Appendix MM

Confidential Information Guidance

Introduction

This appendix provides guidance on confidential information in air permitting and responding to FOIA requests for air permitting records. While this guidance is applied to minor NSR permitting, it has been developed with an eye toward compliance with restrictions on confidential information protection under the federal Clean Air Act Title V permitting program. Permit writers should note differences with past minor NSR confidentiality guidance.

The objectives of this guidance are to provide procedures for:

- submitting permit applications and application-related documents and correspondence 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

There are two overriding statutory and regulatory restrictions on confidential information that will be repeated throughout this document:

- "Emissions data" cannot be confidential information (9 VAC 5-170-60), and
- the contents of a Title V permit cannot be kept confidential (CAA § 503(e))

However, state and federal laws and regulations also recognize and protect trade secrets. For many firms in many industries, keeping certain information confidential is vital to economic competitiveness and company survival. The challenge facing environmental regulators is to achieve a proper balance of protecting confidential business information while assuring public availability of information to which the public is entitled. This appendix provides guidance to help DEQ air permit writers to achieve this balance.

This appendix is organized as follows:[1]

Section A – Procedure for submitting permits applications containing confidential information

Section B – Emissions data

Section C – Regional office 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

Section F -- Writing practically enforceable permits while protecting confidential information

[1] Also note Attachments:
A. Checklist for Evaluating Claims of Confidential Information in Permit Applications
B. Letter to Source Evaluating Confidentiality Claim
C. Description of Emissions Data
D. Examples of Permit Conditions Incorporating Confidentiality Protection

A. Procedure for submitting permits applications containing confidential information

Number of copies

The applicant must submit a public copy along with the number of confidential copies required by the permit program. This submission must also include a "showing" as required by 9 VAC 5-170-60 B.

If warranted (as will be discussed in Section F), the applicant should submit a key. A key, which is kept confidential, relates confidential details to non-confidential identifiers that will appear in the permit. Such identifiers may include reference numbers, aggregated process units, material or chemical categories, and surrogate parameters, among other methods. The key allows a permit to be kept non-confidential in a way that protects a company's confidential details while preserving public accessibility to emissions data. The key allows DEQ access to confidential details for purposes of compliance inspection, emission inventory calculation, and other necessary functions. The permit applicant must certify the key as true, accurate, and complete.[2] See Section F of this Appendix for discussion and examples.

Public copy

The public copy must have the information considered to be confidential removed or blacked out. However, only the specific items considered and shown to be confidential can be removed or blacked out. The public version should indicate which information or data have been removed or blacked out due to confidentiality by labeling those parts or elements of the application as confidential. If an entire page is confidential, there should be a corresponding non-confidential page describing the type of information held confidential, for instance, "Process Flow Diagram (confidential)."

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 constitutes emission data and how such data must be reported.

Confidential copies

The front of the confidential copies must be marked with wording such as "Trade Secret," "Proprietary," or "Company Confidential." In addition, specific items considered confidential

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[2] The key certification reads as follows and is to be accompanied by the signature, date, printed name, title, company name, and registration number of the applicant:

I acknowledge that this confidential key is an attachment to the Air Permit Application and is subject to the certification statement found on the Air Permit Application Document Certification Form.

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

References: Virginia Regulations for the Control and Abatement of Air Pollution (Regulations), 9 VAC 5-20-230B.

within the confidential copy(ies) must also be so marked conspicuously, and each page containing such marked items should also be conspicuously marked at the top or along the margin with the words “Trade Secret”, “Proprietary”, or “Company Confidential”. One way in which this could be done would be to mark them using red ink. Any information not specifically identified as confidential will not be treated as confidential.

Showings

Showings must contain justification sufficient to demonstrate that the information claimed as confidential satisfies DEQ confidentiality requirements at 9 VAC 5-170-60 C. 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 itself 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

Showings of confidential information should include one or more blocks of descriptions of items being claimed as confidential along with descriptions of the measures being taken to protect confidentiality, how disclosure of the information may cause substantial harm to the owner, and a statement indicating that, to the best of the applicant's knowledge, the information is neither publicly available or reasonably obtainable by unauthorized parties. At the end of this block or these blocks should be a certification worded as follows:

> I hereby certify under penalty of law that to the best of my knowledge and belief, after diligent inquiry, the information claimed above as confidential meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208 and is not "emissions data." 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.

The showing must be dated and signed by a "responsible official of the regulated entity" as defined at 9 VAC 5-20-230A(1).

An applicant may use a "boilerplate" showing document for multiple submittals, provided that the document contains all of the above-described information, is currently dated, and contains an original signature of the applicant's responsible official.

An example showing follows:

Example Showing

Throughout the referenced application, XYZ Company claims throughputs of Equipment A, B, and C and composition information of our final blended products as confidential.

Throughputs

XYZ protects the confidentiality of this information by:

- Keeping the information under lock and key except when designated employees have need of its use.
- Allowing only those employees who have a "need to know" access to this information. Other XYZ employees do not have access to this information.
- Requiring all employees who have access to this information to sign a confidentiality agreement.

Disclosure of the throughputs of Equipment A, B, and C could cause substantial harm to XYZ by allowing competitors to better determine our costs. Both fixed and variable costs in our industry are highly dependent on the scale of operations. Disclosure of this information would give competitors information with which they could determine our production capacity, which we believe they do not know at this time. To the best of our knowledge, this information is not publicly available and is not reasonably obtainable by the public or other unauthorized parties.

Product Composition

XYZ protects the confidentiality of this information by:

- Keeping the information under lock and key except when designated employees have need of its use.
- Allowing only those employees who have a "need to know" access to this information. Other XYZ employees do not have access to this information.
- Requiring all employees who have access to this information to sign a confidentiality agreement.
- Requiring customers who have access to this information to sign confidentiality agreements

Disclosure of the composition of our final blended products could cause substantial harm to XYZ by allowing competitors to reverse engineer our products. XYZ has invested significant resources over many years developing these products. Disclosure of these compositions could allow competitors to copy our products without them being required to expend the resources we have spent developing them, thereby reducing our current competitive advantage. To the best of our knowledge, this information is not publicly available and is not reasonably obtainable by the public or other unauthorized parties.

