

DAPC Permitting Manual
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March 2002

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Article Prohibiting Use of Waste Oil for Dust Control, DAPC Air Lines, March 12, 1992

Note: This document includes the readily available Ohio guidance items, as well as some federal guidance. There may be additional items that have been created over the years, which do not appear here. Please notify DAPC of any missing items, so they may be reviewed for inclusion.

From: Bob Hodanbosi
To: Tom Tucker
Date: 12/17/99 8:34AM
Subject: Re: Is Silica an Air Toxic?

Tom,

No. This question has been raised in the past and we have not used the toxic policy for the review of silica.

Bob

>>> Tom Tucker 12/17/99 07:55AM >>>

Under what circumstances would we require an Air Toxics evaluation for the effects of crystalline silica (sand) emissions from a casting plant?

Silica is not a listed 112(b) HAP, but it does have a TLV and is identified by some sources as a human carcinogen. The TLV are for the respirable fraction (roughly PM2.5) and range from 0.05 to 0.1 mg/m³, depending on crystal composition.

Dana is currently reviewing the GM Power Train PSD modeling report.

Thank you. JTT

CC: Dana Thompson ; Mike Hopkins ; Misty Parsons ; Paul Koval ; Safaa ElOraby

Ohio EPA Inter-Office Communication

Division of Air Pollution Control

To: DO Air Unit Supervisors & LAA Directors Date: 4/19/94
From: Bob Hodanbosi, Chief, DAPC
Subject: Review of New Sources of Air Toxic Emissions Policy

I have received a request from Director Schregardus' Office to clarify the role of the most recently proposed (January 1994) "Review of New Sources of Air Toxic Emissions" draft document. The Director's Office has received notification that some DOs and LAAs are requiring PTI applicants to comply with the Proposed 1994 air toxics policy. This is not the correct use of the proposed policy. The older "Option A" policy is the policy currently in effect for PTI applications, which requires the modeling for toxic air contaminants be below the TLV/42 (MAGLC = Maximum Allowable Ground Level Concentration). The proposed Policy includes a MAGLC of TLV/100, plus a risk assessment be conducted for sources of carcinogenic air contaminants.

The 1994 Policy has been released for its third and final public comment period in January 1994. We have received, and are in the process of responding to, many comments on the Policy. When the response to comments is completed by Ohio EPA, the Policy will be issued as the official policy to use for new PTI applications for air pollution sources in Ohio. We anticipate the Policy to be placed into use in May 1994.

Until the release of the final Policy as modified by the most recent public comment period, Ohio EPA DO's are to use the original "Option A" policy for sources of toxic air pollutants.

Some LAAs may have local authority to require additional stipulations in the PTI. These LAAs may be using the proposed Policy as their LAA's determination of BAT for toxic air contaminants. This is the result of local pollution control laws and not the Ohio EPA DAPC.

If you have any additional comments or questions on the proposed Policy please call Paul Koval, Supervisor of the Air Toxics Unit for DAPC at (614)644-2270. Thank you.

cc: District Office Air Unit Supervisors
Local Air Agency Directors

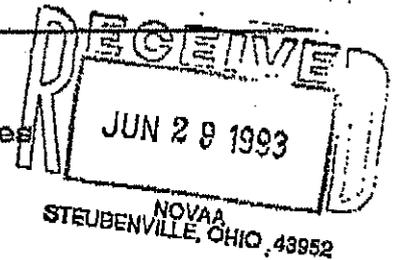
Lynn Malcolm, Akron
Cory Chadwick, DES AQP (Cinn)
John Paul, RAPCA
Don Walden, Portsmouth
Bob Ramhoff, Mahoning-Trumbull

Bruce Blankenship, Canton
Robert Staib, Cleveland
Leon Weitzel, Lake County
Pat Deluca, NOVAA
Lee Pfouts, TESA

Don Cavote, CDO
Fred Klingelhafer, SEDO
Dennis Bush, NEDO
Gerald Rich, NWDO
Phil Hinrichs, SWDO

INTER OFFICE COMMUNICATION

DATE: June 25, 1993
TO: District Offices and Local Air Agencies
FROM: ~~Alan~~ Alan Lloyd - Ohio EPA, DAPC - Permits
SUBJECT: Ceramic tile manufacturers - FYI



Recently, The Division of Air Pollution Control of the Ohio EPA reviewed two Permit to Install (PTI) applications for kilns that manufacture ceramic tile that emit SO₂ and fluoride emissions.

Both of these sources were not permitted for SO₂ and/or fluoride emissions, but did provide documentation in their PTI applications that they did emit SO₂ and fluoride emissions.

Up until the review of these permits and based on information found in AP-42, section 8.3, emission factors for the manufacturer of bricks and related clay products, which indicated that SO₂ may be emitted from the bricks when the temperatures reach or exceed 2500°F and the fluorides, largely in gaseous form, are emitted from brick manufacturing operations, we did have any data or indication that these sources emitted SO₂ and/or fluoride emissions.

In addition, based on our belief that these facilities did not emit SO₂ emissions, these sources were not included in the State's SO₂ State Implementation Plan (SIP).

Therefore, to account for these emissions, Ohio EPA is requesting that the district offices and local air agencies investigate the possibility that SO₂ and/or fluoride emissions are, in fact, being emitted by these facilities. Depending on the results of your investigation, you may need to request that the facilities apply for and obtain PTI's and/or PTO's.

If a new PTI and/or a new PTO is required and depending on the amount of SO₂ and/or fluoride emissions that are emitted, then a number of scenarios would be invoked. An example of one possible scenario would be the following:

If the calculated allowables for SO₂ and fluoride emissions are above 25 and 3 tons per year, respectively, for a permit, then air dispersion modeling would be required per Bob Rodanbosi's memo of January 31, 1989. This would require the facilities to meet a maximum 24-hour ground level concentration of 45 micrograms/m³ for SO₂ and a maximum 30 day average ground level concentration of .5 micrograms/m³ for fluorides. If you have questions, call me.



State of Ohio Environmental Protection Agency

O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

M E M O R A N D U M

To: All Ohio EPA DAPC District Field Offices and
Local Air Authorities

From: Bob Hodanbosi^{BH} - Manager, AQM&P

Subject: Air Toxics Modeling of New Sources

Date: August 13, 1991

All new sources generating greater than one ton per year of an air toxic chemical must include air toxics modeling in their permit to install (PTI) review. If your office runs the screen model on a permit, please include the computer output with the PTI application worksheets. If your office cannot run the screen model, please submit the new source review coding forms so that the model can be run here at central office. Inclusion of this information will help to expedite processing of your permits. The U.S. EPA requires that we keep records of all air toxics modeling.

Although it is not required, it may be helpful to model sources emitting less than one ton per year of chromium, nickel, and other chemicals having TLV's of less than or equal to 50 $\mu\text{m}/\text{m}^3$. We have found that some modeling parameters can cause sources emitting less than 1 ton per year of these types of chemicals exceed the MAGLC (current air toxics policy).

BH/SJS/mmc

Ohio EPA
Division of Air Pollution Control
Engineering Guide # 70

D R A F T

Question:

What is the Ohio EPA's current "Air Toxic Policy" for processing Permit-to-Install (PTI) applications?

Answer:

Ohio EPA's current "Air Toxic Policy" is entitled "Option A - Review of New Sources of Air Toxic Emissions" (issued May 1986). Page 4 of this guideline is a one-page table that summarizes the current "Air Toxic Policy" as established by "Option A" with the interpretations made by the Ohio EPA since the original policy was issued. A copy of "Option A" is attached to this Engineering Guide for reference. Also attached is a copy of the January 31, 1989 inter-office communication (memorandum) from Bob Hodanbosi that establishes a 1.0 ton per year cut-off for "Air Toxic Policy" evaluations.

Discussion:

A number of questions have been raised by agency staff related to the proper interpretation and use of the current "Air Toxic Policy" (i.e., "Option A"). The following questions/answers provide further guidance to staff involved with the implementation of this policy.

Question 1: The Ohio EPA has issued several draft updates to the Ohio EPA's "Air Toxic Policy". The drafts contain numerous updates including an evaluation for carcinogenicity and a tighter Maximum Acceptable Ground Level Concentration (MAGLC). Does Ohio EPA consider compliance with any of the draft policies necessary to meet BAT?

Answer: Compliance with the current "Air Toxic Policy" (i.e., "Option A") is sufficient to demonstrate BAT for emissions of toxic air contaminants. (Note: Enforceable local requirements may be used by Local Air Agencies to establish a standard more stringent than the TLV/42.)

Question 2: If a new Maximum Achievable Control Technology (MACT) standard applies to a proposed new source or modified existing source, does this source also need to meet the "Air Toxic Policy" (i.e., "Option A")?

Answer: No. Compliance with the MACT standard is sufficient to meet the Ohio EPA's "Air Toxic Policy" and BAT requirements. This is also the case for emissions that are controlled by any other national standard. For example, if PSD applies and the pollutant in question complies with the limits/modeling under PSD, then the "Air Toxic Policy" does not apply for that pollutant. MACT, NSPS, NESHAPS, PSD, or major New Source Review are areas where the "Air Toxic Policy" does not apply because of a pre-existing national standard.

POLLUTANT BY POLLUTANT EVALUATION

D R A F T

Question 3: What about emissions of a highly toxic compound (e.g., a known human carcinogen) where the agency determines the "Air Toxic Policy" is not sufficient to protect public health? Is compliance with the "Air Toxic Policy" sufficient to meet BAT requirements in this case?

Answer: No. The "Air Toxic Policy" is not necessarily sufficient. ^{ADDITIONAL} Highly toxic compounds can be evaluated on a case-by-case basis and ^{may be} limitations established to ensure that public health is protected. Please contact the AQM&P Section for assistance in evaluating these situations.

Question 4: A new source is being installed at an existing facility. Do the emissions from the existing sources at the facility need to be included in the model evaluation?

Answer: No. Only emissions from the proposed new source or modification must be evaluated.

Question 5: An existing source is being modified such that it needs a permit to install. The emissions of an air toxic are being increased. Does the "Air Toxic Policy" require that the total emissions after the modification be evaluated? Or, does the "Air Toxic Policy" only require that the incremental increase in emissions be evaluated?

Answer: Only the increase in toxic emissions due to the change must be evaluated (i.e., the net difference between the new allowable and the old allowable for the air toxic).

Question 7: Are only gaseous/vapor VOC type pollutants reviewed under the "Air Toxic Policy" or are some particulates such as toxic metals reviewed?

Answer: Any pollutant for which the American Conference of Governmental Industrial Hygienists (ACGIH) has adopted a TLV or a Ceiling Value must be reviewed. (Note: As indicated in the response to Question 2, pollutants that are regulated under a MACT, NSPS, NESHAPS, PSD, or Major New Source Review are excluded.)

Question 8: There are many "air toxic" lists. Which one do we use for the "Air Toxic Policy"?

Answer: The most recently published Threshold Limit Values (TLV) listing should be used ("Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices", American Conference of Governmental Industrial Hygienists).

Question 9: Are there certain types of emissions units that do not need to be modeled under the "Air Toxic Policy" (for example, do the emissions from a Gasoline Dispensing Facility (GDF) require modeling)?

Answer: Every emissions unit with one ton per year or more of the emissions of any air toxic must be modeled unless an acceptable alternative demonstration is made (the one ton cut-off was established in a memorandum from Bob Hodanbosi dated January 31, 1989). An acceptable alternative demonstration includes modeling associated with an identical emissions unit with comparable site characteristics.

DRAFT

Question 10: Does the "Air Toxic Policy" require an evaluation of each specific air toxic constituent of a VOC coating to determine if the one ton per year cut-off is exceeded?

Answer: Yes. Any source that emits one ton per year or more of any air toxic must be evaluated under the "Air Toxic Policy".

Question 11: Do air toxic emissions from combustion sources have to be evaluated?

Answer: No. Most combustion sources do not need to be evaluated for air toxics at this time. These include boilers and heaters that burn fossil fuels exclusively (coal, natural gas, fuel oil, etc.). These sources are already well regulated under existing rules. Exceptions to this are for combustion sources that emit an air toxic from something other than the combustion of the fossil fuels. Some examples of this include incinerators where air toxics are generated from the burning of the waste stream, and boilers where waste fuel or tires are burned along with the fossil fuel. These types of sources should be evaluated under the "Air Toxic Policy".

Ohio EPA - Division of Air Pollution Control
"Air Toxic Policy"
 Summary

D R A F T

Element	Ohio EPA's Current Policy
PTI applications that require an "Air Toxic Policy" analysis	All new emissions units and all modifications of emissions units that involve emissions increases of ≥ 1 ton per year of any air contaminant for which the ACGIH has adopted a Threshold Limit Value (TLV) or Ceiling Value. (Note: Multiply a 10-min average Ceiling Value by 0.737 to derive an 8-hr TLV.)
Contaminants that require analysis	All contaminants with an ACGIH TLV in effect at the time the application is received.
Exemptions	Emission units subject to a MACT standard are exempt. Emissions that are restricted by another federal standard are also excluded from the analysis (i.e., NSPS, BACT, LAER or NESHAPS) (Note: This includes VOC species that are controlled by an overriding VOC emissions standard).
Amount of emissions that must be evaluated	The amount of the emissions increase requested in the PTI application (unless a previous PTI included a provision that requires future increases to be evaluated in conjunction with previous authorized emissions). The amount of the emissions increase requested in the PTI application
Maximum acceptable ground level concentration (MAGLC)	TLV adjusted for exposure to the general public and the duration of the exposure. Maximum: TLV/10 (for operations ≤ 40 hours per week operation) Intermittent: (TLV/10) x (8/actual daily operating hours) x (5/actual operating days per week) Minimum: TLV/42 (for continuous operations.)
Averaging time for MAGLC comparison	One-hour average concentration. (The MAGLC specified as a 1-hour average concentration versus the maximum predicted 1-hour concentration at the maximum hourly emission rate.)
Methodology for MAGLC analysis	SCREEN3 or other US EPA approved model (model using the maximum 1-hour emission rate to predict the maximum off-site concentration). (Note: The distance to the nearest property line can be used in this analysis.) <i>as the minimum distance</i>
Synergistic effects for MAGLC contaminants	Not required, each contaminant is evaluated independently.
Class A, B and C Carcinogens	The current "Air Toxic Policy" does not include any special provisions for Class A, B or C carcinogens. Extremely toxic contaminants and/or carcinogens should be evaluated independent of the "Air Toxic Policy".

only on a station point?

D R A F T

OPTION A

REVIEW OF NEW SOURCES
OF AIR TOXIC EMISSIONS

Ohio Environmental Protection Agency
Division of Air Pollution Control
1800 WaterMark Drive
Columbus, Ohio 43215



inter-office communication

to: Distribution, date: May, 1986

from: Bob Hodanbosi, DAPC

subject: New Source Review Handbook: Guideline for Air Toxics

Ohio EPA is working to develop a policy for toxic air pollutants. Three (3) draft policies have been developed - Options A, B and C.

Until this policy is finalized, Option A (attached) will be used as the guideline for air toxics.

If you have any questions, please do not hesitate to contact me at (614) 466-6116.

BH/jlc

Attachment

OPTION A

REVIEW OF NEW SOURCES
OF AIR TOXIC EMISSIONS

Ohio Environmental Protection Agency
Division of Air Pollution Control
1800 WaterMark Drive
Columbus, Ohio 43215

REVIEW OF NEW SOURCES OF TOXIC EMISSIONS

Synopsis

The following is a summary of the Ohio Environmental Protection Agency (EPA) policy for the control of toxic air emissions.

