounted for in a contemporaneous period as defined under the "net emissions increase" definition in 9 VAC 5-80-1700 et seq. and 9 VAC 5-80-2000 et seq. of the Regulations and the EPA's New Source Review Workshop Manual, October 1990 Draft, Chapter A, Section III B.2. To be contemporaneous, the changes must occur within a period:

- Beginning 5 years before construction is expected to commence on the modification; and
- Ending when the emission increase from the modification occurs.

In addition, emission increases and decreases can only be used if the facility has not previously used them in another netting analysis.

Appendix KK

Non-Attainment Review

As mentioned in **Chapter** 5, a proposed new or modified source is subject to a Non-attainment New Source Review pursuant to 9 VAC 5-80-2000 et seq. when it is located in a non-attainment area, and is either a major source, or an existing major source undergoing a major modification that will emit, or will have potential to emit, non-attainment pollutant(s) at or above emission thresholds (see Section **F**, above). The EPA's New Source Review Workshop Manual, October 1990 Draft, Chapter F is also an aid in making major source determinations. In discussing non-attainment, EPA uses two definitions of source, the "plant-wide" definition and the "dual source" definition. Virginia has adopted the plant-wide definition of source, which is less stringent than the dual source definition and is the same definition that is used in PSD permitting. Many different layers of requirements make this process difficult and must be carefully reviewed before proceeding with permit formulation. As mentioned in **Chapter 5**, section **F.**, **Appendix N** lists the emissions thresholds for sources locating in various non-attainment areas in Virginia (see 9 VAC 5-20-204 for the official list). This table also lists the non-attainment classification (marginal, moderate, or serious) of the areas as of 1/1/99.

VOC and NO_x are considered non-attainment pollutants in an ozone non-attainment area. If a source is major for one and emits the other in significant amounts, then it is subject to non-attainment review. For example, a 100 tpy VOC source proposing a 40 tpy NO_x increase is subject to non-attainment review.

If a major source locating in a non-attainment area emits, or has potential to emit, any attainment pollutant(s), review of the attainment pollutant(s) must be performed in accordance with PSD requirements.

Fugitive emissions are counted in determining whether a non-attainment review applies if the emissions of the non-attainment pollutant(s) are from one of the 29 processes listed under the definition of major stationary source in 9 VAC 5-80-2010.

Special regulatory requirements for major source non-attainment permits are shown below.

(1). Lowest Achievable Emission Rate (LAER). The source must apply LAER, which is defined in 9 VAC 5-80-2010.

(2). Emission Offset. The source must obtain external offsets or commit to internal netting of the significant non-attainment emissions at an amount greater than the permitted allowable. The external offsets must meet the criteria of 9 VAC 5-80-2120. These are:

- Emission offsets must be of the same pollutant category.

- Emission offsets must occur within the same non-attainment area.

- Emission offsets must be federally enforceable before the final permit is issued.

- Emission offsets must be in place prior to commencement of operations of the proposed source.

- Emission offsets must represent a positive net air quality benefit in the non-attainment area to ensure reasonable further progress toward attainment of the NAAQS.

(3) Other Requirements

- All the existing major sources owned by the applicant in the State must have an emission limit and either be in compliance or on an enforceable compliance schedule before the permit is issued.

- Proposed non-attainment area sources that may impact a Class I area are subject to review by the Class I area FLM. (See **Chapter 3**, section **C.** for names and addresses.)

All non-attainment NSR must go through the public participation process.

Appendix LL

Model Public Notice for Hearing

The Virginia Department of Environmental Quality, _____ Regional Office, will conduct a public hearing to consider an air permit application from (source name) to construct and operate a (brief description of facility) in (location), Virginia. The hearing will be held in accordance with the Air Pollution Control Law, *Virginia Code* sections 10.1-1300 et seq. and with the State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution, 9 VAC 5-80-10. This hearing will be held on (date) at (time) in the (meeting room, building, address), Virginia.