Certification

I hereby certify under penalty of law that to the best of my knowledge and belief, after diligent inquiry, the information claimed above as confidential meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208 and is not "emissions data." 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.

Typed Name and Title of Responsible Official _____

Signature of Responsible Official _____

Date _____

B. Emissions data

There is currently no definition of emissions data in the regulations that govern the development of air permits in Virginia. 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" is 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 that 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 million BTU boiler built in 1990 and information on the size of the boiler is not reasonably obtainable except by requesting information through the company. For the sake of this example, assume that the only applicable requirement is NSPS Subpart Dc. The confidential version of the application must state that it is a 95 million BTU boiler. However, the public version may include only the information required to provide the public with the fact that it is subject to Subpart Dc. For example, the public copy could simply state that the boiler's heat input is between 10 and 100 million 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.

See Attachment C for additional description of what constitutes emissions data.

C. Evaluation of permit applications for confidential information

If information claimed to be confidential is contained in the application, use the following procedure:

As discussed previously, the applicant should have submitted one non-confidential copy of the application for the public file, a number of complete confidential copies, and a certified confidentiality showing document. In addition a confidential key may have been submitted to relate confidential information to non-confidential information and conditions to be included in the permit. The applicant must certify the key, as discussed previously in Section A, footnote 1.

The Regional Director (RD)(or designee) 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.

D. Evaluation of specific information as confidential information

If an 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 all the following criteria of 9 VAC 5-170-60 C:

- 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).

Furthermore, the applicant must provide a showing that explains how and certifies that the information claimed as confidential meets the criteria of 9 VAC 5-170-60 B. See Section A above for the recommended format and example 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 also meet the confidentiality criteria of 40 CFR 2.208 and that the source claim confidentiality in accordance with 40 CFR 2.203(b). The showing format recommended in Section A above meets these criteria.

If the identical information has been disclosed to the public (whether by the applicant or by another party), it is considered to be "reasonably obtainable" and therefore no longer confidential information. Also, data and information determined by EPA or other government agencies to not be confidential will not be considered confidential by DEQ.

E. 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 should strongly 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 complete its review within a time frame that allows DEQ to meet its requirements to respond to the requestor under the FOIA Law. The intent of this is to prevent erroneous release of protected information in response to an FOIA request. DEQ staff should be aware that there might be liabilities associated with the improper release of confidential information. Inviting the company to review its files (but not assert new confidentiality protections) provides an additional measure of care to prevent erroneous release.

This policy of notifying a source of the existence of an FOIA is intended as a transitional 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. The intent is not to allow companies to make additional confidentiality claims and initiate new showings in light of the 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 designee) 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 five days. Should the review described above not be completed within five days, DEQ can request another seven working days to respond. Please refer to the general DEQ FOIA policy to review the requirements for requesting the additional seven 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.

F. Writing practically enforceable permits while protecting confidential information

Under Title V of the Clean Air Act the contents of a permit may not be kept confidential. This is interpreted to mean that the past DEQ practice of having parallel confidential and non-confidential

permits (with the latter being "sanitized" through redaction or crossing-out of confidential information) cannot be applied in the Title V program. Instead, other ways must be pursued to protect confidential information. As noted previously, this confidentiality guidance for minor NSR permitting has been developed to be consistent with Title V permitting requirements.

The permit writer must balance the need for information required to ensure practical enforceability of emissions limitations and other permit conditions with the permit applicant's desire to protect confidential information.[3] A permit must provide a means for DEQ to assess and enforce the permittee's compliance with permit conditions. It must also assure that "emissions data," as previously discussed, remain publicly available.

First, to the extent allowed by regulations, the permit writer should refrain from including in a permit detailed information on materials, processes, equipment, and throughput that is extraneous to any DEQ needs for determining emissions and assuring compliance. If after this there remain confidential items that the applicant has justified through the "showing" process then the permit writer has several tools available. Among these are:

- Aggregation
- Categorization
- Surrogate parameters
- Emissions monitoring or sampling
- Parametric monitoring

These approaches are discussed in greater detail below and examples of pertinent permit conditions follow in Attachment D of this appendix.

The permit writer may also invite the applicant to suggest and provide other means that meet the necessary balance. If the applicant offers an alternative, the permit writer will need to determine if the alternative meets requirements for DEQ to have sufficient information for determining emissions levels and permit compliance as well as for keeping public emissions data.

1. Keys

The use of such confidentiality tools may sometimes require a confidential key. The key, developed by the permit applicant, would contain confidential information that is not included in the permit itself. It would relate the confidential details to non-confidential information in the permit so that DEQ staff has sufficient information to perform compliance inspections, emissions inventories, and other required activities. The permit writer should have proposed keys reviewed by DEQ inspection personnel to assure that the key is understandable and useful for compliance

[3] From 9 VAC 5-80-1110: "Enforceable as a practical matter" means that the permit contains emission limitations that are enforceable by the board or the department and meet the following criteria:

1. Are permanent;
2. Contain a legal obligation for the owner to adhere to the terms and conditions;
3. Do not allow a relaxation of a requirement of the implementation plan;
4. Are technically accurate and quantifiable;
5. Include averaging times or other provisions that allow at least monthly (or a shorter period if necessary to be consistent with the implementation plan) checks on compliance. This may include, but not be limited to, the following: compliance with annual limits [o]n a rolling basis, monthly or shorter limits, and other provisions consistent with 9 VAC 5-80-1180 and other regulations of the board; and
6. Require a level of recordkeeping, reporting and monitoring sufficient to demonstrate compliance.

inspection purposes. Furthermore, to assure accuracy and completeness of the key, the applicant must certify it using the wording in Section A, footnote 1 of this document. The certification is to be accompanied by the signature, date, printed name, title, company name, and registration number of the applicant so that it is clear to which facility and permit the key applies.