1. Determine if a threshold limit value (TLV) exists for the specific compound which is emitted from the source.
2. Divide the TLV by ten to adjust the standard from the working population to the general public (TLV/10).
3. Adjust the standard to account for the duration of the exposure (operating hours of the source) of "X" hours per day and "Y" days per week from 8 hours per day and 5 days per week. This formula is used to obtain the Maximum Acceptable Ground-Level Concentration (MAGLC).

$$\left(\frac{\text{TLV}}{10} \times \frac{8}{X} \times \frac{5}{Y} \right) = \frac{4\text{TLV}}{XY} = \text{MAGLC}$$

4. The Director may, on a case-by-case basis, accept an alternate analysis from a new source applicant.

Introduction

The basis for the air program's activities have been based upon the ambient air quality standards for "criteria pollutants." These standards, designed to protect health and welfare, have been established by U.S. EPA for the following six (6) pollutants:

1. Total suspended particulates,
2. Sulfur dioxide,
3. Carbon monoxide,
4. Nitrogen dioxide,
5. Ozone, and
6. Lead (Pb).

Emission limitations for new and existing sources have been established under the federal National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the following pollutants:

1. Vinyl chloride,
2. Asbestos,
3. Beryllium,
4. Mercury,
5. Benzene, and
6. Arsenic (proposed).

The federal New Source Performance Standards (NSPS) also address several additional pollutants which are:

1. Fluorides,
2. Sulfuric acid mist,

3. Hydrogen sulfide, and
4. Reduced sulfur compounds.

For new sources, the Permit to Install rules require the application of Best Available Technology, and emissions of non-specified contaminants can be controlled through this mechanism. However, this level of review may not be adequate for toxic emissions. U.S. EPA has been slow to promulgate NESHAPS for additional pollutants. In order to assist in the review of new sources of toxic contaminants, the following policy has been developed by the Air Quality Modeling and Planning Section of the Division of Air Pollution Control.

Background and Rationale

The American Conference of Governmental Industrial Hygienists (ACGIH) has been involved with the safety aspects of work places where individuals may be exposed to varying levels of toxic substances. The ACGIH publishes and continuously updates a list of "Threshold Limit Values" (TLVs) for many substances. These TLVs represent maximum concentrations under which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effects. Most of the TLVs refer to time-weighted average concentrations for a normal work day, with certain excursions within limits permissible during that time period, as long as the weighted average is not exceeded. However, for certain substances, there are levels that should not be exceeded at any time.

As outlined below, there are certain limitations and dangers in the literal application of TLVs for air pollution control purposes.

1. Threshold Limit Values are based on the information gathered in industrial/commercial settings, through experience from medical research and practice, from experimental human and animal studies, and also from a combination of these sources. Only in a few instances have the values been established firmly on a basis of examinations of human subjects correlated with extensive environmental observations.
2. The TLVs were determined for a population of workers who are essentially healthy and who fall within a "working age group" of about 17 to 65 years.
3. Synergistic effects of mixtures of substances are not considered in the development of TLVs, although the TLVs for mixtures can be calculated via the appropriate formula.
4. Individuals vary in sensitivity or susceptibility to toxic substances.
5. Often a single value is given for substances which occur in different forms and may have different toxicities.

6. For most contaminants, a worker during a normal work schedule (8 hours per day, 5 days per week) receives 40 hours of exposure per week with daily and weekend periods in which the body may rid itself of the accumulated substances before toxic levels are reached. For a person living continuously in an environment containing such substances, however, these recovery periods do not exist. Exposure to TLV levels may, therefore, subject the person to an unacceptably high risk of injury.

In setting ambient goals for toxic substances, two time periods must be considered.

1. Duration of Exposure - This is the amount of time a person spends in contact with a toxic substance. (In this application, it is assumed that a person may continuously be exposed to the specific contaminants during the operating hours of a source.)
2. Averaging Time - This time period is used to measure compliance with the standard.

For example, the OSHA TLVs have a maximum allowable duration of exposure of 8 hours/day and 40 hours/week, but an averaging time of 8 hours for determining compliance with the rules. Similarly, the ambient lead standard has a continuous duration of exposure, but a quarterly averaging time for determining compliance. Also, the ACGIH publishes acceptable ceiling concentration values within an 8-hour

workday, and acceptable maximum peak concentrations for a short period of time, in addition to the time-weighted 8-hour weekday.

Determination of Maximum Acceptable Ground-Level Concentration (MAGLC)

Taking into account the duration of exposure and averaging time, the following stepwise procedure should be used to determine the allowable ambient air concentration for a toxic substance:

1. Determine if a TLV exists for the specific compound which is emitted from the source.
2. Divide the TLV by ten (10) to adjust the standard from the working population to the general public (TLV/10).
3. Adjust the standard to account for the duration of the exposure (operating hours of the source) of "X" hours per day and "Y" days per week from 8 hours per day and 5 days per week.

$$\left(\frac{\text{TLV}}{10} \times \frac{8}{X} \times \frac{5}{Y}\right) = 4 \frac{\text{TLV}}{XY}$$

4. The TLVs are based on an averaging time of 8 hours per day. The standard method of determining the ambient air quality effect of the source is through dispersion modeling. The most readily adaptable averaging time for dispersion models is generally one hour. The approvability of a source will be based on the

predicted one-hour averaging time (under worst-case meteorology) in comparison to the MAGLC obtained from Step 3. If the impact of the source is greater than the MAGLC, additional measures by the source will be necessary before the Permit to Install can be issued. Because no adjustment is made to the formula in Step 3, an additional safety factor of approximately 30% is produced (see Appendix A for the derivation of the 30% safety factor).

$$\text{MAGLC} = \frac{4 \text{ TLV}}{\text{XY}}$$

By using a factor of 10 in Step 2 and by decreasing the averaging time in Step 3, the TLV has been adjusted for the greater susceptibility of the general population in comparison to healthy workers.

The 8/X and the 5/Y multipliers in Step 3 are used to relate the exposure to longer than 40-hour time periods and ascertain that the individual's total exposure will be no greater than that allowed by the TLV.

For less than 40 hours per week of plant operation, the MAGLC formula will yield a value greater than the TLV/10. Although excursions of up to three times the TLV can be calculated in some cases, it does not appear reasonable to permit this situation for the general population. A condition on the formula is,

therefore, necessary to limit the allowable concentration to TLV/10 for operating times less than 40 hours per week.

Thus, from the above analysis, the derivation of the maximum acceptable ground-level concentration (maximum one hour average) beyond the plant boundary of a continuous emitting source would be:

$$\text{MAGLC} = \frac{\text{TLV}}{10} \times \frac{8 \text{ hours}}{24 \text{ hours}} \times \frac{5 \text{ days}}{7 \text{ days}} = \frac{\text{TLV}}{42}$$

An example of this procedure is contained in Appendix B.

The application of the policy is for use as a guideline in the review of new source applications. There may be cases where the TLV values are inappropriate for this type of application. The Director may consider, on a case-by-case basis, other data in the determination of a Maximum Acceptable Ground-Level Concentration from a new source.

Comparisons of MAGLC to National Ambient Air Quality Standards Values

In order to determine the relative stringency of this procedure, a comparison was made using this method with the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide and ozone, and with the NESHAP for beryllium:

A. Sulfur Dioxide

For a continuously emitting sulfur dioxide source, the acceptable one-hour ground-level concentration would be:

$$\text{MAGLC} = \frac{(4)(\text{TLV})}{(X)(Y)} = \frac{(4)(5 \text{ ppm})}{(24 \text{ hr/day})(7 \text{ days/week})} = 0.12 \text{ ppm}$$

Under the NAAQS, the three-hour standard is 0.5 ppm, not to be exceeded more than once per year.

B. Ozone

For an intermittent ozone source operating three hours per day, five days per week, the allowable impact would be:

$$\text{MAGLC} = \frac{(\text{TLV})}{(10)} = \frac{.1 \text{ ppm}}{10} = 0.01 \text{ ppm}$$

The NAAQS for ozone is 0.12 ppm one-hour average, not to be exceeded more than once per year over a three-year period.

APPENDIX A

The vertical (σ_z) and horizontal (σ_y) dispersion parameters utilized in most gaussian models were developed by Pasquill¹ and modified by Gifford². Although the original experiments were based on a ten-minute sampling time, in practice, σ_y and σ_z values are considered to represent dispersion for a one-hour average. Due to wind direction fluctuations and variations in wind speed, it is necessary to adjust predictions which are greater than one-hour to account for these meteorological phenomena. To apply the predictions to longer than a one-hour period, the following equation is suggested by Turner³:

$$X_s = X_k \left(\frac{t_s}{t_k} \right)^p$$

Where

- X_s is the concentration predicted over an averaging time t_s ,
 X_k is the concentration predicted over an averaging time t_k , and
 p is a constant and should be between 0.17 and 0.2.

¹ F. Pasquill, "The estimation of the dispersion of windborne material," Meteorological Magazine, Vol. 90, 1961, pp. 33-49.

² F.A. Gifford, "Use of routine meteorological observations for estimating atmospheric diffusion," Nuclear Safety, Vol. 2, 1961 p. 47.

³ D.B. Turner, "Workbook of Atmospheric Dispersion Estimates," Office of Air Programs Publication, No. AP-26, U.S. EPA, Research Triangle Park, North Carolina, 1970.

As shown below, applying this equation to the case of estimating an eight-hour average concentration, the one-hour predicted concentration should be reduced by 32%.

$$X_s = \frac{(t_k)^P}{(t_s)^P}$$

$$\frac{X_s}{X_k} = \frac{(1)}{(8)} 0.185$$

$$\frac{X_s}{X_k} = 0.680$$

By not allowing for this adjustment when reducing the averaging time from eight-hours to one-hour in step 4, an additional safety factor of 32% is realized.

APPENDIX B

A new hazardous waste incinerator is proposing to burn sludge containing cadmium. The incinerator is equipped with a wet scrubber which is designed to remove 98% of the cadmium in the waste gas stream and will emit 4.6 pounds per hour of cadmium. The incinerator will operate 24 hours per day, 7 days per week.

The TLV for cadmium is 0.1 mg/m^3 , and from Step 4, the maximum allowable ground-level concentration would be:

$$\begin{aligned} \text{MAGLC} &= \frac{4(\text{TLV})}{(X)(Y)} = \frac{(4)(0.05 \text{ mg/m}^3)}{(24 \text{ hrs/day})(7 \text{ days/week})} = 1.19 \times 10^{-3} \text{ mg/m}^3 \\ &= 1.19 \times 10^{-6} \text{ g/m}^3 \end{aligned}$$

From the PTMAX model, the maximum one-hour impact from the source is predicted to be 6.24×10^{-6} at 0.5 m/sec wind speed and F stability.

Since the predicted concentration is greater than the MAGLC of $1.19 \times 10^{-6} \text{ g/m}^3$, the source will be required to develop a plan to reduce the ambient impact of the cadmium emissions.

OEPA inter-office communication

to: DISTRIBUTION date: December 22, 1999
from: Mike Hopkins, Manager, AOM&P Section
subject: New Preliminary Application Completeness Review Process Guidance

A small group of Central Office and District/LAA staff, the Application Completeness Review (ACR) Team, was formed to develop a mandatory, preliminary application completeness review procedure to be used statewide, beginning with applications received on January 1, 2000.

There are several reasons why this review and system is needed. The Ohio Revised Code requires the PTI program to track progress and prepare reports which deal with timeliness issues. The Ohio Administrative Code also requires that we have a completeness review program. In addition, the new PTI computer tracking program will include a field for the completeness check, which must be completed by the reviewer. Therefore, a standard system is needed statewide.

We earlier surveyed all DO/LAAs for suggestions, and reviewed the information returned. The final system is a revision of the original CDO system/checklists, and is similar to that currently used by some field offices. Therefore, we hope it won't be too much of an adjustment to begin using this system.

The initial or preliminary completeness review, as we have termed it, should be conducted within 7 business days of receipt of a PTI application. This is not an in depth or technical completeness review. It is primarily a check to determine whether all the items on the application forms have been completed, and whether the application is signed. However, it will also be a review to find any basic errors or items that need corrected on the application and EAC forms. This review can be done by the PTI writer or someone else (supervisor/clerical), and it is being left up to each office to decide who will conduct the review.

There is a letter to send to the applicant for when the application is incomplete, as well as one to use when it has been found to be preliminarily complete. Checklists are being provided to help prompt the reviewer to focus on key elements, as well as to show the deficiencies to the applicant. This form will be sent along with the incomplete letter and a copy will be placed in the file. This process is intended to be "customer friendly" which is one reason that the reviewers name, as well as an estimate of when the field office review will be finished, has been included in the letter. The letters also stress that this is only a preliminary determination, and not a full or technical determination of completeness, and advise that construction cannot commence.

As offices use the system, it may become necessary to make revisions, which is fine. This is not necessarily a final product. We had hoped to get this information to you sooner to allow you as much time as possible before the new year, however we need to begin using it in January. If you have any questions or comments on the system please contact me. Thank you.

DISTRIBUTION (with attachments)

Isaac Robinson, Cesar Zapata, Mike Riggleman, CDO
Fred Klingelhafer, Glen Greenwood, SEDO
Dennis Bush, John Curtin, NEDO
Don Waltermeyer, Samir Araj, NWDO
Phil Hinrichs, Pam Smith, SWDO
Dale Aleman, Daniel Schiltz, Canton
Bradley Miller, Ajay Bahri, Cincinnati
Mark Vilem, Anlian Ang, Roland Lacy, Cleveland
Curt Marshall, Tim Wilson, RAPCA
Karen Granata, Matt Stanfield, Toledo
Frank Markunas, Sean Vadas, Akron
Cindy Charles, Anne Chamberlin, Portsmouth

cc: Misty Parsons, Alan Lloyd, Safaa ElOraby, Sudhir Singhal, Bob
Hodanbosi, Jim Orlemann, Tom Rigo, Mike Ahern

Attachments

Incomplete form letter: "incomplt"

Complete form letter: "complt"

PTI Application form checklists: "pti_a99", "pti_b99", "pti_c99"

EAC form checklists:

"aggregat99", "agrichem99", "aluminum99", "ash99", "brick99",
"carbon99", "cement99", "coal99", "coating99", "coke99", "concrete99",
"dryclean99", "ferro99", "fertiliz99", "foundrie99", "fuelburn99",
"galvan99", "gasoline99", "glass99", "grain99",
"inciner99", "inorg99", "iron99", "landfill99", "lime99", "loading99",
"mat_hand99", "metal99", "mineral99", "muni_inc99",
"org_tank99", "process99", "pulp99", "roadpark99",
"salt99", "sandblas99", "solvent99", "steel99", "storage99",
"woodwork99", "yeast99"

<date>

CERTIFIED MAIL [Optional]

<contact name>

<company name>

<street>

<city>, <state> <zip>

Re: <subject; PTI #, eu number(s)/descriptions, etc.>

Dear Mr(s). <contact>:

This letter is to inform you that on <date> this office received your application(s) for a permit to install (PTI) for the above referenced air pollution source(s), and that I [or reviewers name] have [has] been assigned to process your application. After our initial review, your application has been found to be preliminarily complete, therefore we can begin the technical review phase. This preliminary completeness determination does not imply that the application is approvable, only that we have enough information to continue the review. **It does not allow construction, installation or modification of any air contaminant source (emissions unit).**

Applications are generally reviewed on a first come, first serve basis. During the technical review, you may be contacted for additional information or for clarification. Once the review is complete, a PTI recommendation will be prepared either approving or denying the application (if review indicates a denial, you will be contacted to discuss options). The recommendation will then be forwarded to the Ohio EPA, Division of Air Pollution Control (DAPC), Central Office. It is possible they may ask for clarifying information as well before proceeding to issue either a draft permit, a direct final permit, or a denial of the application.

We estimate that review of your application will be completed and a recommendation forwarded to the Central Office, DAPC in approximately <weeks or days>, provided the application is found to be technically complete and no additional information is needed.

Please be assured that we will do everything possible to process your application in a timely manner. If you have any questions concerning this letter or your application, please contact <me/reviewer/supervisor> at <phone>.

Sincerely,

<permit reviewer> [or supervisor, etc.]