The Department staff has completed its review of the permit application and is ready to receive and consider public comments on air quality issues associated with the facility seeking a permit. The public may examine the application at the _____ Regional Office, (address), Virginia, on each business day between the hours of 8 AM and 5 PM until the day of the hearing. In addition, the Department staff will conduct an information briefing on this application (30, 60) minutes prior to the public hearing. This briefing will explain the activity for which a permit is sought and the Department staff's rationale for its preliminary determination. Questions will be welcome.

The maximum annual emissions of air pollutants from the facility seeking a permit would be:

(number of tons per year, air pollutant)
(number of tons per year, air pollutant) [etc.]

Persons who want to make an oral statement concerning this application at the public hearing are requested to put their names on a sign-up sheet, to be provided at the hearing location 15 minutes before the hearing starts, and to provide two copies of their testimony (and supporting documentation) to this office before or at the hearing. The length of time allowed for each person's testimony is determined by the hearing officer; as a guideline, the time limit for each statement is normally three minutes. Written comments may be submitted in lieu of oral comments, or mailed to this office at any time before the hearing or until the close of business 15 days thereafter, which is (date). E-mailed comments are also acceptable, provided they include the name, address, and phone number of the writer and are timely.

The address and phone of this office are (address, city), Virginia; (area code, phone number); the e-mail address is (____@deq.state.va.us). All testimony, exhibits, and comments received are public records.

(Regional director, title) for
Dennis H. Treacy, Director

Appendix MM

Confidential Information Guidance

A. Introduction

This appendix provides guidance on confidential information in air permitting and responding to FOIA requests for air permitting records. The objectives are to provide procedures for:

- Submitting permit applications containing confidential information, including recommended format of showings.
- Evaluating permit applications containing information claimed to be confidential information.
- Responding to FOIA requests involving air permitting records.
- Evaluating information requested under FOIA for confidential information.
- Writing practically enforceable permits while protecting confidential information *(to be developed).*

There are two overriding statutory and regulatory restrictions on confidential information that will be repeated throughout this document:

- "Emission data" cannot be confidential information (9 VAC 5-170-60), and
- The contents of a Title V permit cannot be kept confidential (CAA Section 503(e))

This Appendix is organized as follows:

Section A – Procedure for processing permits containing confidential information

Section B – Emission Data

Section C – Regional evaluation of permit applications for confidential information

Section D – Evaluation of specific information as confidential information

Section E - Responding to an FOIA request involving air permitting records

B. Procedure for processing applications containing confidential information

Number of copies

The applicant should submit a public copy along with the number of confidential copies required by the permit program. This submission should also include a "showing" as required by 9 VAC 5-170-60 B.

Public copy

The public copy will have the information considered to be confidential information removed. However, only the specific items considered and shown to be confidential information can be removed. Even if all of the information on a page is considered confidential information, a page must be submitted in its place with language such as "Confidential Information Removed" or "Information Redacted."

In determining whether or not specific information is confidential information, confidentiality requests should be as specific and narrow as possible. For example, if several pieces of information are present on a single page, it is possible that some of that information will meet confidential information criteria and the remaining information on the page will not. In such a case, the applicant would not be justified in removing from the public copy all of the information on the page.

As was mentioned in the introduction, emission data cannot be kept confidential. See Section B for assistance as to what emission data is and how such data must be reported.

Confidential copies

The front of confidential copies should be marked with wording such as "Trade Secret", "Proprietary", or "Company Confidential". In addition, specific items considered confidential within the confidential copy(ies) should also be so marked conspicuously. One way in which this could be done would be to mark them using red ink.

Showings

The showing(s) must contain justification sufficient to demonstrate that the information claimed as confidential satisfies DEQ confidentiality requirements at 9 VAC 5-170-60 B. However, since much of the information submitted to DEQ (particularly in the Title V permitting process) can or will at some point be released to EPA, the showings submitted to DEQ should meet both DEQ's requirements and EPA criteria as defined in 40 CFR 2.

The showing will not be confidential and is to be part of the public record. If an FOIA request is received, the requester will be given the public version of the application and the showing. The showing will inform the information requester what has been removed from the application as confidential and why.

When a permit applicant has submitted a permit application containing information claimed to be confidential, DEQ will not consider the permit application complete until it

has approved the showing of confidentiality.