Key examples

Permit	**Key**
"Total annual throughput for coating area A shall not exceed X* …"	"Coating area A consists of the following equipment:" (list equipment and rated capacities)
"Total VOC emissions for coating area A shall not exceed Y* tons per year or Z* pounds per hour…"	"Coating area A consists of the following equipment:" (list equipment and rated capacities)
"Total Suspended Particulates, PM-10, and VOC emissions from the following equipment shall be controlled by Thermal Oxidizers: Ref. No. 15, 16, and 17"	(Table listing reference numbers, equipment, rated capacities, and other pertinent information such as stack numbers)
"Total annual production shall not exceed X* tire manufacturing units."	"One tire manufacturing unit equals 150 pounds of finished tires.
"Total annual production shall not exceed X* tire manufacturing units."	"One tire manufacturing unit equals: 1 heavy vehicle tire (list tire models or sizes), 2.5 medium duty truck tires (list models or sizes), 3 light duty truck tires (list models or sizes), or 3.5 passenger automobile (list models or sizes), or 4.5 motorcycle tires (list models or sizes)" (The key may also define the classes of vehicles by gross vehicle weight or other standard definition used by the industry or transportation agencies.)

*X, Y, and Z are used here for convenience. In the actual permit X, Y and Z would be numbers. They do not represent confidential hidden or "sanitized" values.
The reader is reminded that CAA Title V does not allow confidential permit conditions and the intent of this policy guidance is to phase out the use of parallel confidential and non-confidential permits in NSR and other air permits.

2. Necessary Versus Extraneous Information

The purposes of collecting detailed information on the applicant's operations are:

- To determine applicable regulations, emissions limitations, emission abatement measures, and other pertinent federal and state requirements; and
- To ensure mechanisms for DEQ to perform needed compliance, enforcement, and emissions inventory activities.

Some of the types of information typically gathered from applicants include process descriptions; material quantities and compositions; equipment descriptions, throughput, and rated capacities; fuel quality and heat content; and yearly hours of operation.

If an applicant claims certain information to be confidential the permit writer should evaluate whether that information is required for developing a practically enforceable permit. For instance, the type or brand of, say, pump or conveyer is relevant to the permit writer only if there are differing emissions factors. If such details do not affect the potential emissions estimate then they are extraneous and not needed for developing a permit.

> Example: XYZ Biopharmaceuticals Co. uses a bioreactor to produce a particular antibiotic. Ethanol can be emitted from the bioreactor vessel as well as at subsequent processing steps.

For simplicity, consider ethanol as the only pollutant of concern. XYZ claims confidentiality for the type of bioreactor due to the design of the aerator and impeller. The company also wants the reactor's yearly throughput kept confidential.

The permit writer should only be concerned about the reactor type and design as it affects the potential amount of ethanol that may be emitted. The permit writer needs to determine the maximum amount and concentration of ethanol that may be emitted from the reactor vent to determine the potential to emit from that unit. Total air throughput and production throughput may be needed to calculate the potential to emit from the bioreactor. Volume and throughput may also be required to determine potential ethanol emissions from subsequent processing steps.

The brand, manufacturer, impeller type or design, and aerator type or design are not necessary information and can be omitted from the permit altogether. The reactor's volume, vented air throughput and ethanol concentration, and yearly production throughput may be needed to calculate potential to emit. They may be kept confidential based on a proper "showing" plus a determination that they are not "emissions data" as discussed elsewhere in this guidance. There may be opportunities to keep details confidential through other means, such as those described below.

See Attachment D for permit condition examples.

3. Aggregation

Sometimes DEQ requirements and the applicant's desire to protect information can be accommodated by aggregating (i.e., combining) individual elements of an operation into less detailed totals that adequately convey to the public the amount and types of emissions from a facility without revealing details that may injure the applicant's business competitiveness.

Aggregation may be applied to equipment or to materials, fuels, and chemicals. A permit writer using aggregation will probably write permit conditions in terms of maximum allowable units, capacities, throughput, or other quantities in contrast to the usual permit approach of having an itemized list of all equipment and each of their capacities or limitations.

This technique may be used to establish *emissions limitations or caps* on an aggregated operational unit rather than on individual pieces of equipment. However, it cannot be used to establish aggregated *applicability limits* (i.e., a "mini-PAL").[4]

Example: XYZ Surface Coatings Co. uses flame spray and high velocity oxy-fuel (HVOF) technologies to apply specialized coatings to high value components of engines, turbines, missiles, and other products. The metallic and ceramic coatings provide strength and resistance to corrosion and wear. Among the coatings materials are several toxic or hazardous metals such as nickel and chromium.

The company knows that it needs to provide DEQ with information on the individual coating units (which have different emissions factors based on either AP-42, vendor specifications, or field measurements of comparable units) and on the potential to emit of all regulated pollutants, which, as noted, include hazardous air pollutants (HAPs). The company plans to have five coating units--three flame spray and two HVOF--that in

[4] In other words, aggregation of operational units does not negate the need for permit writers to perform New Source Reviews (for instance, BACT analyses, if required) on individual pieces of equipment. Nor does it absolve the permittee of responsibility to follow NSR requirements and, if necessary, apply for a permit amendment or new NSR permit if it wishes to modify, install, or construct individual pieces of equipment.

aggregate will have an annual potential capacity to coat 100,000 sq. ft. of product. While the company would like to keep as much about its equipment and potential throughput confidential, it is most concerned that competitors not learn about the type and capacity of its HVOF equipment. All the units are vented to a single pollution abatement unit (say, a filter and wet scrubber) designed to handle particulates and vapors.

In order to facilitate proper permit writing as well as subsequent DEQ compliance inspections, the permit applicant should provide a confidential key that provides itemized equipment descriptions, capacities, and other emissions-relevant parameters while noting which items should be held confidential. The confidential key supplements the non-confidential permit application.