<title/office>

<date>

CERTIFIED MAIL [Optional]

<contact>

<company name>

<street>

<city>, <state> <zip>

Re: <subject; PTI #, eu numbers/descriptions, etc.>

Dear Mr(s). <contact>:

This letter is to inform you that this office has completed a preliminary review of the above referenced permit to install application(s) received on <date>, and that I [or reviewers name] have [has] been assigned to process your application. The purpose of this review is to identify basic deficiencies as early in the permit process as possible, and allow you to make corrections. Our review found that the application you submitted is not complete and cannot be processed at this time. The attached checklist(s) details the additional information or corrections needed. A checklist is provided for each form you submitted which needs additional information or corrections.

Please submit the requested information to this office as soon as possible, but no later than thirty (30) days from the date of this letter. The sooner the needed information is received, the quicker the preliminary review can be completed. The data you submit may need to be in the form of a complete resubmittal, depending upon the box checked below:

- A new, signed copy of the complete application must be submitted. Signatures must be original, not copies.
- The requested data can be submitted without resubmission of the complete application. Only the pages with missing or incomplete information need to be resubmitted.

If the requested information is not submitted within 30 days, your application can not be processed and will be returned to you as incomplete. The preliminary completeness review does not imply that the application is approvable, only that we have enough information to continue the review. **It does not allow construction, installation or modification of any air contaminant source (emissions unit).**

If you have any questions concerning this letter or your application, please contact <me/reviewer/supervisor> at <phone>.

Sincerely,

<permit reviewer> [or supervisor, etc.]

<title/office>

interoffice

MEMORANDUM

to: Air Program Supervisors, Ohio EPA District Offices and Local Air Agencies
from: Mike Hopkins, Manager, AQM&P, through Bob Hodanbosi, Chief, DAPC
subject: PTI Requirements for Hot-Mix Asphalt Plants
date: April 9, 1998

In response to complaints about asphalt plant emissions from affected citizens and neighboring businesses, Ohio EPA Division of Air Pollution Control (DAPC) has undertaken an investigation into VOC emissions from hot-mix asphalt plants. These facilities, also known as paving asphalt plants, asphalt batch plants, bituminous asphalt plants, asphaltic concrete plants, etc., have evolved beyond simply blending heated, virgin aggregate and asphaltic cement to produce a finished product. In hot-mix plants operating today, ingredients that may contribute to increasing VOC emissions include recycled asphaltic paving (RAP), foundry sand, slag, and recycled asphalt shingles. Additionally, the burning of waste fuels in asphalt plants and the use of virgin aggregate that may be contaminated with organic compounds has increased potential VOC emissions.

In order to develop better information on VOC emissions from asphalt plants, DAPC is undertaking an effort to acquire VOC emissions testing data. The available AP-42 emission factors have low reliability ratings, and the limited VOC testing that has been conducted at Ohio asphalt plants suggests significantly higher emissions than predicted by AP-42. As part of the effort to bridge this gap in reliable emissions data, DAPC will begin requiring VOC testing of hot-mix asphalt plants as a term and condition of permits to install (PTI). It is anticipated that test results will indicate that, for most plants, this will be a one-time only test to establish a plant-specific emission factor for VOC and to contribute to a general set of emission factors based on a statistically-significant body of test results. It should be recognized, however, that plants with uncommon fuels, job-mix formulae, or other potential contributors to VOC emissions may be required to demonstrate on-going compliance with VOC limits beyond the initial PTI demonstration.

In light of the significant amount of information not known regarding the source(s) of VOC emissions from hot-mix asphalt plants, we believe that placing a testing requirement on new and modified plants is warranted and will not place a significant financial burden on the affected permittees. The development of testing data covering a wide range of plant types and operating scenarios is the only legitimate strategy for establishing reliable emission factors and identifying the source(s) of VOC emission problems that have led to increasing complaints and enforcement involving the paving asphalt industry. (Additionally, a significant number of existing facilities will be required to test in order to contribute to the study, reducing any comparative disadvantage borne by new permittees that are required to test for VOC.)

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The role of PTI writers in the hot-mix asphalt plant VOC emissions investigation shall be to continue to set limits on organic compound emissions in the PTI, in accordance with OAC rule 3745-31-05, and to begin including a performance testing requirement corresponding to that limit. The appropriate testing method should be identified as "method 25 or 25A, as appropriate," with additional guidance to be provided by DAPC Engineering Section concerning the testing of aggregate and the documentation of key operating parameters. Other aspects of the PTI process are not expected to be affected by this project.

Questions regarding the proposed testing or recommendations for the most appropriate methodology to measure asphalt plant VOC emissions may be directed to Patrick Haines, DAPC Engineering, at (614) 644-4838 or "patrick.haines@epa.state.oh.us".

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FINAL SCOPE OF WORK FOR THE SECOND PHASE OF
THE DAPC'S INVESTIGATION INTO VOC EMISSIONS
FROM HOT-MIX ASPHALT PLANTS

1. Review the rules and policies observed by other States when permitting hot-mix asphalt plants, and determine their appropriateness as a model for Ohio policy. What key operating parameters are monitored and/or restricted? Do these parameters differ for different plant types? Are these parameters more effective than outlet mass emission limitations in minimizing VOC emissions?
2. Contact asphalt plant manufacturers for information on key operating parameters for each type of asphalt plant and their proper operating levels. How are these parameters linked to potential VOC emissions? What are the design drum and stack temperature ranges? Do manufacturers recommend fuel types for specific plants? Are there recommended RAP usage limitations? Do manufacturers have recommendations that address exotic feed materials such as slag or high organic-content aggregate?
3. Based on (1), (2), and (8), define the key operating parameters for each type of plant that should be monitored and the ranges, thresholds, and/or minimums that should be established as part of BAT for the minimization of VOC emissions from hot-mix asphalt plants.
4. Define the protocol for testing VOC emissions from hot-mix asphalt plants, using method 25, 25A, or a modified version of either or both. What are the limitations of each method when applied to emission streams from asphalt plants? Are there inherent biases in either method? What method(s) has USEPA used to develop the AP-42 emission factors? What method(s) have been used in Texas in establishing their asphalt plant permitting program?
5. Define the protocol for analyzing the organic content of aggregate. Are there USEPA promulgated methods for such tests? If not, are there acceptable methods available from ASTM, NIOSH, or other reputable entities?
6. Define new PTI permitting procedures to be implemented in light of the results of items 1-5 and 7, if needed. (The creation of new procedures should reflect whether or not feedstocks, especially high-organic content aggregate, are the most significant contributor to hot-mix plant VOC emissions.)
7. Test the VOC emissions of hot-mix asphalt plants to ensure compliance with new source review and PTI requirements and to confirm the accuracy of AP-42 emission factors:
 - a. Testing of VOC emissions from hot-mix asphalt plants will be required for new or

modified plants which receive a PTI subsequent to the issuance of the attached IOC (April 9, 1998). The testing requirements will be included in the terms and conditions of the PTI. Such tests will follow the testing protocol established through this Scope of Work. Test reports will include detailed parametric monitoring data and analysis of aggregate as determined through this Scope of Work.

b. Continue testing the VOC emissions of asphalt plants that have violations, verified complaints, nuisance issues, enforcement actions, or other evidence of non-compliance. Such tests will follow the testing protocol established through this Scope of Work. Test reports will include detailed parametric monitoring data and analysis of aggregate as determined through this Scope of Work. Identify, if possible, potential common sources of problem emissions, such as aggregate with high organic content and/or other high-VOC releasing feedstocks.

c. Testing of VOC emissions from hot-mix asphalt plants will be required for plants which receive Federally Enforceable State Operating Permits (FESOPs). The testing requirement will be included in the terms and conditions of each FESOP to confirm that the VOC emissions are below the Title V applicability threshold of 100 TPY. Such tests will follow the testing protocol established through this Scope of Work. Test reports will include detailed parametric monitoring data and an analysis of the aggregate as determined through this Scope of Work.

d. Assist in planning and witness a series of VOC emission tests sponsored by Flexible Pavements, Inc., to determine the effects of different aggregate sources and operating conditions on total VOC emissions from a single, representative source. Key operating parameters of the source will be closely monitored, and aggregate(s) analyzed in order to identify, if possible, the largest contributor(s) to plant VOC emissions.

8. Create a database for asphalt plant VOC emission testing data to include test results, parametric monitoring data, job-mix formulae, organic content of aggregate, and other relevant data as identified.

NOTE: USEPA is currently conducting testing of hot-mix asphalt plants to identify and quantify HAP emissions toward the development of MACT. Therefore, DAPC will limit this *Scope of Work* to addressing total VOC emissions, and will not duplicate the efforts of USEPA by developing data on the speciation of asphalt plant emission streams.

Schedule for Completion of the Scope of Work:

<u>Item(s)</u>	<u>Completion Date</u>
4 and 5	July 31, 1998
1 and 2	August 14, 1998
7 and 8	August 28, 1998
3 and 6	October 30, 1998

RESPONSE TO COMMENTS ON THE PROPOSED SCOPE OF WORK FOR THE SECOND PHASE OF THE DAPC'S INVESTIGATION INTO VOC EMISSIONS FROM HOT-MIX ASPHALT PLANTS

Note: some comments are paraphrased for clarity.

Comment:

"The *Scope of Work* should identify the type of nuisance issues and evidence of non-compliance that would justify ordering a VOC test of a hot-mix asphalt plant," from Ed Fasko, Cleveland Division of the Environment.

Response:

Based on the outcome of this *Scope of Work*, such guidance may be developed. However, it would be premature at this time to attempt to identify all the scenarios that justify a VOC test of an existing plant. Field offices are encouraged to exercise their discretion in ordering VOC tests of existing plants. To date, such tests have been ordered for facilities receiving verified complaints, facilities using non-traditional formulae that were not part of their permit applications (such as the 50% slag mix currently required for some Ohio Turnpike jobs), and facilities identified during routine inspections as having odor or nuisance problems.

Comment:

"Synthetic minor facilities that are issued a FESOP should be tested for VOC, to verify compliance with the limits keeping them out of Title V," from Ed Fasko, Cleveland Division of the Environment.

Response:

DAPC agrees, and added this as item 7.c.

Comment:

"We need to have a better understanding of the various mixes that are produced and the raw material constituents that differ from mix-to-mix. This information, in conjunction with the key operating parameters for the different types of plants, should put us in a better position in telling facilities what would constitute a "worst case scenario" for VOC emissions when they are required to conduct tests," from Don Waltermeyer, Ohio EPA, NWDO.

Response:

DAPC identified some of the parameters that contribute to "worst case" for VOC emissions in the complete Phase One *Scope of Work*, though this information does not appear in the Phase One summary report. This information can be distributed as a memorandum to those field offices that have not received a complete copy of the Phase One *Scope of Work*. Additional information regarding "worst case" should become apparent through Phase Two.

Comment:

“DAPC Central Office (CO) needs to put out some specific guidance right away telling everyone that CO will coordinate the gathering of [VOC testing] information and that all intent-to-test forms should be reviewed with CO staff to ensure consistency,” from Don Waltermeyer, Ohio EPA, NWDO.

Response:

DAPC CO will continue to participate in hot-mix asphalt plant VOC tests. A cover memo will accompany the distribution of this Scope of Work instructing field offices to contact Patrick Haines of CO upon receipt of any Intent to Test form that includes an asphalt plant VOC test. CO will provide guidance regarding the parameters to be monitored, the method(s) to be employed, and the “worst case” operating scenario, based on the plant type and formulae mixed.

Comments:

“We suggest that items 4 and 5 [test procedures]... be defined as soon as possible,” from Fred Frecker, President, Flexible Pavements, Inc.

Response:

These items will be first among the first completed, as reflected in the *Scope of Work* schedule.

Comments:

“We suggest a subparagraph be added which references the proposed FPI/OEPA test to investigate whether aggregates from particular sources cause higher VOC emissions than predicted,” from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC has added item 7.d.

Comment:

“Flexible Pavements, Inc., would like to have it memorialized in the *Scope of Work* that any new PTI permitting procedures that are developed as a result of the *Scope of Work* will reflect whether or not aggregate is the most significant source of VOC emissions from plants with high VOC emissions,” from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC has amended item 6.

Comment:

"The Scope of Work seems to focus on the Texas DNRCC approach to control asphalt plant VOC emissions through limits on key operating parameters. We believe that, should additional steps to limit VOC emissions become necessary, it would be simpler and more effective to provide outlet emission limits and allow each permitted entity to comply in the manner that best suits their operations," from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC has amended item 1 to include the rules and policies of other states in general, not only Texas.

Comment:

"Item 7 states that new or modified plants which have been issued a PTI in 1998 will be tested for VOC emissions. Will this requirement be retroactive for facilities issued a PTI prior to the April 9, 1998 memo?" from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC amended item 7.a to clarify that VOC testing requirements will be included in the terms and conditions of new PTI(s). Therefore, those facilities that have received a PTI that does not include a VOC testing requirement will not be retroactively required to test, unless they are subject to item 7.b.

Comment:

"In item 7, the word 'contaminated' may be inappropriate to describe high-organic content aggregate," from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC has amended item 7.b.

Comment:

"In item 8, the reference to the creation of a 'statistically significant body of test results' in describing the proposed database may be overly-ambitious, given the large number of variables that exist within the systems being studied. To accumulate a body of work with statistical significance would require much more testing than has been proposed," from Fred Frecker, President, Flexible Pavements, Inc.

Response:

DAPC has amended item 8.

Investigation Into VOC Emissions From Asphalt Batch Plants

Ohio EPA, Division of Air Pollution Control

Summary Report, Phase I
February 20, 1998

Introduction

In response to the expressed concerns of citizens, regulators, and industry representatives, Ohio EPA, Division of Air Pollution Control (DAPC) has prepared a seven-part investigation addressing VOC emissions from hot-mix asphalt plants. The investigation was prepared to fulfill the *Scope of Work* developed by the DAPC Engineering Section. A draft *Scope of Work* was made available to interested parties for comment prior to initiating the investigation, and the final version (attached) was distributed to affected parties during the course of the study.

The organization of this summary report reflects the organization of the seven-part, Phase I investigation report. Highlights and conclusions from each part of Phase I follow. At the end of this document, topics deserving additional research are noted. Supporting figures and tables are attached.

Phase I, Part 1: Description of hot-mix asphalt manufacturing

Hot-mix asphalt is prepared by blending heated, sized aggregate with asphaltic cement. Most asphalt plants include reclaimed asphalt pavement (RAP) in their formulations, as a substitute for virgin aggregate. Virtually all hot-mix plants that are capable of accepting RAP will include 10% RAP in their formulations. When using 10% RAP, job-mix formulae do not need to be adjusted from "all-virgin" formulae, and finished-product characteristics will be virtually unchanged. Use of higher percentages of RAP may increase VOC emissions, as organic compounds can be heat-stripped, or "scorched," from RAP material.

While RAP use may be a contributor to VOC emissions, it is important to recognize that recycling old paving material may provide significant environmental and economic benefits. According to industry sources, almost 90% of the paving removed from roadways goes back into paving asphalt, instead of being landfilled. Consumption of virgin aggregate and asphaltic cement is reduced at a corresponding rate.

Three major plant configurations are used in the production of hot-mix asphalt: batch plants, parallel-flow drum plants, and counter-flow drum plants. As Figure 1 illustrates, batch plants combine aggregate that has been heated and dried in a rotary dryer with heated asphaltic cement; the mixture is blended into paving asphalt in a pug mill. When used in a batch plant, RAP is combined with heated, dried aggregate in the hot elevator or pug mill, prior to addition of asphaltic cement. As such, the percentage of RAP that can be amended to batch-mixed asphalt is

limited by the conductive heating capacity of the aggregate. Batch mix plants are generally operated using no more than 20%-25% RAP.

As Figure 2 illustrates, parallel-flow drum plants combine heating and drying of aggregates with mixing of liquid asphaltic cement in a single dryer/drum. Aggregate is sized and weighed "cold" and is introduced into the flame zone of the rotating drum. Asphaltic cement is added in the lower third of the drum, where it is mixed with aggregate through the veiling action of the flights lining the drum. Both aggregate and asphaltic cement move "downslope" through the drum in the same direction as combustion products. Finished asphalt is conveyed to a hot storage silo or surge bin. Unlike batch mixing, parallel-drum processes can continuously produce asphalt.