Format of Showings

Following is the recommended format for showings of confidential information.

There should be one or more blocks of descriptions of items being claimed as confidential along with descriptions of the measures being taken to protect confidentiality and how disclosure of the information would cause substantial harm to the owner. At the end of this block or these blocks should be a certification worded as follows:

> I hereby certify that the information claimed above as confidential is not “emission data,” and the information meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208. Further, to the best of my knowledge, this information has never been determined not to be confidential information by EPA or any other agency, nor has it ever been disclosed to the public by EPA or any other agency.

C. Emissions data

There is currently no definition of Emissions Data in the regulations that govern the development of air permits in Virginia. The federal regulations (40 CFR 2 §2.301) define "emissions data" as follows:

> **Emission data** *means, with reference to any source of emission of any substance into the air --*
>
> *(A) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;*
>
> (*B) Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of the emissions which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner or rate of operation of the source); and*
>
> *(C) A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source).*

Paragraph (§2.301(a)(2)(1)(A)) of the definition refers to "any emission which has been emitted". This is directed at actual emissions. Emissions data can then be interpreted to include any information needed to identify what the actual emissions are, determine the amount that is emitted, and establish the concentration of the pollutant in the emissions. The portion of the definition that refers to "other characteristics" are qualified by the phrase "to the extent related to air quality". This phrase is intended to provide a constraint on the general nature of the term "other characteristics".

The construction of paragraph (§2.301(a)(2)(1)(B)) closely parallels that of paragraph (A) but is directed toward what "the source was authorized to emit". This can have several connotations. Where a source has a permit and the permit contains emissions limitations, these limitations cannot be confidential because they are emissions that "the source was authorized to emit." Where a source is an existing source and is subject to a process rate standard the source will have to provide the information necessary to determine the emissions the source was "authorized to emit." This interpretation is consistent with the parenthetical phrase "including, to the extent necessary for such purposes, a description of the manner or rate of operation of the source."

While not specifically providing information on the amount, nature or concentration of emissions, location information cannot be deemed confidential because the emissions data must be associated with a specific facility. Attachment C discusses a draft of an EPA policy document that identifies the items EPA designated as information that provides a "description of the location and/or nature of the source." Where the applicability of a standard is dependent on the "description of the manner or rate of operation of the source" the delineation of emissions data can be defined in general terms. Please see the examples below.

<u>"Emissions data" determinations based on applicability or compliance with applicable requirements</u>

Below are several examples of how to evaluate the extent to which data can be deemed to be "emissions data" based on applicability or compliance with applicable requirements. When applying these examples, refer to the regulatory criteria for deeming information confidential, 9 VAC 5-170-60 C. If the information that you are reviewing is "reasonably obtainable" by other legitimate means then the information cannot be deemed confidential. The examples below are intended to guide confidentiality decisions and not as prescriptive solutions. Each determination of confidentiality should be based on an evaluation of the specific requests of the applicant.

Example A: Facility A has a single 95 MM BTU boiler built in 1990 and <u>information on the size of the boiler is not reasonably obtainable except by requesting information through the company.</u> For the sake of this example, we will make the simplifying assumption that the only applicable requirement is NSPS Subpart Dc. The confidential version of the application must state that it is a 95 MM BTU boiler. However, the public version may include only the information required to provide the public with the fact that it is subject to Dc. For example, the public copy could simply state that the boiler's heat input is between 10 and 100 MM BTU/hr (as well as any other information needed to determine regulation applicability and compliance, such as what fuel the boiler uses).

Example B: Facility B is a site that uses 10,000 megagrams/year of benzene. The permit application requires the actual benzene usage be provided. The confidential version would list the actual usage of 10,000 Mg/year. The public copy could list benzene usage as "> 1000 Mg/year", the applicability threshold of 40 CFR 61 Subpart J. By stating that annual usage is >1000 Mg/yr, the public would be able to determine that the rule applies.