Assuming that XYZ Surface Coatings Co. has made a proper "showing" for confidentiality of its equipment details, the permit writer could word permit limitations in terms of maximum quantities and volumes rather than detailing specific equipment. There may be more than one option for such wording, such as:

a) "The company may operate no more than five flame spray and/or HVOF units with a combined annual throughput of 100,000 sq. ft. of treated surface or equivalent [perhaps another unit is appropriate; also see section on surrogate measures below]. All of the units shall vent to an operating [name and, if necessary, describe the air pollution control device]. Throughput from the coating equipment shall not cause vented emissions sent to the air pollution control equipment to exceed [the air pollution control equipment's] hourly and annual rated treatment capacity [may provide numerical capacity limits]. [Note: The permit will have separate requirements for adequate operation, maintenance, worker training, and monitoring of the air pollution control device. The permit may also require a certain capture and treatment efficiency for the air pollution control device.]," or

b) "The company may operate flame spray, HVOF, and related equipment so that all units vent to an operating [name and, if necessary, describe, the air pollution control device]. The coatings equipment shall not be operated at a rate that exceeds the rated capacity [X units/hour, Y units per year][5] of the [name the air pollution control device]. [Note: The permit will have separate requirements for adequate operation, maintenance, worker training, and monitoring of the air pollution control device. The permit may also require a certain capture and treatment efficiency for the air pollution control device]"

See Attachment D for permit condition examples.

The issued permit would have aggregated maximum operation limits with no confidential information. But the confidential key submitted by the company in support of the permit application will be available for DEQ air inspectors so that they can check the number, type, and capacity of the specific coating units in order to assess the company's compliance with operational and emissions limitations.

4. Categorization

Categorization is similar to aggregation. Rather than combining quantities of production units, capacities, or throughputs, the permit writer would work to combine names and quantities of specific chemicals or materials into pertinent categories. The categories should be specific enough so as to not obscure "emissions data"--which cannot be held confidential--while allowing companies to protect confidential information on product formulation and production processes.

[5] X and Y are used here for convenience. In the actual permit they would be numbers. They do not represent confidential hidden or "sanitized" values. The reader is reminded that CAA Title V does not allow confidential permit conditions and the intent of this policy guidance is to phase out the use of parallel confidential and non-confidential permits in NSR and other air permits.

One example of categorization that DEQ uses is to combine various individual VOCs into a single VOC category for purposes of developing emissions limitations and other permit conditions. If "VOC" (or "non-methane organic gases [NMG]" or "non-methane hydrocarbons [NMH]") is the parameter being regulated then the names and quantities or proportions of specific VOC component compounds need not be divulged as public. However, if one or more of the VOC, NMG, or NMH components is subject to particular standards and regulations, for instance as a HAP, then its identity, allowable quantities, and other limitations or requirements must remain publicly accessible emissions data.[6] The permit writer must be careful to identify and apply relevant permit limitations to HAPs or other specifically regulated compounds that the permit applicant intends to use or generate. (See Chapter 10 Toxic Air Pollutants and Appendix FF AQP-5 Priority Pollutant Tables of the New Source Review Permits Program Manual as well as 9 VAC 5 Chapter 60 Hazardous Air Pollutant Sources.)

In particular cases, it may make sense for a permit writer to state restrictions on VOCs in terms of average or maximum vapor pressures if the general VOC category is too broad for delineating emissions restrictions. In other cases, categories of chemicals (VOCs or otherwise) may be described in terms of average molecular weight. And even in the case of HAPs, full speciation of individual compounds may not be required because some toxic air pollutants are regulated as compound categories such as "antimony compounds," "cyanide compounds," or "nickel compounds (soluble)."

> Example: XYZ Gas Systems Co. manufactures high value gas handling systems for aerospace and medical use. Lines, compressors, and other components manufactured by the company are degreased to remove oil, grease, moisture, and other contaminants. Very high levels of cleanliness are required.
>
> The industry uses a variety of organic solvents. XYZ Gas Systems Co. plans to use hydrofluoroethers (HFEs) with isopropanol (IPA) as a co-solvent. HFEs are non-toxic (non-HAP) and are not considered to be VOCs due to their low reactivity.[7] IPA is a VOC but is not a HAP. The company will incororate vapor recovery and re-distillation to conserve solvent and reduce emissions. The company wants to keep the composition of its degreasing solvent confidential though it recognizes that VOC emissions and emissions limitations must be disclosed. (For simplicity sake, consider these to be the only solvents the company plans to use.)
>
> Since HFEs are not regulated due to their innocuous environmental, health, and safety effects, the permit writer needs only to be concerned about potential IPA emissions. The permit writer will need to determine the facility's potential to emit IPA based on concentrations of IPA in the HFE-IPA solvent blends. Based on that potential to emit, the permit writer will need to determine applicable limitations and whether the proposed solvent recovery system will meet them or if throughput limitations or additional pollution abatement will be required.
>
> The permit writer can handle the company's confidentiality concerns by stating emissions limitations in terms of allowable VOC throughput and needed pollution controls (vapor recovery in this case) without specifically mentioning HFE (a non-VOC from a regulatory perspective) or IPA. Since the permit limitations would be in terms of VOCs rather than a specific chemical solvent, the company will have the freedom to substitute other VOC (or non-VOC) solvents for IPA. Because of this, the permit writer should include provisions that do not allow HAPs to be used. Reference could be made to a standard list of allowable VOC solvents, if available.

[6] A number of HAPs are also listed as ozone depleting compounds (ODCs) under the Clean Air Act and may be subject to certain federal restrictions, though these are beyond the scope of state air permitting programs.
[7] HFEs are also non-flammable and are not ODCs, though these characteristics are beyond the scope of state air permitting.

See Attachment D for permit condition examples.

5. Surrogate Parameters

A surrogate parameter is a value that represents throughput, production, or some other variable that the company may want protected as confidential. The surrogate parameter should have a simple and direct relationship to the data that the company wants protected. Through a confidential key, DEQ permit writers and inspectors can relate surrogate parameters to actual values. Yet, the non-confidential surrogate parameters fulfill the need to keep emissions data, emissions limitations, and other pertinent information available to the public.

Development of surrogate parameters that meet public information needs (and EPA acceptance) can be a difficult exercise. This is because "emissions data" that must be kept public includes "information *necessary to determine*" emissions or applicable limits and standards. The practicality and propriety of using surrogate parameters needs to be determined on a case-by-case basis. Because of these difficulties, the use of surrogate parameters should be considered only after exhausting other options (such as the other techniques discussed in this appendix).