Parallel-flow plants can theoretically accommodate up to 50% RAP because RAP is heated directly with aggregate. Unfortunately, exposure of RAP to flame fronts can cause noteworthy emissions of VOC and "blue haze," due to scorching. Parallel-flow plants typically limit RAP usage to 30% to reduce the possibility of heat-stripping organic compounds from RAP.

As Figure 3 illustrates, counter-flow drum mix plants combine heating and drying of aggregates with mixing of liquid asphaltic cement in a single dryer/drum, but unlike a parallel-flow drum the mixing occurs behind (downslope of) the burner flame zone. The isolation of asphaltic cement and RAP from the flame zone reduces opportunities for heat-stripping of organic constituents by exhaust gases, with resultant reductions in VOC emissions. Finished asphalt is conveyed to a hot storage silo or surge bin. Like parallel-flow drum mixing, counter-flow drum processes can continuously produce asphalt.

Like parallel-flow plants, counter-flow plants can theoretically accommodate up to 50% RAP, because of their ability to heat RAP directly. Counter-flow plants typically limit formulations to about 40% RAP. Ohio Department of Transportation specifications for paving asphalt allow RAP formulations between 10% and 50%, depending on the intended use of the paving product. Higher-quality surface courses tend to allow less RAP usage; base courses can accommodate higher RAP substitution.

According to US EPA, about 2,300 of the 3,600 active asphalt plants in the US are batch mix plants, about 1,000 are parallel-flow drum plants, and about 300 are counter-flow drum plants. The predominance of batch mix plants reflects the fact that batch mix technology is the oldest of the three processes and has proven to be both rugged and cost-effective. The continuous-production capacity of drum mix configurations is better suited to large-scale operations with fixed job mix formulae. Despite the predominance of batch mix plants among active facilities, 85% of the plants being manufactured today are of counter-flow drum mix design. Batch mix plants and parallel-flow drums comprise 10% and 5%, respectively, of newly manufactured plants.

Phase 1, Parts 2 & 3: VOC Emission Factors and Stack Test Results

Based on the information developed through this investigation, VOC emissions from hot-mix

asphalt plants can range from less than 0.01 pound VOC/ton asphalt produced to as much as 1.0 pound/ton for different plants under various operating scenarios. Given that a typical hot-mix plant produces between 200-300 tons of asphalt per hour, hot-mix asphalt plants have the potential to be significant sources of VOC emissions. Despite this, there is currently no formal activity underway within US EPA to establish VOC emission standards for hot-mix asphalt plants.

US EPA has developed AP-42 emission factors for hot-mix asphalt plants. The existing VOC emission factors are "D" rated, and the draft AP-42 emission factors currently under development for asphalt plant VOC emissions are also "D" rated. The results of hot-mix plant emission tests in Ohio and Texas (Tables 1,2) and the tests that contributed to AP-42 (Tables 3-5) indicate that asphalt plant VOC emissions are highly variable and can greatly exceed the rate predicted by AP-42.

Given the limited amount of VOC stack testing data available from Ohio-based hot-mix plants and the low reliability rating of AP-42 emission factors, it may be necessary to develop additional VOC emissions data through testing. Emission factors based on Ohio and Texas tests are compared to current and draft AP-42 emission factors in Table 6. This investigation has developed sufficient information to define the probable "worst case" operating scenarios for different plant configurations, which will help define test parameters for future tests. "Worst case" operations for VOC include maximizing RAP, maximizing aggregate sizing to minimize aggregate surface area, maximizing dryer/drum temperature, and using the permitted fuel with the highest potential VOC emissions.

Phase 1, Parts 4 & 5: Rules in Other States; Contribution of Aggregate-bound Organics

As part of this investigation, emission standards for hot-mix asphalt plants in other states were examined. Among the 10 most-populated states, including Ohio, only New Jersey and Texas have state rules specifically limiting VOC emissions from hot-mix asphalt plants. Testing performed in these two states prior to enacting VOC-limiting rules supported the assertion that asphalt plants may vary widely in their actual emissions from the predictions of AP-42.

New Jersey has enacted rules limiting VOC emissions to 125 parts-per-million (ppm) from new sources, 250 ppm from existing sources. Because of these rules, testing data from New Jersey is reported on a concentration basis and does not contribute significantly to this investigation. Texas does not apply VOC emission limitations to asphalt plants by rule, but includes operating restrictions in their air pollution permits to ensure that plants are maintained and operated in accordance with good engineering practices (see Table 7). Such operating restrictions may include, but are not necessarily limited to, the following:

- restrictions on the use of cutback, or solvent-thinned, asphalt;
- temperature restrictions on the dryer/drum;
- control of aggregate moisture content, to minimize quenching effects in dryer/drum;
- restrictions on fuel type;

- use of pre-combustion chambers, revised flame fronts, double-barrel designs, and other measures to prevent the exposure of RAP and asphaltic cement to flame;
- reduced RAP substitution;
- and, restrictions on the use of anti-strip chemicals and other organic additives such as SBR-latex.

Questions regarding the contribution of aggregate-bound organic compounds to VOC emissions were raised during the development of the *Scope of Work*, and every reasonable attempt was made to answer those questions. Unfortunately, attempts to quantify the contribution of aggregate-bound organic compounds to VOC emissions of hot-mix asphalt plants were largely unsuccessful. The single Ohio quarry that acknowledged performing periodic analyses of aggregate samples for total petroleum hydrocarbons declined to share data with this investigation. In the absence of data defining a causal relationship between aggregate composition and asphalt plant emissions, this investigation has focused on other contributors to VOC emission rates, as described above. Testing in this area is needed, if the potential contributions of aggregate-bound organics are to be quantified.

Phase I, Parts 6 & 7: VOC Control Strategies and Remaining Questions

Air pollution controls at asphalt plants are primarily intended to control emissions of particulate matter and usually consist of fabric filters or venturi scrubbers. Add-on controls to reduce VOC emissions, such as thermal oxidizers, are not common in Ohio nor in other states.

VOC emission tests indicate that plant configuration can play a major role in the expected emissions of asphalt plants, particularly when RAP is utilized. As such, it may be reasonable to establish plant configuration as Best Available Technology (BAT). Other factors affecting VOC emissions can include the condition and make-up of aggregate, degree of RAP substitution, type of asphaltic cement, type of dryer/drum fuel used, and plant-specific engineering practices such as operating temperature, vent stream quenching, exposure of RAP and asphaltic cement to direct flame, condition of burners, etc. Identification of the factor(s) that most contribute to hot-mix asphalt plant VOC emissions will require additional testing.

Based on a review of available testing data and interviews with persons including air pollution authorities from Ohio and other states, owner/operators of hot-mix plants, and representatives of the professional associations of the paving and aggregate industries, this investigation concludes that good engineering practices and minor controls on feedstocks (such as aggregate OC content, RAP substitution, asphaltic cement additives, etc.) can help to minimize VOC emissions from hot-mix plants. However, ultimate VOC emission rates may still be substantial.

Conclusions

Testing in Ohio and elsewhere indicates that VOC emissions from hot-mix asphalt plants may be more significant than predicted by AP-42 emission factors. The magnitude of these emissions may justify control requirements and/or operating restrictions not previously assigned to asphalt

plants in Ohio. Phase II of this investigation should include a determination of best operating practices for each type of plant, based on information provided by manufacturers, trade associations, and testing. Additionally, Phase II should include a significant number of VOC emissions tests, to include stack sampling, analysis of aggregate organic content, and detailed parametric monitoring. It should be possible to develop reliable emission factors based on such testing, to identify those practices and parameters that most significantly affect VOC emissions, and to quantify the role of aggregate-bound organic content as a contributor to VOC emissions. Details of Phase II will be proposed in a Phase II *Scope of Work*.

Table 7. Operating Restrictions for VOC Control, Texas NRCC*

Operating Parameter	Limit
Fuel Type	Natural gas or #2 diesel only, with case-by-case exceptions allowing waste oil with sulfur, metals and halogens feed limits
Aggregate Moisture	≤5% moisture content, unless control of particulate emissions requires case-by-case exception
Dryer/Drum Temperature	≤325°F for all dryers/drums (≤340°F allowed with compliance demonstration under worst case conditions; compliance requires <5% opacity and no scorching/heat stripping of materials at elevated temperature when making worst-case product)
Mix Additives:	
Liquid amine anti-strip	1% by weight
Low- or no-amine anti-strip	no limit
SBS (styrene-butadiene amendment)	6% by weight
SBR latex (styrene butyl-rubber latex)	6% by weight
EVA (ethyl vinyl acetate)	10% by weight
Crumb rubber	18% by weight
Gilsenite and similar fiber-based amendments	no limits
RAP	50% by weight (up to 95% allowed with thermal oxidizer)

* More information is available on the TNRCC website, NSR Air Permits web pages: “www.tnrcc.state.tx.us/air/nsr_permits/”

Table 6. Emission Factors from AP-42 and Other Testing

Plant Type	Firing #2 oil (no RAP)	Firing #2 oil (RAP)	Firing #6 oil (no RAP)	Firing #6 oil (RAP)	Firing nat. gas (no RAP)	Firing nat. gas (RAP)
Batch						
Current AP-42	0.046 lb/T	same	0.046 lb/T	same	0.017 lb/T	same
Draft AP-42	0.015 lb/T	same	0.043 lb/T	same	0.015 lb/T	same
Investigation Tests ¹	*	*	*	*	*	*
Parallel-flow						
Current AP-42	0.069 lb/T	same	0.069 lb/T	same	0.051 lb/T	same
Draft AP-42	0.039 lb/T	same	0.091 lb/T	same	0.039 lb/T	same
Investigation Tests ¹	0.068 lb/T **	0.355 lb/T	0.106 lb/T	*	*	*
Counter-flow						
Current AP-42	0.051 lb/T	same	0.051 lb/T	same	0.051 lb/T	same
Draft AP-42	0.039 lb/T	same	0.091 lb/T	same	0.039 lb/T	same
Investigation Tests ¹	*	0.275 lb/T	*	*	*	*

* insufficient testing data to develop independent emission factors

** discarding outlying value (1.999 lb/T) from Investigation test results

¹ Calculated as the mean of data presented in Tables 1-5. Calculation of emissions factors for use in permitting may include more complex statistical methods to assure confidence in the application factors to all sources.

12/09/92	unk	#2 Oil	35	Baghouse	unk	0.036 lb/T	25A	Macaspahlt, Cross City	FL
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Table 5. Selected AP-42 Tests of Parallel-Drum Plants (SD: 0.054)

Test Date	Process Weight Rate	Fuel Type	% RAP	Control Equip.	Exhaust Temp. (°F)	VOC Emissions	Test Method	Company Name	State
07/13/93	unk	Propane	unk	Baghouse	unk	0.044 lb/T	25A	Charles Oliver & Sons	CA
06/10/91	unk	#2 Oil	unk	Baghouse	unk	0.015 lb/T	25A	Granite Construction Co.	CA
09/04/87	unk	#2 Oil	unk	Baghouse	unk	0.012 lb/T	25A	Weldon Asphalt Co.	NJ
04/92	unk	#6 Oil	unk	Baghouse	unk	0.091 lb/T	25A	Mathy Construction Co.	WI
02/81	unk	#6 Oil	unk	Baghouse	unk	0.210 lb/T	25A	US EPA	DC
01/94	unk	Nat. Gas	0	Baghouse	unk	0.073 lb/T	25A	WW Engineering	MI
07/90	unk	Nat. Gas	0	Scrubber	unk	0.083 lb/T	25A	Hawraker, Inc.	PA
06/25/92	unk	#2 Oil	0	Scrubber	unk	0.037 lb/T	25A	James Julian, Inc.	PA
09/04/87	unk	#2 Oil	0	Baghouse	unk	0.030 lb/T	25A	Klug Brothers, Inc.	WV
11/88	unk	#2 Oil	0	Baghouse	unk	0.006 lb/T	25A	Hudson Materials, Inc.	NJ
04/25/88	unk	#2 Oil	0	Baghouse	unk	0.023 lb/T	25A	Weldon Asphalt, Inc.	NJ
10/09/90	unk	Propane	10	Baghouse	unk	0.064 lb/T	25A	I.A. Construction Co.	CA
07/92	unk	Propane	10	Baghouse	unk	0.120 lb/T	25A	E.J. Breneman, Inc.	PA
08/91	unk	Nat. Gas	25	Scrubber	unk	0.046 lb/T	25A	Hawraker, Inc.	PA

Table 2. Counter-flow Drum Plant Test Results (not included in AP-42)

Test Date	Process Weight Rate	Fuel Type	% RAP	Control Equip.	Exhaust Temp. (°F)	VOC Emissions	Test Method	Company Name	State
06/25/97	344 TPH	#2 oil	15	Baghouse	212	0.167 lb/T	25A	Kokosing Materials, Sheffield	OH
07/29/97	350 TPH	#2 oil	25	Baghouse	346	0.383 lb/T	25A	Kokosing Materials, Sandusky	OH
Mean:						0.275 lb/T	SD:	0.153	

Table 3. Selected AP-42 Tests of Batch Plant (SD: 4.61)

Test Date	Process Weight Rate	Fuel Type	% RAP	Control Equip.	Exhaust Temp. (°F)	VOC Emissions	Test Method	Company Name	State
02/92	unk	Nat. Gas	unk	Baghouse	unk	0.021 lb/T	25A	Mathy Construction Co.	WI
11/20/89	unk	#2 Oil	0	Baghouse	unk	0.010 lb/T	25A	Quality Materials, Inc.	NJ
09/01/88	unk	#2 Oil	0	Baghouse	unk	8.0 lb/T	25A	Jackson Asphalt Co.	NJ

Table 4. Selected AP-42 Tests of Counter-flow Plants (SD: 0.024)

Test Date	Process Weight Rate	Fuel Type	% RAP	Control Equip.	Exhaust Temp. (°F)	VOC Emissions	Test Method	Company Name	State
08/05/92	unk	Nat. Gas	0	Baghouse	unk	0.009 lb/T	25A	Industrial Asphalt	CA
09/01/94	unk	Nat. Gas	0	Baghouse	unk	0.019 lb/T	25A	Fred Weber, Inc.	MO
10/23/91	unk	Nat. Gas	13	Baghouse	unk	0.039 lb/T	25A	Lehman Roberts Co.	TN
10/07/91	unk	Nat. Gas	30	Baghouse	unk	0.080 lb/T	25A	APAC of Tennessee	TN
12/04/92	unk	#6 Oil	30	Baghouse	unk	0.043 lb/T	25A	Macasphalt, Melbourne	FL