Example C: A chemical facility modifies a reactor that is applicable to Subpart RRR of the federal NSPS (40 CFR §60.700 et seq.). The facility has consistently maintained the production data for the affected process as confidential and information associated with this process is only available through the company that operates the facility. The application includes a Total Resource Effectiveness (TRE) analysis that indicates the TRE index is less than 1.0 indicating

the need for controls. The TRE analysis required the facility to perform Method 18 analyses to properly speciate the gas stream. The non-confidential version of the application can be submitted with a statement from the source that the TRE value is lower than 1.0, that pollution control equipment submitted with the application will meet the reduction requirements of 40 CFR §60.702 and the emissions estimates associated with this process can be reported as VOC's without having speciated information included.

D. Evaluation of permit applications for confidential information

If information claimed to be confidential is contained in the application, use the following procedure:

The applicant should have submitted one copy for the public file in addition to the number of complete (confidential) applications required.

The Regional Director (or designate) reviews each item in the application claimed to be confidential information in accordance with the next section “Evaluation of specific information as confidential information."

If all confidential information claims are determined to be valid, the RD submits a letter (see Attachment B) to the applicant that all confidential information claims have been accepted.

However, if one or more of the items claimed to be confidential information are determined not to be valid, the regional office shall send a letter (Attachment B) to the applicant listing the deficiencies in the confidential information claims. If the applicant agrees with the findings listed in the letter, the applicant should submit a revised public copy and/or showing to address the identified deficiencies. The revised public copy will be reviewed as earlier described.

Where a source indicates that there are contested issues relative to deficiencies identified in the letter, the regional office should discuss these issues with the applicant to be sure that the deficiencies are properly understood. After all of the confidential information issues have been resolved, the regional office shall send the letter to the applicant stating that all confidential information claims have been accepted.

At the end of the permitting process, the confidential version of the application will be secured in confidential files. Because documents generated during the permitting process are public information, separate public and confidential versions of internal documents associated with permit processing (e.g., engineering analyses) will be prepared for the public and confidential files.

E. Evaluation of specific information as confidential information

If the item is “emission data,” it is not confidential information (9 VAC 5-170-60 A). See section B above for assistance in determining whether or not information is “emission data.”

In order to be confidential information, the item must meet the criteria of 9 VAC 5-170-60 C, that is:

- The owner has been taking and will continue to take measures to protect confidentiality of the information; (9 VAC 5-170-60 C 1)
- The information has not been and is not presently reasonably obtainable without the owner's consent by private citizens or other firms through legitimate means other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding (9 VAC 5-170-60 C 2)
- The information is not publicly available from sources other than the owner. (9 VAC 5-170-60 C 3); and
- Disclosure of the information would cause substantial harm to the owner (9 VAC 5-170-60 C 4).

In order to be determined confidential information, a showing meeting the criteria of 9 VAC 5-170-60 B is also required. To meet the requirements of 9 VAC 5-170-60 B, the showing must state that the information meets the criteria in 9 VAC 5 170-60C and must include a certification to that effect signed by a responsible representative of the owner. See Section A above for the recommended format of this showing.

Much of the information submitted to DEQ may at some time be submitted to EPA, therefore the regional offices should recommend to the applicant that information claimed as confidential meet the confidentiality criteria of 40 CFR 2.208 and that the source claim confidentiality in accordance with 40 CFR 2.203(b). The format recommended in Section A above meets these criteria.

If the information has been disclosed to the public or determined not be to confidential information by EPA or any other agency, it is considered “reasonably obtainable” and therefore no longer confidential information.

F. Responding to an FOIA request involving air permitting records

If an FOIA request identifies information from a permit file for which the company has requested confidentiality, the Regional Office may want to consider notifying the company of the FOIA request within one working day. The company will be asked to notify DEQ of its intention to review the files and to actually complete its review within a time frame that allows DEQ to meet its requirements to respond to the requestor under the FOIA Law. By notifying the company prior to the release of information, this policy is trying to prevent the erroneous release of information from companies that have requested confidential treatment prior to the issuance of this guidance.

This policy of notifying a source of the existence of an FOIA is intended as an interim measure to be sure that pre-existing files will meet the criteria established in this policy document. There is no need to contact companies that have not previously requested confidentiality. It is not intended that companies be allowed to initiate new showings for confidential data from a file review prompted by an FOIA request. If the company chooses not to conduct an additional review of the requested information, the existing DEQ FOIA policy should be followed.