The surrogate parameter may be an alternative measure of production or throughput such as the use of weight or volume of production rather than number of manufactured items. Or it may use some other alternative production unit that correlates with production or throughput and with emissions. The example below illustrates both approaches.

> Example: XYZ Tires Co. wants to protect information on its production capacity for the various sizes and types of tires it manufactures. However it may be amenable to allowing disclosure of its capacity in terms of mass of tires because different types of tires have different mass, thus not divulging the number of each type of tires produced. The company may also propose the use of a "tire manufacturing unit" that may give different counting weights to different types of tire. For instance, one "tire manufacturing unit" may equal three light duty vehicle (under 6000 lbs. gross vehicle weight [GVW]) tires or 2.5 tires for vehicles of between 6000 and 10,000 lbs. GVW or one heavy truck (over 10,000 lbs. GVW) tire. The weightings of different classes of tires should approximate the mass, volume, tread area, or some other reasonable measure of physical production so that it correlates with emissions potential. Furthermore, there should be a simple direct linear relationship between physical tire production and the surrogate tire manufacturing unit.

See Attachment D for permit condition examples.

The permit writer needs to be assured through engineering analysis and, perhaps, monitoring and testing that the surrogate parameter has a simple direct relationship to the throughput, capacity, rate, or other value that the permit applicant is trying to protect. There may be a need for a permit provision to require periodic testing or monitoring to reconfirm or recalculate the conversion factor between the surrogate parameter and the underlying value that the company wants kept confidential. For instance, a beverage can manufacturer may want to use mass of aluminum as a surrogate for number of cans produced and coated. If the manufacturer changes its process to make thinner cans, more cans will be coated (with more potential VOC emissions) per ton of aluminum consumed.

6. Emissions Monitoring or Sampling

Ideally, a facility's emissions should be determined by emissions monitoring rather than calculations based on assumed emissions factors, input fuels and materials, and production throughputs. Unfortunately, monitoring, especially real-time monitoring, is not yet economically or

technically feasible for a large number facilities requiring air emissions permits. Thus detailed questions about facilities' operations are often still required.

However, there may be instances in which real-time monitoring (continuous emissions monitors--CEMs) or statistically valid periodic sampling and monitoring may reliably provide all the emissions data required by DEQ. Under those circumstances permit writers, inspectors, emissions inventory staff, and other air regulators may not need to include details about production equipment, material throughputs, heat rates, etc. in permits so long as reliable emissions data are provided through monitoring to assure that DEQ and the public have accurate emissions data.

CEMs are currently required for certain facilities, such as large electric power plants. Such plants are required by regulation and through permit conditions to document the proper calibration, operation, and maintenance of the CEMs. Electric power plants seldom have confidentiality issues with respect to air permitting so an alternative hypothetical example follows.

> Example: XYZ Specialty Polymers makes specialized plastic products for high-end medical and scientific applications. The company uses several organic compounds, which include listed VOCs and HAPs, as solvents for dissolving polymer resins, forming products, and cleaning. XYZ's facilities will be state-of-the-art, with all solvent handling taking place in totally enclosed chambers. Computer automation controls production processes, including solvent use and evaporation. The enclosed solvent-using units are connected to a solvent recovery unit. Trace amounts of solvent are expected to still be present in air eventually vented from the production units via three stacks.
>
> The company recognizes the need to divulge throughput and potential solvent usage to DEQ for establishing emissions limitations. The company, however, does not want details of its production equipment and throughput to be made public. After consulting DEQ, the company realizes that emissions data must remain public information and that typically such data are calculated by applying emissions factors to specific equipment and calculating potential emissions based on throughputs, equipment capacities, transfer efficiencies, and other details.
>
> XYZ offers to install a CEM employing Fourier transform infrared (FTIR) spectroscopy on the ventilation stacks. FTIR is used in a number of occupational safety and health as well as environmental contexts. The device proposed by XYZ will accurately and reliably measure concentrations of each of the solvents the company intends to use.
>
> In this case, the permit writer may need to consider process throughputs and capacities to determine potential to emit and whether the proposed solvent recovery unit will provide sufficient controls. XYZ can develop a key with solvent amounts and equipment throughput details but such details do not need to appear in the permit itself. Aggregation methods (discussed previously) may be available to protect individual equipment details but allow the public to know aggregate capacity and potential to emit. CEM data will provide emissions data to DEQ that can be made available to the public. The CEM data are the means for compliance determination and meet the "information necessary to determine" emissions test. So actual throughput or other production details may not need not be divulged as necessary for the public to determine emissions levels. The permit writer will still need to divulge which solvents may be emitted (although a general VOC category may be used instead of naming specific solvents in the case of non-HAP solvents) and at what maximum amount or concentration. The permit may include details on the capacity of the vapor recovery unit while requiring its proper operation and maintenance as well as a certain minimum level of solvent capture and treatment. The permit will also include provisions for proper operations, maintenance, and calibration of the CEM, as well as for transmission of emissions data to DEQ. (Note that other confidentiality techniques, such as aggregation and categorization may also be applicable for this example.)

See Attachment D for additional discussion of permit condition issues pertinent to application of CEMs and other emissions monitoring.

7. Parametric Monitoring

Parametric monitoring combines the use of surrogate parameters and monitoring or sampling in lieu of including detailed throughput, capacity, or other process details. The surrogate parameter should have a simple direct relationship to the data the company wishes to keep confidential. Monitoring of the surrogate should have a simple direct relationship to emissions.

Again, development and use of surrogate parameters requires special care and case-by-case judgement in order to assure that "information *necessary to determine*" emissions or emissions limitations and standards remain publicly accessible. It should be pursued only after exhausting other options for protecting CBI.