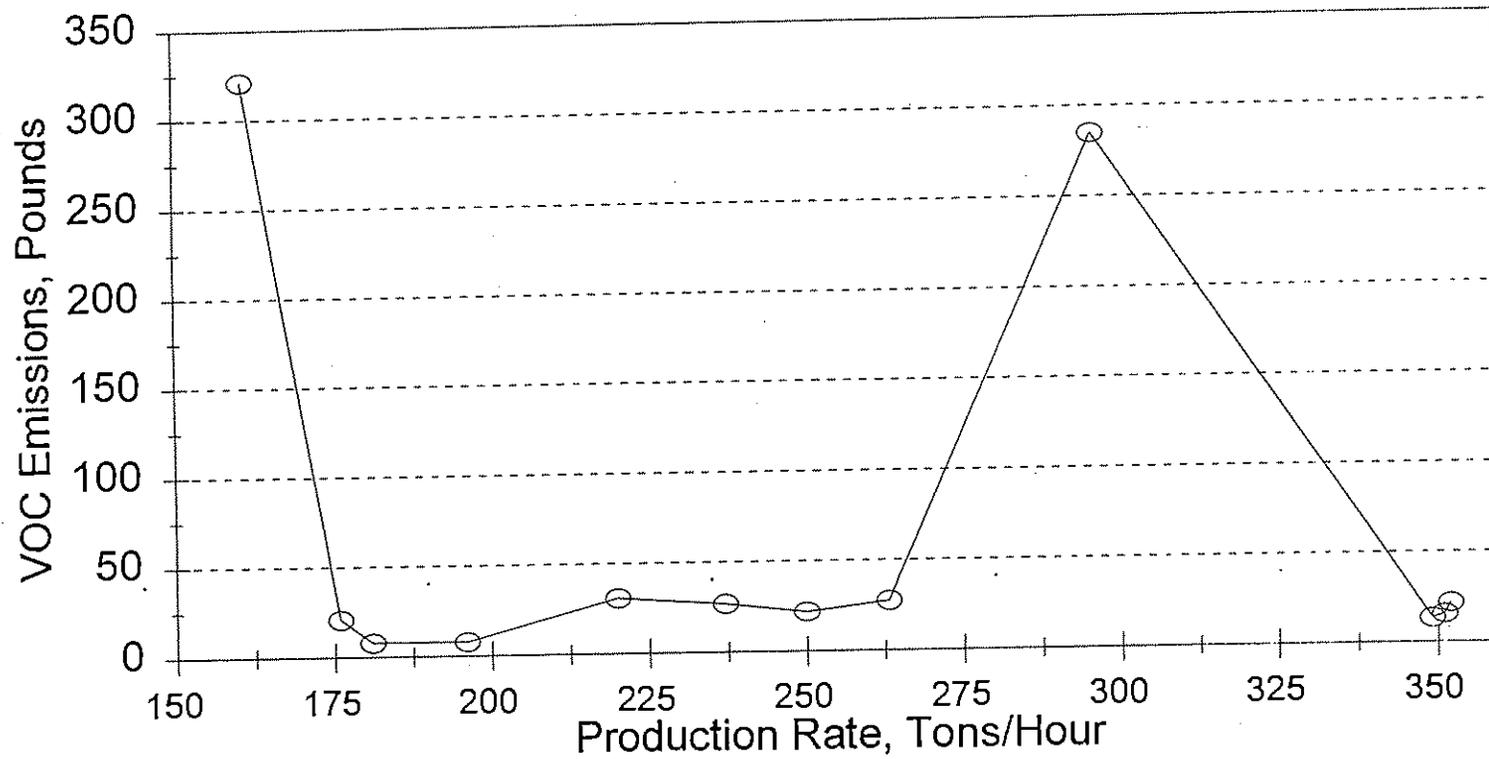
Table 1. Parallel-flow Drum Plant Test Results (not included in AP-42)

Test Date	Process Weight Rate	Fuel Type	% RAP	Control Equip.	Exhaust Temp. (°F)	VOC Emissions	Test Method	Company Name	State
07/02/97	296 TPH	#2 oil	20	Baghouse	282	0.964 lb/T	25A	StoneCo, Sandusky	OH
07/93	352 TPH	#2 oil	25	Baghouse	312	0.062 lb/T	25A	The Shelly Co.	OH
07/93	349 TPH	#2 oil	30	Baghouse	311	0.039 lb/T	25A	The Shelly Co.	OH
					Mean:	0.355 lb/T	SD:	0.527	
07/93	351 TPH	#2 oil	0	Baghouse	311	0.045 lb/T	25A	The Shelly Co.	OH
07/93	220 TPH	#2 oil	0	Baghouse	280	0.140 lb/T	25A	The Shelly Co.	OH
08/09/88	181 TPH	#2 oil	0	Scrubber	315	0.045 lb/T	25	Colorado Co.	TX
08/10/88	161 TPH	#2 oil	0	Scrubber	198	1.999 lb/T	25	Colorado Co.	TX
10/13/88	196 TPH	#2 oil	0	Scrubber	278	0.041 lb/T	25	Austin Paving	TX
					Mean:	0.068 lb/T*	SD:	0.048	
09/08/88	263 TPH	Waste oil	0	Scrubber	270	0.105 lb/T	25	Austin Paving	TX
09/07/88	237 TPH	Waste oil	0	Scrubber	270	0.114 lb/T	25	Austin Paving	TX
09/08/88	250 TPH	Waste oil	0	Scrubber	270	0.086 lb/T	25	Pioneer Aggregate	TX
11/10/88	176 TPH	Waste oil	0	Baghouse	305	0.119 lb/T	25	Colorado Co.	TX
					Mean:	0.106 lb/T	SD:	0.015	

* discarding outlying value (1.999 lb/T) from Investigation test results

Parallel-Flow Drum Plant Test Results

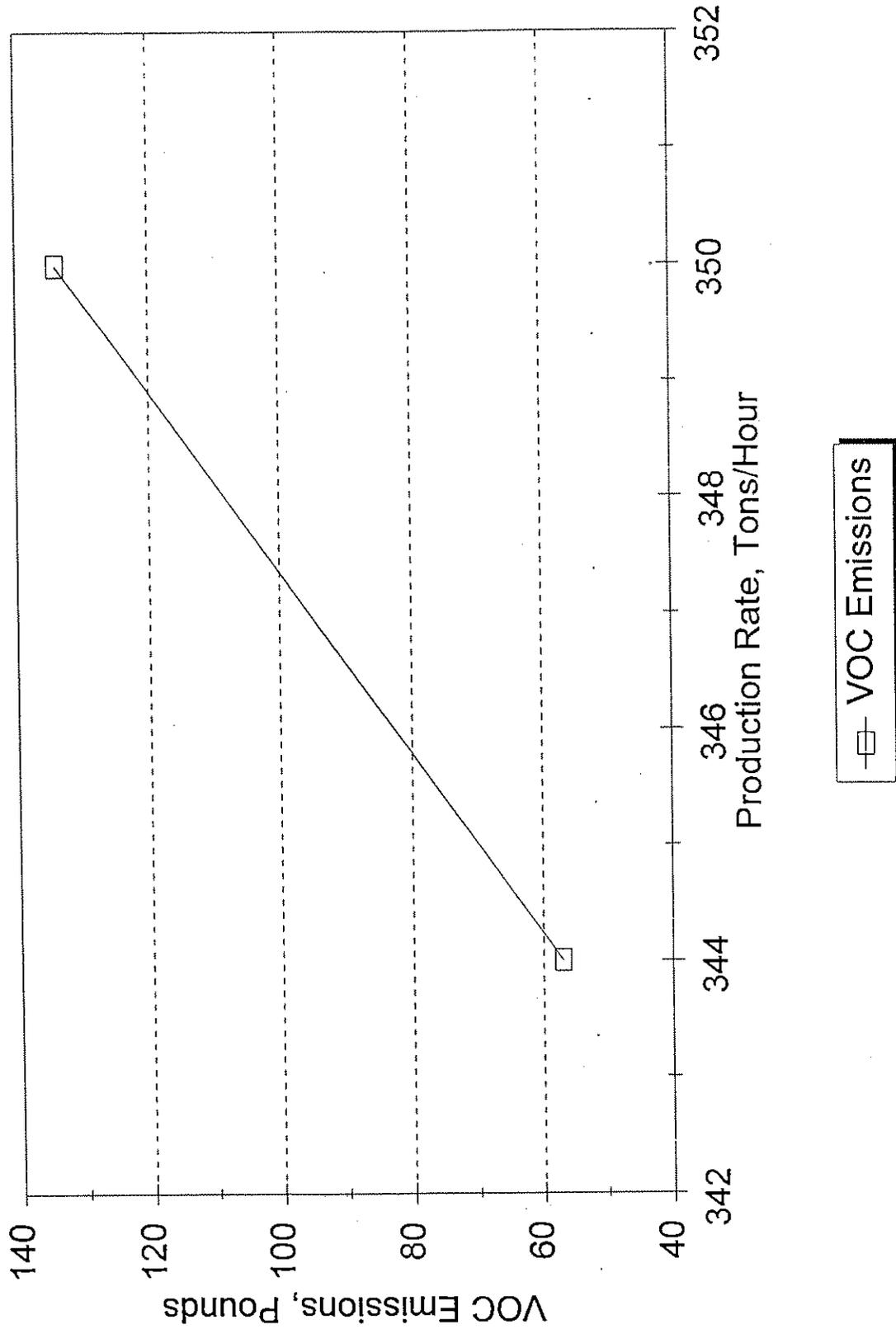
Production Rate vs. Pounds VOC



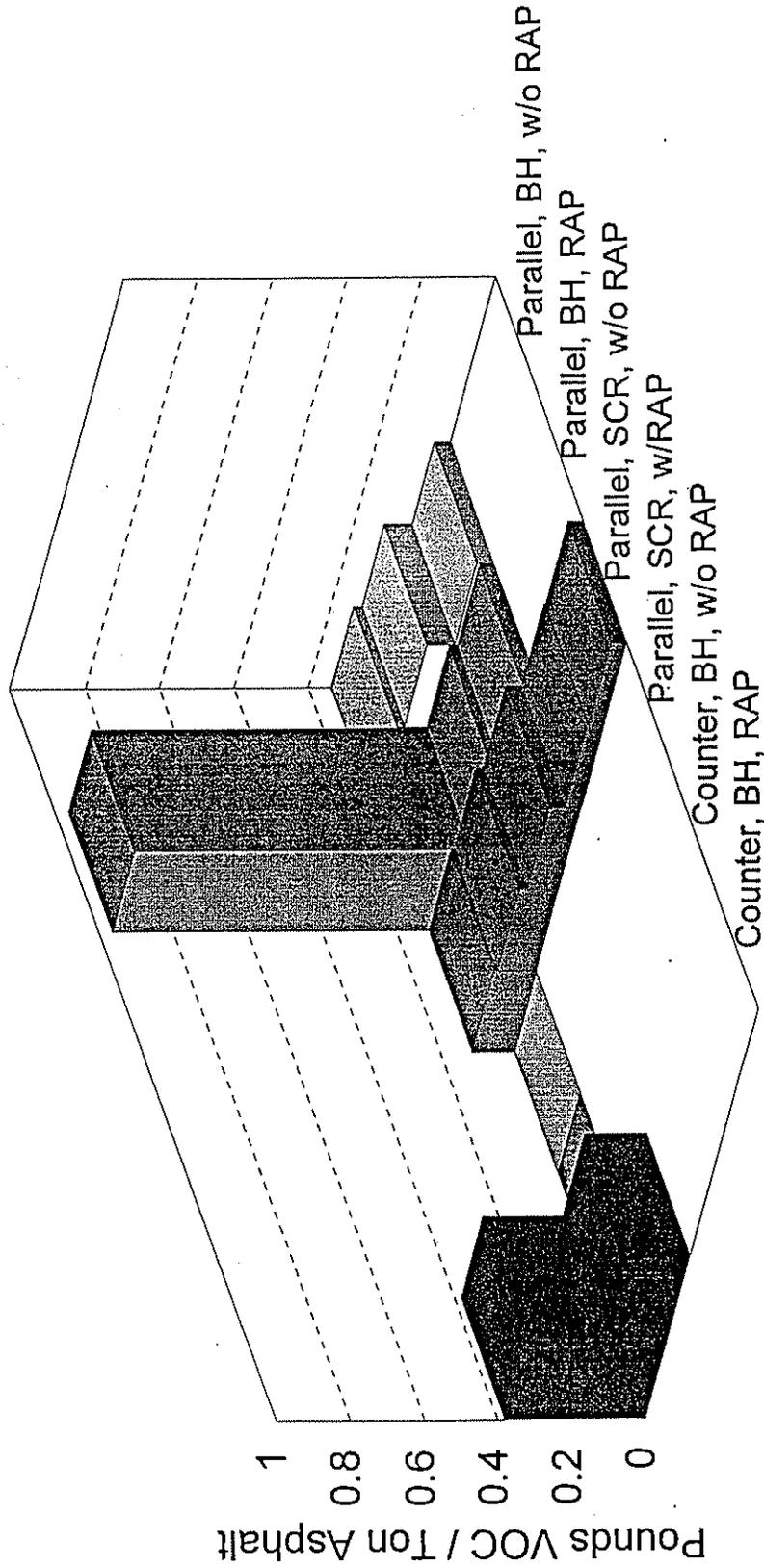
—○— VOC Emissions

Counter-Flow Drum Plant Test Results

Production Rate vs. Pounds VOC



Comparison of Emission Rates by Plant Pounds VOC/Tons Asphalt Produced



Plant Type, Control, and RAP Formula

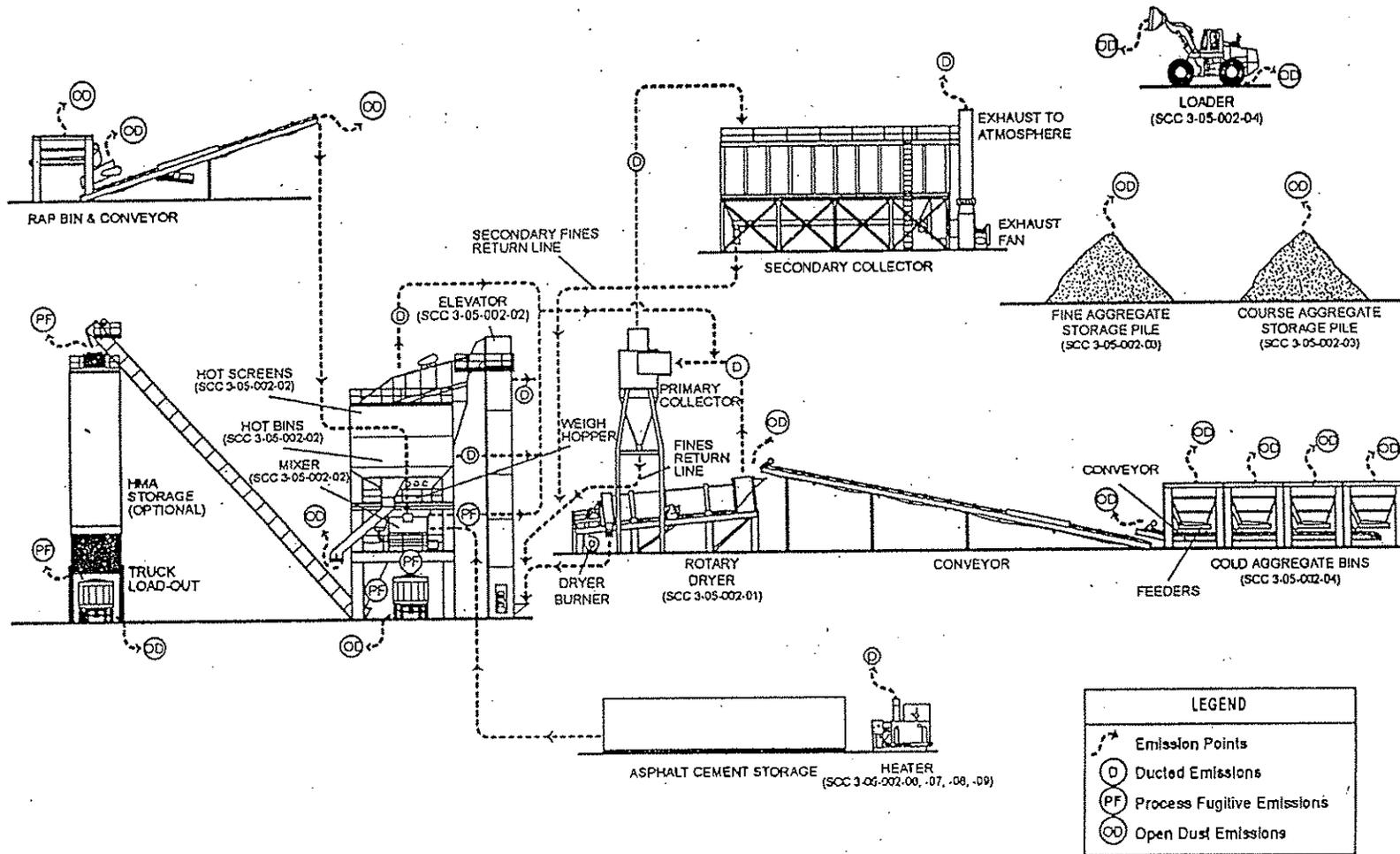


Figure 1. General process flow diagram for batch mix asphalt plants. (Source Classification Codes in parentheses.)