The Regional Director (or designate) reviews each item in the application that is identified in the FOIA and is claimed to be confidential information in accordance with the previously described procedure in Section C “Regional evaluation of permit applications for confidential information”. If one or more of the items claimed to be confidential information are determined not to meet the criteria for confidentiality, send a letter to the applicant (see Attachment B) listing the

deficiencies in the confidential information claims. If the applicant agrees with the RD's findings, they revise the public copy and/or showing to address deficiencies. The revised public copy will be reviewed as in the first paragraph of this section. The regional office must provide an initial response to the FOIA request within 5 days.

If the company has chosen to conduct a review of the requested information and the information previously deemed confidential was found to be deficient, the requester should be notified that the requested information may contain confidential information and needs to be reviewed before the information request can be honored for the document(s) in question. According to the Virginia FOIA law an initial response must be made within 5 days. Should the review described above not be completed within five days, DEQ can request another 7 working days to respond. Please refer to the general DEQ FOIA policy to review the requirements for requesting the additional 7 days. Should it appear that this time will still not be sufficient to complete the review and any required document revisions, notify the DEQ FOIA Officer.

If the company, upon reviewing the requested documents, determines that it contains confidential information consistent with the original showing that has not been held as confidential, the company will be required to prepare a revised public copy without the information claimed as confidential. The RD evaluates these additional confidential information claims consistent with the description above.

After all of the confidential information claims have been resolved, the regional office responds to the FOIA request, withholding all information determined to be confidential. If the confidentiality issues cannot be resolved within the timeframes provided for in the Agency FOIA policy, contact the DEQ FOIA Officer to determine the appropriate course of action.

Attachment A: Checklist for Evaluating Claims of Confidential Information in Permit Applications

Note: If the company is not claiming confidentiality on any of the information, there is no need to go through this checklist. The requirements of both 40 CFR 2 and 9 VAC 170 are covered by this checklist.

Overall

1. Have both confidential and public versions of the application been submitted? **Yes** ☐ No ☐

Comparison of Confidential and Public Applications

2. Is there at least one page in the public version corresponding to each page in the confidential version? **Yes** ☐ No ☐

   One exception to this would be when an entire section is considered confidential. For example, a section of the application might contain several pages of process flow diagrams, all of which the company considers confidential. In that case, including a single page with wording such as "Process Flow Diagrams – Confidential" in the public version would be sufficient.

Review of Confidential Copies

3. Have copies containing confidential information been marked in such a way to make it clear that they contain information the applicant considers confidential? (40 CFR 2.203(b)) **Yes** ☐ No ☐

   Examples of such marking would be words such as "trade secret", "proprietary", or "company confidential" on the front of the document.

4. Has each item that is claimed to be confidential within the confidential copy(ies) been marked as such? (40 CFR 2.203(b)) **Yes** ☐ No ☐

Review of Public Versions of Applications

5. Has only information specifically claimed to be confidential been removed from the public version? **Yes** ☐ No ☐

   Companies may not remove an entire page of information when some items on the page are confidential and others are not.

Evaluation of Specific Information contained within the document for whether or not it can be claimed confidential

6. Is the data that is being claimed as confidential data "emission data"? If so, it cannot be kept confidential. Yes **No**

   Section B of Confidential Information Guidance contains procedures to evaluate what can be considered confidential.

Evaluation of Showing

7. Does the showing cover each type of information claimed to be confidential? **Yes** No

   For example, if the applicant has claimed throughputs as confidential, does the showing state why the applicant believes the throughputs are confidential?

8. Does the showing include for each item or type of item a description of the items or types of items being claimed as confidential along with a description of the measures being taken to protect confidentiality? **Yes** No

9. Does this description contain a discussion of how disclosure of this information would cause substantial harm to the owner? **Yes** No

10. Does the showing contain the certification below? **Yes** No

I hereby certify that the information claimed above as confidential is not "emission data", and the information meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208. Further, to the best of my knowledge, this information has never been determined not to be confidential information by EPA or any other agency, nor has it ever been disclosed to the public by EPA or any other agency.