> Example: XYZ Aluminum Co. wishes to keep its production throughput and capacity confidential. The company notes, and the permit writer confirms, that XYZ's production level correlates directly with electricity consumption. So electric power consumption serves as a surrogate measure for aluminum production and, via the use of emissions factors, for emissions.
>
> DEQ can keep equipment details confidential by use of a confidential key. However, the relationship between the surrogate parameter being monitored (in this case, electric power consumption) and emissions must be kept non-confidential as a form of emissions data.
>
> Example: XYZ Polymers Co. produces nylon but wishes to keep its production rate confidential. The company has demonstrated that throughput is directly correlated with the speed of the polymer supply pumps in revolutions per minute (rpm). In turn these are directly correlated with particulate matter (PM) emissions, which is the only pollutant of concern. The permit writer may use pump speed as a surrogate parameter for throughput or production and, therefore, may state throughput or production limitations in terms of maximum supply pump speed. Likewise monitoring, reporting, and record keeping may be done for the pump speed surrogate rather than for the underlying mass of polymer.

See Attachment D for permit condition examples.

Permit writers need to be cautious about the use of parametric monitoring. They need to have assurances through historical data or other means that an accurate relationship between the surrogate and emissions exists. Furthermore, there needs to be an enforceable mechanism to require the company to alert DEQ and provide new accurate correlations between the surrogate parameter and emissions should they change. The permit may include a provision requiring periodic testing or monitoring to reconfirm or recalculate the conversion factor between the surrogate parameter and the underlying value that the company wants kept confidential. For example, the hypothetical aluminum company may improve its power supply or electrodes in order to produce more aluminum per unit of electric power consumed. This could cause an underestimate of emissions. Alternatively, improved electrodes may reduce emissions per unit of power consumed and aluminum produced. This could cause an overestimate of emissions if an older correlation between power consumption and emissions is employed.

8. Section Summary

Permit writers must balance legitimate business interests in protecting sensitive business information with DEQ's need for process and product details to administer air quality requirements and with the public's right to emissions data.

Permit writers only require product and process details for purposes of developing practically enforceable permits. The public is entitled to such information only if it falls under the category of emissions data, i.e., it is required in order for the public to identify and calculate emissions. Details not needed for determining potential or actual emissions are extraneous and are not required by DEQ.

A confidential key can be developed in cases where confidential details are required by DEQ for developing permits, performing compliance inspections, and other purposes. The actual permit would not include such confidential details.

Aggregation, categorization, and surrogate parameters are means to protect confidential details while still providing emissions data to the public. Emissions monitoring or statistically sound sampling can provide emissions data without the need to divulge confidential product and process details. Ideally, DEQ should be concerned only with emissions and not with detailed industrial processes. Such details are only needed if complete accurate emissions monitoring is not done. Parametric monitoring may also be applicable but with some cautions.

Attachment A: Checklist for Evaluating Claims of Confidential Information in Permit Applications

Note: If the applicant 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 5 Chapter 170 are covered by this checklist.

Overall

1. Have both confidential and public versions of the application been submitted? Yes ☐ No ☐

2. If necessary, has a confidential key been submitted? Yes ☐ No ☐

   A confidential key relates confidential information to non-confidential identifiers by means of reference numbers, aggregated process units, surrogate parameters, or other means to assure that that permits do not contain confidential information while emissions data remain public. See Section F of Appendix MM of the NSR Permits Program Manual for discussion and example.

3. If a key has been submitted, has it been certified using the language below? Is the certification accompanied by the signature, date, printed name, title, company name, and registration number of the applicant so that it is clear to which facility and permit the key applies? Yes ☐ No ☐

   I acknowledge that this confidential key is an attachment to the Air Permit Application and is subject to the certification statement found on the Air Permit Application Document Certification Form.

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

Comparison of Confidential and Public Applications

4. 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

5. 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.

6. 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

7. 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

8. 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

9. 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?

10. 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 ☐

11. Does this description contain a discussion of how disclosure of this information would cause substantial harm to the owner? Yes ☐ No ☐

12. Does this description indicate that to the best of the applicant's knowledge this information is not publicly available and is not reasonably obtainable by unauthorized parties? Yes ☐ No ☐

13. Does the showing contain the certification below? Yes ☐ No ☐

    I hereby certify under penalty of law that to the best of my knowledge and belief, after diligent inquiry, the information claimed above as confidential meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208 and is not "emissions data." 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:
AFS 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 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, those 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.

Attachment D. Examples of Permit Conditions Incorporating Confidentiality Protection

1. Necessary Versus Extraneous Information

Typical permit condition without confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  One 1000-liter Chemap Model 2000 continuously stirred tank reactor (Ref. No. A-1), with maximum annual throughput of 55,000 liters and emissions of up to 2.0 lbs/hr of VOC and up to 3 tons/yr of VOC. (9 VAC 5-80-1100)

With confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  One 1000-liter fermentation bioreactor (Ref. No. A-1), with maximum emissions of up to 2.0 lbs/hr of VOC and up to 3 tons/yr of VOC.
  (9 VAC 5-80-1100)

[Note that a confidential key may contain additional information on the bioreactor, such as manufacturer and model, to assist DEQ air inspectors to accomplish their tasks.]

2. Aggregation

Typical without confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  - One flame spray coating line (Ref. No. A-1), rated at annual maximum throughput of 10,000 square feet or equivalent of coated substrate.
  - Two flame spray coating lines (Ref. No. A-2 and A-3), each rated at annual maximum throughput of 25,000 square feet or equivalent of coated substrate.
  - One high velocity oxy-fuel line (Ref. No. A-4), rated at annual maximum throughput of 10,000 square feet or equivalent of coated substrate.
  - One high velocity oxy-fuel line (Ref. No. A-5), rated at annual maximum throughput of 30,000 square feet or equivalent of coated substrate.

  (9 VAC 5-80-1100)

With confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  - Inorganic Coating Production Unit A consisting of no more than five flame spray and/or high velocity oxy-fuel coating lines (Ref. No. A-1 through A-5), with aggregated annual maximum throughput of 100,000 square feet or equivalent of coated substrate.