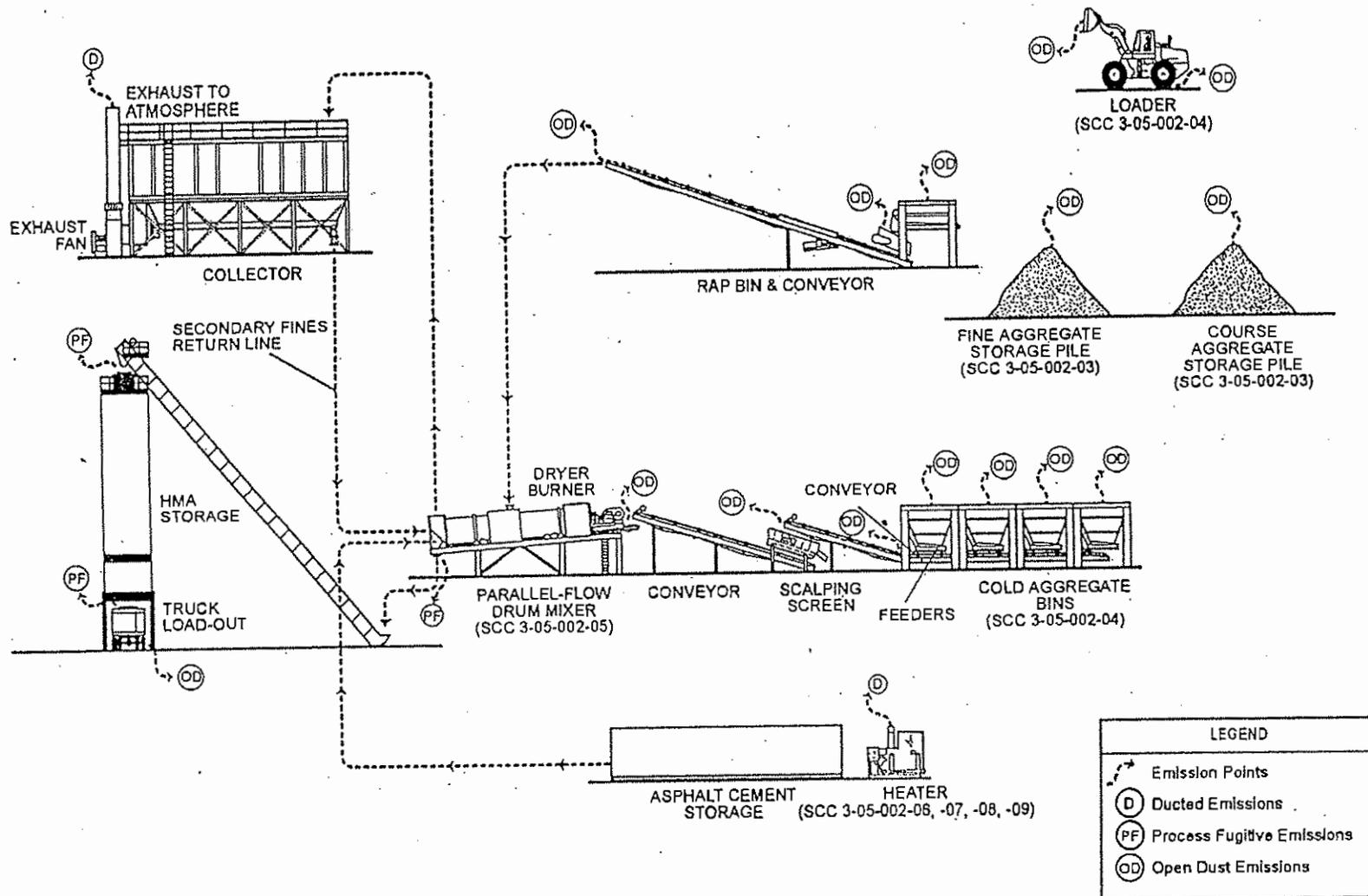


Figure 2. General process flow diagram for drum mix asphalt plants. (Source Classification Coes in parentheses.)

SCOPE OF WORK FOR THE FIRST PHASE OF THE DAPC'S INVESTIGATION INTO VOC EMISSIONS FROM ASPHALT BATCH PLANTS

1. Identify the different types of asphalt plant equipment configurations and explain the operation of each. Which technology is the most common and why? Which is the newest technology?
2. Which types of asphalt batch plants process recycled asphalt pavement (RAP)? What is the average organic content of RAP? What is the typical % of RAP used in each type of asphalt batch plant? What are the ODOT specifications concerning the use of RAP?
3. What are the current AP-42 emission factors for VOC emissions from asphalt batch plants? What are the reliability ratings for these factors? What is the basis for each factor? Obtain copies of the reports and stack tests that were used to develop each emission factor.
4. Is the USEPA in the process of updating the AP-42 emission factors for VOC emissions from asphalt batch plants? If so, what are the proposed emission factors and the bases for those proposed emission factors? Obtain copies of the relevant documents.
5. Identify and summarize the results of all the VOC emission tests that have been performed in Ohio for asphalt batch plants. Include, if possible, the type of plant, the process weight rate during the test, the % of RAP being processed, the supplier of the aggregate, the type of control equipment employed, the temperature of the exhaust gases during each test run, the VOC emission rate for each test run, and the filterable and non-filterable particulate emission rate for each test run. Is there any information that indicates what portion of the total VOC emissions is condensible organics?
6. Check with the USEPA and several other states (e.g., California, Illinois, Michigan and New York) to see if they have a database for the results of VOC emission tests for asphalt batch plants. Do the emission tests that were conducted for the use of crumb rubber contain helpful information? Obtain as much of the information outlined in (5) as possible.
7. Summarize the information contained in the USEPA's BACT/LAER clearinghouse concerning VOC emissions from asphalt batch plants.
8. Have any studies and/or reports been written concerning VOC emissions from asphalt batch plants? Check with the USEPA and Flexible Pavements, Inc. Obtain a copy of whatever is available.
9. What would be the "worst case" operating scenario for VOC emissions for each type of asphalt batch plant?

10. What types of control technologies could be used to control the VOC emissions from asphalt batch plants? Are any of these technologies currently employed in Ohio? Survey the field offices and check with Flexible Pavements, Inc. and the USEPA's CTC.

11. How does the organic content of aggregates vary around the State? Is the organic content routinely measured? If so, what test methods are used? Check with the Ohio Aggregates Association to see if any information exists concerning these questions.

12. Should the organic content of the aggregate be a primary concern in determining when an asphalt batch plant should be required to test for VOC emissions? Should the aggregate supplier be required to provide an analysis of the organic content of the aggregate to the owner/operator of the asphalt batch plant that will be using the aggregate?

13. Do any states regulate VOC emissions from asphalt batch plants? If so, how? Conduct a survey of the 10 most-populated states in the nation.

14. Does the USEPA have any written new source review policies concerning VOC emissions from asphalt batch plants? If so, obtain a copy of whatever is available.

15. What additional information is needed to define the DAPC's policy concerning VOC emissions from asphalt batch plants?

Schedule for completion of the Scope of Work:

Item(s)	Completion Date
1 and 2	09/26
3, 4, 7, 8, and 14	10/03
5 and 6	10/17
9 and 13	10/24
11 and 12	10/31
10	11/14
15	11/28

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15	11/28



State of Ohio Environmental Protection Agency

Central District Office

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Columbus, Ohio 43266-2198

George V. Voinovich
Governor
Donald R. Schregardus
Director

INTEROFFICE COMMUNICATIONS

TO: Distribution
FROM: Brad Thomas, DAPC, CDO
SUBJECT: Crumb Rubber Modified Asphalt Mix Test Results
DATE: May 18, 1994

Attached are the emission summaries from the above referenced testing. On July 28-30, 1993, six test runs were conducted on a 300 ton per hour asphalt plant to determine emissions from crumb rubber modification of asphalt cement. The tests performed were USEPA Methods 1, 2, 3A (for oxygen and carbon dioxide), 4, 5, modified Method 5 (for polynuclear aromatic hydrocarbons), 7E (nitrogen oxides), 9 (opacity), 10 (carbon monoxide), 18 (methane, benzene, toluene, ethylbenzene, xylene, styrene, and butadiene), 25A (total hydrocarbons), 29 (multiple metals), 202 (condensable particulate matter), and SWA-846 Method 0011/8315 (formaldehyde). Method 6C (for sulfur dioxide) was attempted but the monitor failed during the testing. I do believe, though, the sulfur dioxide emissions are significant with and without the crumb rubber.

The first three runs were the "test" runs in which crumb rubber was added to the asphalt cement. The second three runs were the "control" runs in which no crumb rubber was used.

The process parameters for the test runs and control runs are as follows:

Test Runs (1-3)

Mix temperature: 305-315°F
Production rate: Approximately 155 tons per hour
Mix composition: Limestone coarse aggregate, sand, asphalt cement ("AC-10") which was 7.9% by weight of total mix, and crumb rubber which was 19% by weight of asphalt cement (or 1.5% of total mix by weight). The asphalt cement was kept at 350°F while rubber was added.

Control Runs (4-6)

Mix temperature: 285-300°F
Production rate: Approximately 220 tons per hour
Mix composition: Limestone coarse aggregate, sand, asphalt cement ("AC-20") which was 6.3% by weight of total mix

IOC

RE: Crumb Rubber Modified Asphalt Mix Test Results

May 18, 1994

Page 2

To summarize the results:

- the particulate matter emissions don't appear significantly different between the "test" run and the "control" run;
- the organic condensibles were different but it could be explained by different mix temperatures, different AC content, or addition of crumb rubber;
- the multiple metal emissions, inorganic condensible emissions, carbon monoxide, and nitrogen oxide emissions don't appear significantly different between "test" runs and "control" runs;
- the VOC data (Method 18) appears consistent across the runs but emissions of the target compounds (including formaldehyde) may be higher without addition of rubber to mix;
- the total hydrocarbon (THC) data (Method 25A) is significantly different between "test" and "control" runs (i.e. the measurements show higher emissions as carbon in the test run). The reason for this could be the different mix temperatures or the different AC content. Note that the overall AC weight was 1.6 tons per hour higher in the "control" mix than in the "test" mix.

Before a cause and effect of emission increases/decreases due to the addition of crumb rubber can be established, more rigorous testing should be conducted and the operating conditions of the plant should be more consistent.

BCT/bja

Distribution:

Michael Hopkins, DAPC, CO
CDO Air Unit
Gerry Rich, NWDO
Phil Hinrichs, SWDO
Fred Klingelhafer, SEDO
Dennis Bush, NEDO
Robert Ramhoff, Mahoning-Trumbull, APC
Lynn Malcolm, Akron Regional AQM District
Bruce Blankenship, Canton, APC Division
Cory Chadwick, DES, Air Quality Programs, Cincinnati
Robert Staib, Division of Environment, DHWP, Cleveland
John Paul, RAPCA
Leon Weitzel, Lake County, APC
Don Walden, Portsmouth Air Pollution Unit
Pat DeLuca, NOVAA
Lee Pfouts, Toledo, DPC

Table I
Particulate Matter Test Summary

Run	Date	Time	Filterable PM		Organic Condensibles		Inorganic Condensibles		Isokinetics %
			gr/dscf	lb/hr	gr/dscf	lb/hr	gr/dscf	lb/hr	
1	07-28	07:29 - 10:45	0.0454	10.61	0.0604	14.11	0.0061	1.43	91.9
2	07-29	07:20 - 09:00	0.0503	10.75	0.1210	25.85	0.0064	1.37	101.8
3	07-29	11:26 - 13:37	0.1147	24.31	0.1513	32.06	0.0134	2.84	98.7
4	07-30	07:06 - 08:32	0.0359	8.74	0.0091	2.21	0.0027	0.66	91.9
5	07-30	10:12 - 11:37	0.0455	11.10	0.0071	1.73	0.0063	1.54	97.2
6	07-30	13:15 - 15:22	0.0413	10.03	0.0021	0.51	0.0106	2.57	99.2

Broken bag

Table II-A

Multi-Metals Test Summary
gr/dscf Concentrations

Run	Date	Time	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
1	07-28	07:29 - 10:49	<1.52x10 ⁻⁵	1.07x10 ⁻⁵	4.19x10 ⁻⁴	4.57x10 ⁻⁶	<7.16x10 ⁻⁶	8.37x10 ⁻⁷	<1.52x10 ⁻⁵	<7.61x10 ⁻⁷
2	07-29	07:15 - 08:56	<1.12x10 ⁻⁵	7.84x10 ⁻⁶	5.60x10 ⁻⁵	3.64x10 ⁻⁶	<5.60x10 ⁻⁶	<2.24x10 ⁻⁷	<1.12x10 ⁻⁵	<5.60x10 ⁻⁷
3	07-29	11:16 - 13:29	<1.23x10 ⁻⁵	8.58x10 ⁻⁶	1.26x10 ⁻⁵	3.37x10 ⁻⁶	<6.13x10 ⁻⁶	8.88x10 ⁻⁷	<1.23x10 ⁻⁵	<6.13x10 ⁻⁷
4	07-30	07:01 - 08:28	<1.22x10 ⁻⁵	1.22x10 ⁻⁵	4.56x10 ⁻⁶	4.86x10 ⁻⁶	<6.08x10 ⁻⁶	5.47x10 ⁻⁷	<1.22x10 ⁻⁵	<6.08x10 ⁻⁷
5	07-30	10:07 - 11:38	<1.24x10 ⁻⁵	1.02x10 ⁻⁵	<3.11x10 ⁻⁷	4.04x10 ⁻⁶	<6.21x10 ⁻⁶	5.28x10 ⁻⁷	<1.24x10 ⁻⁵	<6.21x10 ⁻⁷
6	07-30	13:08 - 15:07	<1.19x10 ⁻⁵	9.80x10 ⁻⁶	<2.97x10 ⁻⁷	<5.94x10 ⁻⁷	<5.94x10 ⁻⁶	5.34x10 ⁻⁷	<1.19x10 ⁻⁵	<5.94x10 ⁻⁷

DSCFM

1,635,273.2
1,495,367.0
1,483,307.6
1,701,845.1
1,709,555.3
1,698,883.8

Dry std. ft³ per hour

0.1#/hr

SO₂?
- monitor went down

Table II-B
Multi-Metals Test Summary
lb/hr Emissions

Run	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
1	$<4.09 \times 10^3$	2.88×10^3	0.113	1.23×10^3	$<2.05 \times 10^3$	2.25×10^4	$<4.09 \times 10^3$	$<2.05 \times 10^4$
2	$<2.77 \times 10^3$	1.94×10^3	1.38×10^3	8.99×10^4	$<1.38 \times 10^3$	$<5.53 \times 10^5$	$<2.77 \times 10^3$	$<1.38 \times 10^4$
3	$<3.11 \times 10^3$	2.17×10^3	3.19×10^3	8.53×10^4	$<1.55 \times 10^3$	2.25×10^4	$<3.11 \times 10^3$	$<1.55 \times 10^4$
4	$<3.25 \times 10^3$	3.25×10^3	1.22×10^3	1.30×10^3	$<1.62 \times 10^3$	1.46×10^4	$<3.25 \times 10^3$	$<1.62 \times 10^4$
5	$<3.47 \times 10^3$	2.85×10^3	$<8.69 \times 10^5$	1.13×10^3	$<1.74 \times 10^3$	1.48×10^4	$<3.47 \times 10^3$	$<1.74 \times 10^4$
6	$<2.97 \times 10^3$	2.45×10^3	$<7.42 \times 10^5$	$<1.48 \times 10^4$	$<1.48 \times 10^3$	1.33×10^4	$<2.97 \times 10^3$	$<1.48 \times 10^4$



Table III
PAH Test Summary

Run	Date	Time	pp/dscf	lb/hr
1	07-28	07:29 - 10:49	1.31×10^3	0.351
2	07-29	07:15 - 08:56	1.82×10^3	0.431
3	07-29	11:16 - 13:29	2.25×10^3	0.576
4	07-30	07:01 - 08:28	5.37×10^4	0.156
5	07-30	10:07 - 11:35	5.66×10^4	0.152
6	07-30	13:08 - 15:07	2.19×10^4	0.058