Reviewed by

Permit Writer: Signature_____Date_____

Air Permit Manager: Signature_____Date_____

Attachment B: Letter to Source evaluating Confidentiality Claim

Regional Letterhead
Date

Source Name
Source Address
Source Address
City, State zipcode

Location:
Registration No:
AIRS ID No.:

Dear {name of applicant}

The {Regional Office Name} has reviewed the request in your application dated {enter date of application} for certain information within the application to be deemed confidential. The regulatory criteria for determining whether data can be considered confidential are located at 9 VAC 5-170-60. Please note that 9 VAC 5-170-60 A. states that "Emission data in the possession of the board shall be available to the public without exception". To assist you in understanding those items that are considered "emissions data" a copy of our confidentiality policy is attached for your review.

(**insert if confidentiality request is accepted**)
Based upon our review, the {regional office name} finds that the information as specified in your application dated {enter application date} meets the criteria established in 9 VAC 5-170-60 C for confidentiality. All data as specified in the confidentiality showing submitted with your application will be maintained as confidential information. The public file copies will retain a copy of this showing to assist the public in understanding this designation. Please refer to the attached policy if you have any questions regarding the handling of confidential data.

(**insert if confidentiality request is denied**)
Based upon our review, the following information does not meet the criteria described in 9 VAC 5-170-60 C.:

- {enter list of deficiencies}

Please contact this office if you wish to further discuss this determination or wish to supply additional information to support your request.

If you have any questions regarding this determination or the confidentiality policy in general, please do not hesitate to contact {permit writer name} at {phone number}. Your concern for Virginia's air quality is appreciated.

Signed,

Regional Director
XXXX regional office

Attachment C. Description of Emissions Data

EPA issued a policy statement through the Federal Register in 1991 (56 FR 7042-7043) that defined specific items that were always considered emissions data. This policy was never finalized but is summarized in here to provide additional supporting guidance to inform regional confidentiality determinations. This policy was never promulgated and as such does not have the force of regulation. It is included here as additional supporting guidance.

Emissions Data is not subject to protection as confidential information

The following information in most cases should be considered emission data and therefore not subject to protection as confidential information:

Facility Identification information

- Plant name and related point identifiers
- Address
- City
- County
- AQCR
- MSA, PMSA, CMSA
- State
- Zip Code
- Ownership and point of contact information

Location identifiers

- Latitude and longitude, or UTM Grid Coordinates

Emission Point, device, or operation description, information

- SCC Code
- SIC Code

Emissions Parameters

- Emission type
  1. nature of emission e.g. CO, particulate, etc.
  2. origin of emissions e.g. process vents, storage tanks, equipment leaks
- Emission rate (such as lb/hr, tons/year)
- Release height
- Description of terrain and surrounding structures
- Stack or vent diameter at point of emissions
- Release velocity (such as feet/second)
- Release temperature
- Frequency of release
- Duration of release
- Concentration
- Density of emissions stream or average molecular weight
- Emission estimation method
  When emission estimation method is included in the permit application, it cannot be kept confidential. In cases in which additional information is required, such as the source of an emission factor, that data also cannot be kept confidential. Currently, codes for “emission estimation method” in the Form 7 correspond to:

1. Material balance
2. Stack test
3. Emission factor (including identifying the source of emission factor), and
4. Other (which must be identified)

However, should calculations be included, those can be kept confidential.

Information considered emission data to the extent it is necessary to determine applicability or compliance

The following information will be considered to be emission data and therefore not subject to protection as confidential information if necessary to determine applicability of, or compliance with, any underlying applicable requirement.

- Boiler or process design capacity (e.g, the gross heating value of fuel input to a boiler at its maximum design rate)
- Percent space heat
- Hourly maximum design rate

These items will be considered emission data to the extent necessary to determine applicability of or compliance with underlying emissions limitations/applicable requirements. Therefore, in some cases it may be possible for an applicant to provide less specific information in the public copy of the permit application than in the confidential version of the application.