  (9 VAC 5-80-1100)

  Note that the permitee will have provided details of throughput and emissions of the five individual lines in the permit application and these details would have been labeled and justified as confidential business information (CBI). A confidential key would be available to DEQ permit writers, inspectors, and air emissions staff that provide such details.

Confidential Key:
Inorganic Coating Production Unit A consists of:

- One flame spray coating line (Ref. No. A-1) rated at annual maximum throughput of 10,000 square feet or equivalent of coated substate.
- Two flame spray coating lines (Ref. No. A-2 and A-3) each rated at annual maximum throughput of 25,000 square feet or equivalent of coated substrate.
- One high velocity oxy-fuel line (Ref. No. A-4) rated at annual maximum throughput of 10,000 square feet or equivalent of coated substrate.
- One high velocity oxy-fuel line (Ref. No. A-5) rated at annual maximum throughput of 30,000 square feet or equivalent of coated substrate.

Typical without confidentiality measures

- **Emission Limits** - Emissions from the operation of the facility shall not exceed the limits specified below [xx and yy are used here for convenience. In the actual permit they would be numbers. They do not represent confidential hidden or "sanitized" values.]:

Flame spray coating line Ref. A-1:

Cadmium compounds	xx lbs/hr	yy tons/yr
Chromium II and III compounds	xx lbs/hr	yy tons/yr
Chromium VI compounds	xx lbs/hr	yy tons/yr
Manganese compounds	xx lbs/hr	yy tons/yr
Nickel compounds	xx lbs/hr	yy tons/yr

Flame spray coating lines Ref. A-2 and A-3, each:

Cadmium compounds	xx lbs/hr	yy tons/yr
Chromium II and III compounds	xx lbs/hr	yy tons/yr
Chromium VI compounds	xx lbs/hr	yy tons/yr
Manganese compounds	xx lbs/hr	yy tons/yr
Nickel compounds	xx lbs/hr	yy tons/yr

High velocity oxy-fuel coating line Ref. A-4:

Cadmium compounds	xx lbs/hr	yy tons/yr
Chromium II and III compounds	xx lbs/hr	yy tons/yr
Chromium VI compounds	xx lbs/hr	yy tons/yr
Manganese compounds	xx lbs/hr	yy tons/yr
Nickel compounds	xx lbs/hr	yy tons/yr

High velocity oxy-fuel coating line Ref. A-5:

Cadmium compounds	xx lbs/hr	yy tons/yr
Chromium II and III compounds	xx lbs/hr	yy tons/yr
Chromium VI compounds	xx lbs/hr	yy tons/yr
Manganese compounds	xx lbs/hr	yy tons/yr
Nickel compounds	xx lbs/hr	yy tons/yr

With confidentiality measures

- **Emission Limits** - Emissions from the operation of the facility shall not exceed the limits specified below [aa and bb are used here for convenience. In the actual permit they would be numbers. They do not represent confidential hidden or "sanitized" values.]:

  Inorganic Coating Production Unit A (Ref. A-1 through A-5):

Cadmium compounds	aa lbs/hr	bb tons/yr
Chromium II and III compounds	aa lbs/hr	bb tons/yr
Chromium VI compounds	aa lbs/hr	bb tons/yr
Manganese compounds	aa lbs/hr	bb tons/yr
Nickel compounds	aa lbs/hr	bb tons/yr

  Note that the permitee will have provided details of throughput and emissions of the three individual lines in the permit application and these details would have been labelled and justified as confidential business information (CBI). A confidential key would be available to DEQ permit writers, inspectors, and air emissions staff that provide such details.

[Same key as shown previously.]

[The permit writer will also include permit conditions requiring, if necessary, coating unit emissions to be treated by appropriate air pollution control equipment. If such equipment is required, there will be permit conditions regarding proper operation, maintenance, monitoring, and performance reporting.]

3. Categorization

Typical without confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  - Five Vapotech Model XYZ enclosed vapor degreasers (Ref. No. A-1 through A-5), each with 30 gallon solvent capacity, filter, refrigerated chiller, and solvent distillation tank; each with controlled emissions of up to 1.1 lbs/hr and 4.8 tons per year of hydrofluoroethers and 0.5 lbs/hr and 2.4 tons/yr of isopropanol.

  (9 VAC 5-80-1100)

With confidentiality measures

- **Equipment List** - Equipment to be «Constructed» at this facility consists of:

  - Five Vapotech Model XYZ* enclosed vapor degreasers (Ref. No. A-1 through A-5), each with 30 gallon solvent capacity, filter, refrigerated chiller, and solvent distillation tank; each with controlled emissions of up to 0.5 lbs/hr and 2.4 tons/yr of non-HAP VOC.

  (9 VAC 5-80-1100)

Confidential pages from permit application may show individual VOCs although this is not necessary if speciation is not required.
* Brand and model may not be necessary information. Aggregation may also be applied if warranted by defining, say, a "cleaning process unit" consisting of "no more" than a certain number of degreasers of some aggregate capacity and emissions limit.

Typical without confidentiality measures

- **Emission Limits** - Emissions from the operation of the facility shall not exceed the limits specified below:

  Enclosed vapor degreasers (Ref. No. A-1 through A-5), each:

Isopropanol	0.5 lbs/hr	2.4 tons/yr

  [Note that this is a non-HAPs.]

With confidentiality measures

- **Emission Limits** - Emissions from the operation of the facility shall not exceed the limits specified below:

  Enclosed vapor degreasers (Ref. No. A-1 through A-5), each:*

Volatile Organic Compounds (non-HAP)	0.5 lbs/hr	2.4 tons/yr

Confidential pages from permit application may show individual VOCs although this is not necessary if speciation is not required. Note that these are non-HAPs. HAP compounds must be individually identified unless a given HAP is regulated in terms of a broader category of compounds--for instance, "cyanide compounds" instead of potassium cyanide or sodium cyanide.
* Aggregation may also be applied if warranted by defining, say, a "cleaning process unit" consisting of "no more" than a certain number of degreasers of some aggregate capacity and emissions limit.