Table IV
Formaldehyde Test Summary

Run	Date	Time	gr/dscf	ppm _v	lb/hr
1	07-28	07:29 - 10:45	0.0006	1.04	0.13
2	07-29	07:20 - 09:00	0.0005	0.86	0.11
4	07-30	07:06 - 08:32	0.0018	3.36	0.44

lost one run for VOC

Table V
Volatile Organic Compound
Concentration Summary

Parameter	Run 1 07-28	Run 2 07-29	Run 3 07-30	Run 4 07-30	Run 5 07-30
Concentrations:					
Methane, ppm	ND*	ND	ND	ND	ND
Styrene, ppm	4.73	ND	ND	1.78	ND
Butadiene, ppm	0.80	ND	4.67	7.89	6.25
Benzene, ppm	0.20	0.46	0.09	ND	ND
Ethyl Benzene, ppm	ND	0.05	0.03	ND	ND
Xylene, ppm	ND	ND	0.05	ND	ND
Toluene, ppm	ND	ND	ND	ND	ND
Emissions:					
Styrene, lb/hr	2.086	ND	NC	0.821	ND
Butadiene, lb/hr	0.183	ND	1.113	1.890	1.487
Benzene, lb/hr	0.066	0.139	0.031	ND	ND
Ethylbenzene, lb/hr	ND	0.021	0.014	ND	ND
Xylene, lb/hr	ND	ND	0.023	ND	ND

* ND = not detected

Table VI - A
 THC, NO_x, CO, O₂ and CO₂ Test Summary

Run	Date	Time	O ₂ , %	CO ₂ , %	THC, ppm	NO _x , ppm	CO, ppm
1	07-28	11:38 - 11:50	14.8	3.4	1129.9	25.4	295.0
2	07-29	07:51 - 09:00	13.0	4.5	1472.5	33.5	802.0
3	07-29	11:22 - 13:36	13.8	4.2	1574.9	31.3	992.7
4	07-30	07:08 - 08:31	15.2	3.4	441.4	26.4	703.1
5	07-30	10:11 - 11:37	14.3	3.7	454.3	25.5	936.4
6	07-30	13:18 - 15:21	14.7	3.7	409.1	30.2	159.0

Table VI - B
 THC, NO_x, CO Emission Summary

Run	THC, lb/hr	NO _x , lb/hr	CO, lb/hr
1	76.76	4.95	35.00
2	91.48	5.97	87.00
3	97.05	5.53	106.82
4	31.21	5.35	86.81
5	32.26	5.19	116.13
6	28.86	6.11	19.59

*SO₂?
 - monitor went down*

*↑
 how was
 this
 determined?*



FLEXIBLE PAVEMENTS, INC.

P.O. BOX 16186
COLUMBUS, OHIO 43216-6186 • 614/221-5402



Fred F. Frecker, P.E.
President
Executive Director

AN ASSOCIATION FOR THE DEVELOPMENT, IMPROVEMENT AND ADVANCEMENT OF ASPHALT PAVEMENT CONSTRUCTION

June 30, 1994

RECEIVED

JUL 01 1994

REGIONAL AIR POLLUTION
CONTROL AGENCY

Mr. Dane Marsee
P.A.P.C.A.
P. O. Box 972
451 W. Third St.
Dayton, Ohio 45422

Dear Dane:

As per our telephone conversation, I am forwarding a report entitled "Evaluation of Stack Emissions From HMA Facility Operations", Special Report 166, which represents a compilation of stack emissions data from hot mix asphalt facilities. This report represents several years of coordinated effort between the National Asphalt Pavement Association (NAPA) and the U. S. EPA Office of Air Quality Planning and Standards. As you know, the current federal AP-42 Guidance Document For The HMA industry is somewhat sketchy and has not been updated since 1986. For this reason NAPA is working with EPA to update that guidance document.

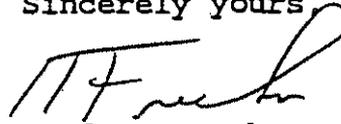
Special Report 166 includes data from nine to twenty-two facilities dependent upon the category of pollutant sampled and analyzed. Protocol for all NAPA testing and analyses was agreed upon with EPA prior to beginning the test program. All NAPA test data has been supplied to EPA and will be utilized in a future update of AP-42.

I have reviewed this report with Mr. Tom Rigo, manager of the Field Operations and Permit Section, Ohio EPA, and he informed me that the emission factors contained in the report were satisfactory for calculation a "Synthetic Minor" deferral of Title V Operating Permits. Please let me know if you have a question concerning any data from the report and I will try to provide an answer.

It was also my understanding from the meeting with Mr. Rigo that the tonnage limitation contained in the P.T.I. was "enforceable by the administration" for calculating a "Synthetic Minor" deferral of Title V operating permits if the P.T.I. had gone through the draft final process. When Mr. Rigo returns to his office next week I will contact him to try and clear the points you have raised on this issue.

Thank you for your time and talking to me on this matter, it is appreciated.

Sincerely yours



Fred F. Frecker
President/Executive Director

FFF/js
Encl:

Typical Emissions Inventory Calculations - HMA Facility

1. Use Table I to calculate annual emissions (tons pollutant/year):

$$\frac{\text{tons pollutant}}{\text{year}} = \frac{\text{Emission Factor}}{\text{from Table I}} \times \text{maximum HMA produced} \left(\frac{\text{tons}}{\text{year}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

Example: Calculate annual formaldehyde emissions for a facility which produces up to 500,000 tons HMA per year.

$$\frac{\text{tons formaldehyde}}{\text{year}} = \text{Factor } .00108 \left(\frac{\text{lbs formaldehyde}}{\text{ton HMA}} \right) \times 500,000 \left(\frac{\text{tons HMA}}{\text{year}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.27 \left(\frac{\text{tons}}{\text{year}} \right)$$

2. Use Table I to calculate hourly emissions (lbs pollutant/hour):

$$\frac{\text{lbs pollutant}}{\text{hour operation}} = \frac{\text{Emission Factor}}{\text{from Table I}} \times \text{Average Production Rate} \left(\frac{\text{tons}}{\text{hour}} \right)$$

Example: Calculate formaldehyde emission rate for a facility which produces at the average rate of 350 tons HMA/hour.

$$\frac{\text{lbs formaldehyde}}{\text{hour operation}} = 0.00108 \left(\frac{\text{lbs formaldehyde}}{\text{ton HMA}} \right) \times 350 \left(\frac{\text{tons HMA}}{\text{hour}} \right) = 0.38 \left(\frac{\text{lbs}}{\text{hour}} \right)$$

3. Use Table II to convert emissions data for purposes of comparisons:

Example: Compare existing facility stack test data to emissions calculated in Example 2 above. Note: Assume existing stack test data reported 0.0024 gr/dscf (grains/dry standard cubic feet) and an average stack gas flow rate of 20,000 dscf/min (dry standard cubic feet per minute) for the facility above.

From Table II:

$$\frac{\text{lbs formaldehyde}}{\text{hour}} = \frac{\text{gr}}{\text{dscf}} \times \frac{\text{dscf}}{\text{min}} \times 0.00857$$

$$\frac{\text{lbs formaldehyde}}{\text{hour}} = 0.0024 \left(\frac{\text{gr}}{\text{dscf}} \right) \times 20,000 \left(\frac{\text{dscf}}{\text{min}} \right) \times 0.00857 = 0.41 \left(\frac{\text{lbs}}{\text{hour}} \right)$$

Conclusion: The stack test results in this example are slightly higher than emissions calculated in Example 2 above.

Table I - Average Emission Factors - Pounds of Pollutant/Ton HMA Produced (lbs/ton)

	NAPA Average	EPA Average	CAPA Average	CV Average	All Data Average
Criteria Pollutants					
Carbon Monoxide (CO)	0.303	0.490			0.345
Sulfur Oxides (SO ₂)	0.0385	0.0537			0.0419
Nitrogen Oxides	0.0528	0.0550			0.0533
Total Hydrocarbons (non-methane)	0.0276	0.0562			0.0347
Particulate (PM-10)		0.00660			0.00660
HAPs (Clean Air Act List of 189)					
Polycyclic Aromatic Hydrocarbons					
PAH/PNA	0.000173	0.000564	0.0000361	0.000266	0.000176
Specific Gaseous Compounds					
Benzene	0.000294	0.000316	0.0000815	0.000121	0.000186
Toluene	0.000252	0.00120			0.000464
Xylene	0.000282	0.00381			0.00107
Ethyl Benzene	0.000148	0.00315			0.000815
Formaldehyde	0.00203	0.00199	0.000281	0.000348	0.00108
Metal Compounds					
Antimony					
Arsenic	0.0000180	0.00000738	0.00000213		0.00000103
Beryllium	0.0000481	0.000000293			0.00000120
Cadmium	0.00000505	0.00000259	0.00000135		0.00000171
Chromium	0.0000631	0.00000352	0.0000138		0.00000617
Cobalt					
Lead	0.00000352	0.00000160	0.0000347		0.0000197
Manganese	0.0000116	0.00005153	0.000314		0.000204
Mercury		0.0000885	0.000155		0.0000128
Nickel	0.0000107	0.0000257	0.000112		0.0000408
Selenium		0.00000170	0.0000590		0.00000132

Table II - How to Convert NAPA Emission Data to Other Units Frequently Used

To Calculate	ppm	lbs/hr	µg/m ³	gr/dscf	lbs/hr	µg/m ³
Multiply	gr/dscf	gr/dscf × dscf/min	gr/dscf	ppm	ppm × 10 ⁻⁶ × dscf/min	ppm × 10 ³
	by	by	by	by	by	by
Note: All Factors Corrected to Standard Conditions of 68 °F & 1 atm (20 °C & 760 mm)						
Carbon Monoxide (CO)	1966	0.00857	2288088	0.000509	4.36	1.16
Sulfur Dioxide (SO ₂)	860	0.00857	2288088	0.00116	9.97	2.66
Nitrogen Oxides (As NO ₂)	1196	0.00857	2288088	0.000836	7.16	1.91
Total Hydrocarbons (THCs as methane)	3440	0.00857	2288088	0.00029	2.49	0.67
Benzene	705	0.00857	2288088	0.00142	12.16	3.25
Toluene	597	0.00857	2288088	0.00168	14.36	3.83
Xylene	518	0.00857	2288088	0.00193	16.53	4.41
Ethyl Benzene	518	0.00857	2288088	0.00193	16.53	4.41
Methane	3440	0.00857	2288088	0.000291	2.50	0.67
Formaldehyde	1835	0.00857	2288088	0.000545	4.67	1.25
Any Compound	$\frac{55037}{MW}$	0.00857	2288088	$1.817 \times 10^{-3} \times MW$	$0.156 \times MW$	$\frac{MW}{24.05}$

Other Conversion Factors @ 68 °F, 1 atm (20 °C, 760 mm)

- | | |
|---|--|
| 1 lb = 7000 grains | 1 gr/dscf = 1.9 lbs/1000 lbs air |
| 1 lb = 453.6 grams | 1 gr/dscf = 1.9 lbs/13282 cf air |
| 1 cf = 28.32 liters | % Volume = ppm × 10 ⁻⁴ |
| 1 lb-mole = 385.26 cf | 1 gram = 15.43 grains |
| 1 m ³ = 1000 liters = 35.31 cf | 1 grain = 64.8 mg = 64800 µg |
| 1 gr/dscf = 2288 mg/m ³ | 1 mg/m ³ = 0.000437 gr/dscf |
| $ppm = mg/m^3 \times \frac{24.05}{MW}$ | $1 mg/m^3 = ppm \times \frac{MW}{24.05}$ |

Nomenclature:

- | | |
|---|---|
| ppm = parts per million | lbs/hour = pounds per hour |
| gr/dscf = grains per dry standard ft ³ | dscf = dry standard ft ³ @ 68 °F & 1 atm |
| g = gram | µg = microgram = 10 ⁻⁶ grams |
| l = liter | mg = milligram = 10 ⁻³ grams |
| gr = grains | cf = cubic feet |
| m ³ = cubic meters | MW = molecular weight |
| atm = atmosphere | °F = fahrenheit |
| lbs = pound | °C = centigrade |

Glossary of Terms and Acronyms

AREA SOURCE

Any building, structure, facility or installation (Stationary Source) which is a source of Hazardous Air Pollutants (HAPs) but is not a major source.

Example: For Hazardous Air Pollutants
Area Source = Stationary Source that emits
< 10 tons/year of single air toxic compound
< 25 tons/year of combination of air toxic compounds

ATTAINMENT/NON-ATTAINMENT

Each state is divided into Air Quality Control Regions for assessment of compliance with National Ambient Air Quality Standards. If a region is now meeting the standard for a particular pollutant within that region, it is labeled "Attainment" for that pollutant. If a region is not meeting the National Ambient Air Quality Standards, it is labeled "Non-Attainment" for that pollutant. The Clean Air Act of 1990 focuses on maintenance of attainment regions and the assurance of reasonable further progress toward "attainment" in regions where National Standards for air quality are not now being met.

BENZENE, TOLUENE, ETHYLBENZENE, XYLENE (BTEX)

A subset of petroleum-based Volatile Organic Compounds (VOCs) for which EPA defines a specific test procedure and analysis. These compounds appear on the list of 189 "Hazardous Air Pollutants" as defined in the Clean Air Act of 1990 and are thought to have adverse effects on human health. They are relatives of Polycyclic Aromatic Hydrocarbons (PAHs) but are more volatile and must be dealt with in separate test procedures.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

This term normally has meaning for sources in regions of the country where National Ambient Air Quality Standards are consistently being met, i.e., attainment areas. It is the most common level of technology requirement and takes economics into account. Some emission standards have been developed for specific sources in specific regions of the country, and are intended to reflect back on BACT.

CARBON MONOXIDE (CO)

A gas which occurs in the atmosphere, and is a primary product of incomplete combustion. Mobile sources, such as cars, trucks, etc., combined with other sources concentrate the gases, particularly in urban areas. For this reason and its known health effects, Carbon Monoxide has been declared by Congress as a priority pollutant for regulation.

CLEAN AIR ACT (CAA)

The federal laws which provide the basic framework for regulating air pollution sources in the U.S. The Clean Air Act of 1990 refers specifically to the most recently amended version of the Clean Air Act.

EMISSIONS INVENTORY SURVEY

A process of tallying emissions of specific pollutants within a state or local air jurisdiction. It is mandated by the Clean Air Act of 1990 in specific situations. This data is used to form the baseline reference point for judging a state's implementation plan effectiveness and to document the sources of a particular pollutant which are subject to regulation.

EPA

The United States Environmental Protection Agency. This agency is the official agency at the federal level charged with administration of the Clean Air Act and other environmental laws.

FORMALDEHYDE

Formaldehyde is a Volatile Organic Compound and is a known product of incomplete combustion, especially where combustion zone temperatures are lower.

HAZARDOUS AIR POLLUTANTS (HAPs, sometimes referred to as Air Toxics)

A list of chemicals which the Clean Air Act defined as Hazardous Air Pollutants based upon a finding that suggests these chemicals either participate in adverse human health effects or adverse environmental effects. The initial list of 189 HAPs is to be extended based upon future findings by EPA. Many of the chemicals are closely linked with petroleum and coal derivatives and products of combustion. For this reason, HMA Manufacturing was one of 174 source categories named by EPA as a target for future regulation.

LOCAL AIR AUTHORITY

Refers to some county or city air pollution regulatory authorities that have been delegated authority to administer provisions of the Clean Air Act by the state and/or the U.S. EPA.

LOWEST ACHIEVABLE EMISSION RATE (LAER)

A term which has meaning under the non-attainment provisions of the Clean Air Act. Its application is intended to reflect the most stringent level of control for affected sources and allows no consideration for economics. The implications are that emission standards would reflect the best 12% experience in reducing emissions for the affected industry and would usually require offsetting reductions in emissions from other sources in order to comply.