[The permit writer may also include permit conditions requiring, if necessary, coating unit emissions to be treated by appropriate air pollution control equipment, although in this example full enclosure, vapor recovery, and re-distillation are incorporated into the vapor degreasing units. There may need to be permit conditions regarding proper operation, maintenance, monitoring, and performance reporting.]

4. Surrogate Parameters

Typical without confidentiality measures

- **Production** - The production of tires shall not exceed 400,000 per year, calculated monthly as the sum of each consecutive 12-month period.
  (9 VAC 5-80-1180)

With confidentiality measures

[XXXX, YYYY, and ZZZZ are used here for convenience. In the actual permit they would be numbers. They do not represent confidential hidden or "sanitized" values.]

- **Production** - The production of tires shall not exceed 4,000 tons per year, calculated monthly as the sum of each consecutive 12-month period.
  (9 VAC 5-80-1180)
  or
- **Production** - The production of tires shall not exceed XXXX square feet of total tread area on finished tires per year, calculated monthly as the sum of each consecutive 12-month period.
  (9 VAC 5-80-1180)
  or
- **Production** - The production of tires shall not exceed 100,000 tire production units per year per year, calculated monthly as the sum of each consecutive 12-month period. One tire production unit equals 4 tires for vehicles of under XXXX lbs gross vehicle weight, 3.5 tires for vehicles of greater than XXXX lbs but no more than YYYY lbs gross vehicle weight, 2.5 tires for vehicles of greater than YYYY lbs but no more than ZZZZ lbs gross vehicle weight, or 1.5 tires of greater than ZZZZ lbs gross vehicle weight.
  (9 VAC 5-80-1180)

The confidential key can translate between production units--total tires, mass, tread area, weighted tire production by size or mass ("tire production unit")--as desired. Such a key may not be necessary if the surrogate parameter adequately describes production for purposes of Agency permitting, compliance inspection, and emissions inventorying.

5. Emissions Monitoring or Sampling

Similar to both aggregation (above) and parametric monitoring (below). However, CEMs (or other valid sampling and monitoring) rather than the typical "throughput x emissions factor = emissions" (or "throughput x concentration x control efficiency = emissions") formula would be the means for DEQ to measure compliance. Thus is may be possible for such a permit to *omit* throughput limitations conditions while still assuring that facility emissions limitations are met.

This method is conducive to facilities where emissions flow through a limited number of discrete stacks or points that can be properly monitored by CEMs. The permit would need to have conditions that require that emissions be monitored and that monitoring equipment cannot be bypassed. The permit would have conditions for adequate operation and maintenance of CEM or other monitoring equipment. As a backstop, in case of CEM failure, DEQ could continue to require the company to maintain pertinent throughput data (for instance, VOC use) on-site. However these data do not need to be made public unless CEM or other monitoring fails and "throughput x concentration x control efficiency = emissions" becomes the means to determine emissions. The permit writer should make clear in the permit conditions that throughput data may be made public at times when CEMs fail or are not adequately operated and maintained to guarantee accurate data. With proper monitoring, throughput need not be made public, monitoring data would provide emissions data.

6. Parametric Monitoring

Typical without confidentiality measures

[XXX is used here for convenience. In the actual permit it would be a number. It does not represent confidential hidden or "sanitized" values.]

- **Throughput** - The throughput of aluminum ore shall not exceed XXX tons per year, calculated monthly as the sum of each consecutive 12-month period.
  (9 VAC 5-80-1180)

With confidentiality measures

[YYY is used here for convenience. In the actual permit it would be a number. It does not represent confidential hidden or "sanitized" values.]

- **Throughput** - The throughput of aluminum ore as represented by electrical power consumption shall not exceed YYY amp-hours per year, calculated monthly as the sum of each consecutive 12-month period.
  (9 VAC 5-80-1180)

  Note: There would need to be a publicly available emissions factor relating electrical power consumption to emissions from aluminum smelting at the facility and also a provision for the facility to either inform DEQ of any change in the emission factor due to process or equipment change and/or to conduct periodic monitoring to either re-confirm or correct the emission factor. These could be addressed under monitoring or compliance determination conditions in the permit.

Confidential pages from the permit application and its engineering analysis would provide an equation translating the surrogate parameter (power consumption) to product throughput (tons of aluminum) and then, via an emissions factor, to emissions. The publicly available data should provide a power consumption-to-emissions emissions factor. This can also be implied by dividing the facility's emission limitation by its electric power throughput limitation.

Typical without confidentiality measures

[XXX is used here for convenience. In the actual permit it would be a number. It does not represent confidential hidden or "sanitized" values.]

- **Throughput** - The production of Nylon shall not exceed XXX tons per year, calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-1180)

With confidentiality measures

[yyy, x.x, and zz.z are used here for convenience. In the actual permit they would be numbers. They do not represent confidential hidden or "sanitized" values.]

- The total polymer supply pump rate (Ref. N-1, N-2, N-14, N-15) shall not exceed yyy revolutions per minute (rpm).

- Emissions from the Nylon fiber production facility shall not exceed the limits specified below:

Particulate Matter	x.x lbs/hr	zz.z tons/yr

- Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period.

(Condition based on total polymer pump rate not exceeding yyy rpm. If rate not exceeded and process controls are operating properly, there is reasonable assurance that PM limits will not be violated.)

- A change to the polymer supply pumps or polymer supply pump system may require a permit to modify and operate.
- The permittee shall continuously monitor the total supply rate for the polymer supply pumps (Ref. N-1, N-2, N-14, N-15) in revolutions per minute (rpm).
- The permittee shall conduct a weekly inspection of the maximum total supply rate for the polymer supply pumps (Ref. N-1, N-2, N-14, N-15) in revolutions per minute (rpm).
- Recordkeeping of the maximum weekly polymer supply pump rate and polymer supply pump inspections.

Confidential pages from the permit application and its engineering analysis would provide an equation translating the surrogate parameter (polymer supply pump speed) to product throughput (tons of Nylon) and then, via an emissions factor, to emissions. The publicly available data should provide a pump speed-to-emissions emissions factor. This can also be implied by dividing the facility's hourly emission limitation by its polymer supply pump rate limitation in rpm times 60 minutes per hour.