MAJOR SOURCE

A term (referenced many times in the Clean Air Act of 1990) used to define a specific annual threshold quantity for a specific pollutant. If a source emits more than the threshold quantity, it is termed a major source.

The tonnage threshold is not the same for all pollutants and all situations.

Example:

- Air toxics - Major Source ≥ 10 tons/year of a single air toxic
 ≥ 25 tons per year of a combination of air toxics
- Attainment areas where National Ambient Air Quality Standards are consistently met
- Major source = 100 tons/year or more (PM-10, CO₂, SO_x, NO_x, Lead, Ozone, CO)

MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT)

A term which has meaning when applying some provisions of the Clean Air Act, specifically Air Toxics. Must use technology that has been proven to do the best job or meet the specified emissions standards. Economics are not taken into account. Emission standards are to reflect back on MACT when proposed.

METAL COMPOUNDS

A material which contains any one of eleven specifically named metals as part of the chemical structure of that material. These metals were identified on the list of 189 "Hazardous Air Pollutants" listed in the Clean Air Act of 1990. Specifically, the list includes: Antimony (Sb), Arsenic (As), Beryllium (Be), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Lead (Pb), Manganese (Mn), Mercury (Hg), Nickel (Ni), and Selenium (Se). These metals are often associated with combustion of oil and coal.

MOBILE SOURCE

Automobiles, trucks and airplanes, and non-road vehicles such as construction equipment, farm machinery, lawn equipment, forklifts, marine vessels, and locomotives which emit a pollutant for which there is a national standard.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

To protect public health and public welfare, the Clean Air Act mandates atmospheric standards for six pollutants: Particulate Matter (PM-10), Sulfur Oxides (SO₂), Nitrogen Oxides (NO₂), Ozone (O₃), Carbon Monoxide (CO), and lead.

NITROGEN OXIDES (NO_x)

An air pollution term applied to a class of Nitrogen-bearing gases that are a primary product of combustion. The gases are known to be a primary factor in the formation of smog and acid rain. For these reasons, Nitrogen Oxides have been listed by Congress as a priority pollutant for regulation. Usually expressed as Nitrogen Dioxide (NO₂).

ORGANIC COMPOUND

Chemical compounds which contain carbon. Coal and oil-based products are rich in carbon.

OZONE (O₃)

A gas which is known to be a primary component of smog within a 7-10 mile zone above the earth's surface. Ozone in the atmosphere is produced through a complex set of chemical reactions involving other gases (Nitrogen Oxides and Volatile Organic Compounds) and sunlight. Because of its concentration, particularly in urban areas, Ozone has been declared by Congress to be a priority pollutant for regulation. Since Ozone (smog) is a product of a reaction in the atmosphere, the focus of regulation is on gases which react to form O₃, i.e., Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO_x).

PARTICULATE MATTER (PM-10)

Particles which are captured in a specifically defined EPA test procedure and analysis, and have an average diameter of 10 microns or less. These are components of dust, smoke, fumes etc. Because these particles are viewed to be most respirable and have an impact on human health, PM-10 has been declared a priority pollutant for regulation under the Clean Air Act.

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) OR POLYNUCLEAR AROMATICS (PNAs)

Two air pollution terms used synonymously to describe a class of organic compounds that are largely associated with combustion and petroleum-based products. Because they tend to condense at atmospheric temperatures, they diffract light and are often associated with blue haze. They are sometimes referred to as semi-Volatile Organic Compounds. These materials were targeted by the Hazardous Air Pollutant provisions of the Clean Air Act due to the belief that they are associated with adverse health effects. The class includes at least 17 different compounds which have been specifically identified. Termed "hazardous", these compounds are targets for future regulation. EPA specifies a test procedure for these compounds.

POLYCYCLIC ORGANIC MATTER (POM)

A term applied to a class of organic compounds, largely associated with combustion and petroleum products, that condense as they are emitted into the atmosphere. Because these gases condense in the atmosphere and diffract light, they are often observed as blue haze. They are sometimes referred to as semi-Volatile Organic Compounds. The regulation focus is on a subset of 17 of these compounds, Polycyclic Aromatic Hydrocarbons (PAHs) or Polynuclear Aromatics (PNAs). For air pollution control purposes, the terms are often used synonymously, i.e., POMs, PAHs, or PNAs. These chemicals are often associated with adverse health effects and many are thought to be cancer causing. For this reason these compounds are labeled in the Clean Air Act as Hazardous Air Pollutants.

POTENTIAL TO EMIT

A term used in emissions inventory processes to define the basis for calculating emissions from a source. It normally sets the number of hours of operation to 8,760 hours of operation, 365 days, 24 hours per day for emissions calculations. Indications are that this is not a federal mandate and may be subject to state or local interpretation.

REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT)

This term has meaning under the Clean Air Act in regard to the upgrade of existing facilities where required to assist in meeting National Ambient Air Quality Standards in non-attainment areas. It is usually the easiest level of technology to meet, but could vary from one location to another, dependent upon the severity of the non-attainment problem. In some areas, such as southern California, it could be very stringent, while in others, it may be much more lenient.

STATE IMPLEMENTATION PLAN (SIP)

The document submitted to EPA by the Governor of each state which details the state's plan for administering and enforcing the provisions of the Clean Air Act. The Clean Air Act requires approval of this plan by EPA. Upon approval, a state is delegated authority to administer specific provisions of the Clean Air Act. There are at least two reasons for a state to submit a plan: potential loss of federal grant money, and the threat of federal intervention.

STATIONARY SOURCE

Any building, structure, facility, or installation which emits, or has the potential to emit any air pollutant.

SULFUR OXIDES (SO₂)

An air pollution term applied to a class of gases which are made up of sulfur and oxygen in different combinations. It is usually associated with the burning of fuels which contain sulfur, i.e., diesel, coal, #6 fuel oil, kerosene, etc. Because it is observed in the atmosphere in large quantities and is viewed to have an effect on human health, vegetation, and acid rain, it has been labeled a priority pollutant for regulation by Congress in the Clean Air Act. Usually expressed as Sulfur Dioxide (SO₂).

TOTAL HYDROCARBONS (THCs)

An air pollution term often used to describe gases (organic compounds) emitted from combustion processes. It is often used synonymously with the term Volatile Organic Compounds (VOCs) in non-combustion processes. This may vary dependent on local interpretation.

TOTAL ORGANIC COMPOUNDS (TOCs)

An air pollution term often used to describe gases (organic compounds) in the emissions from a manufacturing process. It is often used synonymously with the term Volatile Organic Compounds (VOCs).

VOLATILE ORGANIC COMPOUNDS (VOCs) - sometimes used synonymously with THCs and TOCs

An air pollution term used in the Clean Air Act to describe gases or vapors which are typically emitted from combustion or manufacturing processes and also which are known to participate in the chemical formation of OZONE in the presence of sunlight and other gases (e.g., smog). EPA specifies a test method for capture and analysis. Since mobile sources such as autos and trucks are a significant source of VOCs, urban centers are likely to be focal points for additional regulation.



State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020 Fax (614) 644-2329

JAN 23 1991

MEMORANDUM

TO: Fred Klingelhafer, SEDO
FROM: Chris ^{C.W.A.} Armstrong, Legal
SUBJECT: PORTABLE ASPHALT PLANTS - PROPOSED PILOT PROGRAM
DATE: January 14, 1991

Issue

Can a pilot program allowing the following be considered within OAC Rule 3745-31-03 or any other rule?

1. General notification by an asphalt company of the various sites where portable plants are to be located (OEPA determines acceptability of these various sites with each such acceptance being valid for three (3) years);
2. General notification by an asphalt company of the various portable plants that may be moved to these listed and accepted sites; and
3. Relocation of a listed portable plant to a listed and accepted site would be deemed acceptable with a notification to the Director of this relocation within ten (10) days of the relocation.

Discussion and Conclusion

Although the pilot program may provide administrative efficiencies, it appears that the pilot program fails to meet the requirement of OAC Rule 3745-31-03(A)(1)(n)(iii). The pilot program contains general notice of the site and portable plant involved through the original listing of these two groups. In the pilot program the specific notice of intent to relocate a particular portable asphalt plant is required ten (10) days prior to the actual relocation.

Under OAC Rule 3745-31-03(A)(1)(n)(iii), the asphalt company must provide:

proper notice of intent to relocate the source to the Director within a minimum of thirty (30) days prior to the scheduled relocation.

The use of the term "scheduled relocation" appears to contemplate that a specific portable asphalt plant will be moved to a specific OEPA approved site. The notice of intent to relocate the plant to this particular site must be provided to the Director within thirty (30) days.

Fred Klingelhafer, SEDO
Portable Asphalt Plants
PAGE TWO

The pilot program attempts to satisfy the notice requirement by first providing a general notice list of the asphalt plants to be relocated and second by providing a general notice list of the sites where the plants may be relocated to. Then, a more specific notice of intent to relocate is required to reach the Director ten (10) days prior to the specific relocation.

Although the pilot program eventually satisfies the requirement of specifically identifying the asphalt plant and where it is to be operated, it does not do so until ten (10) days before the specific relocation. OAC Rule 3745-31-03(A)(1)(n)(iii) requires specific notice of intent to relocate "within a minimum of thirty (30) days."

Because the general notice does not specifically identify the particular asphalt plant and where it is going to operate, the general notice as provided for in the pilot program does not satisfy OAC Rule 3745-31-03(A)(1)(n)(iii). In order for the pilot program to work within OAC Rule 3745-31-03(A)(1)(n)(iii), it appears that the rules must be amended to allow for the ten (10) day notification period.

Another basis upon which the pilot program may operate is OAC Rule 3745-31-03(A)(5). This rule allows the Director (at the Director's discretion and in writing) to exempt a source from obtaining a PTI for a period of up to six (6) months "for purposes of research and development of more effective prevention or control of air pollutant emissions or of more efficient combustion of coal."

It appears to me that a pilot program emphasizing changes in its notification process does not constitute "research and development" for purposes of OAC Rule 3745-31-03(A)(5). The term "research and development" seems to include technological changes being tested rather than changes of notification, which appear to be changes of procedure requiring neither research nor development.

Even if it can be alleged that changes in a particular notification program constitute "research and development" designed to lessen air pollutant emissions, there remains the requirement that the Director approve of this action in writing. Approval of the pilot program may be obtained from the Director just as easily by PTI rule changes without having to rely upon a questionable legal theory that such a pilot program constitutes "research and development of more effective prevention or control of air pollutant emissions."

In addition, it is my understanding that such a basis (the use of OAC Rule 3745-31-03(A)(5)) has not been used to allow the implementation of a pilot program. Therefore, it is my conclusion that the pilot program as proposed does not satisfy OAC Rules 3745-31-03(A)(1)(n)(iii) or 3745-31-03(A)(5), and that the appropriate method of implementing this pilot program would be to revise or add rules allowing it.

CWA/dms

cc: Bill Hayes, Legal Supervisor
Bob Hodanbosi, DAPC

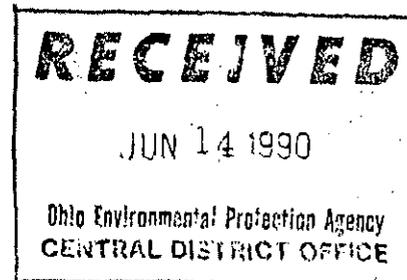


inter-office communication

to: LAA Directors/D.O. Unit Supervisors date: June 11, 1990
from: Bob Hodanbosch, Manager, AQM&P
subject: Fuel Oil Usage at Asphalt Plants

This is a reminder that any new permit to install applications for asphalt plants should indicate the type of fuel used at the facility. If fuel oil is to be utilized, be sure to obtain the necessary applications for the storage tanks of fuel oil. Also, any asphalt storage tanks should be covered by permit. The resultant sulfur dioxide emissions from the combustion of fuel oil should also be included on the New Source Coding Form for modeling. If there are existing facilities, without storage tank permits, the company should be asked to submit applications in order to obtain the required air permit.

RH/mmc





 Moderate Non-Attainment Areas

Ohio

Ozone Non-Attainment Areas

© 5/7/96

Sulfur Dioxide
Non-Attainment Sub-County Narrative
to Supplement the Map
Non-Attainment, Primary Standards

Coshocton

Franklin Township

Cuyahoga

Townships of Olmsted and Riveredge
The Cities of Bay Village, Westlake, North Olmsted, Olmsted Falls,
Rick River, Fairview Park, Berea, Middleburg Hts., Strongsville, North
Royalton, Broadview Hts., and Brecksville - Attainment. Remainder of
Cuyahoga County is primary non-attainment.

Jefferson

The Cities of Steubenville and Mingo Junction
The Townships of Steubenville, Island Creek, Cross Creek, Knox and Wells

Lake

The Cities of Eastlake, Timberlake, Lakeline, Willoughby (north of U.S. 20),
and Mentor (north of U.S. 20 and west of S.R. 306).

Lorain Area Bounded on the north by the Norfolk and Western R.R.
tracks, on the east by S R 301 (Abbe Road), on the south by
S R 254, and on the west by Oberlin Road.

Lucas

The area east of Route 23 and west of eastern boundry of Oregon Township

OHIO—SULFUR DIOXIDE (SO₂)

Summit

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than National Standards
Summit Area bounded by the following lines—North—Interstate 76, East—Route 93, South—Vanderhoof Rd., West—Summit County line.				X
Area bounded by the following lines—North—Bath Rd., 148 east to Route 8, Route 8 north to Barlow Rd., Barlow Rd east to county line, East—Summit/Portage County line, South—Interstate 76 to Route 93, Route 93 south to Route 619, Route 619 east to county line, West—Summit/Medina County line.				X ^a
The remainder of summit County				X ^a

^a This area remains undesignated at this time as a result of a Sixth Circuit Court remand.
^a This area was not affected by the court remand.

Non-Attainment Secondary Standards

Gallia

Addison Township



Although this map reflects the entire county as designated non-attainment, the actual non-attainment designations are on a sub-county basis. Consult attachment.

- Non-attainment counties Secondary
- Non-attainment counties Primary

PM10 NONATTAINMENT AREAS

CUYAHOGA COUNTY - Entire county

JEFFERSON COUNTY - The area bounded by Market Street (State Route 43) from the West Virginia/Ohio border west to Sunset Blvd. (U.S. Route 22), Sunset Blvd. west to the Steubenville Township/Cross Creek Township boundary, the township boundary south to the Steubenville Corporation limit, the corporation boundary east to State Route 7, State Route 7 south to the Steubenville Township/Wells Township boundary, the township boundary east to the West Virginia/Ohio border, and north on the border to Market Street.

ENTIRE STATE OF OHIO
IS ATTAINMENT
FOR

NITROGEN DIOXIDE

LEAD

CARBON MONOXIDE

From: Tom Rigo
To: Cesar Zapata; CURT MARSHALL; Dale Aleman; Dennis Bush; Don Waltermeyer; Frank J. Markunas; Frank.Stoy@does.hamilton-co.org; Fred Klingelhafer; Harry.Schwietering@does.hamilton-co.org; Isaac Robinson; Jim Orlemann ; John Curtin; Karen Granata; Mark Vilem; Michael.Kramer@does.hamilton-co.org; Mike Hopkins ; Mike Riggelman; Misty Parsons; Phil Hinrichs; Phillip_thompson@epa.ohio.gov; Ron Hancher; Samir Araj; Tim Wilson
Date: 2/7/00 11:25AM
Subject: BAT terms and conditions IMPORTANT !!!!

Until further notice, please **immediately** direct your permit review staff for both Title V and bifurcated PTIs to begin to place any BAT terms and conditions on the State/federal side of the permits. Beginning today 2/7/00, we will not accept any new draft Title V or draft bifurcated PTIs with the BAT requirements on the State-only side of the permit. This should make the permits less complicated because if the BAT is more stringent than an associated OAC rule requirement, it will only be necessary to cite the more stringent BAT requirement on the State/federal side of the permit. Also, for Title V permits that were drafted prior to June 18, 1999, those permits can proceed to final issuance without having to revise the drafts by moving the BAT requirements over to the State/federal side of the permit. We are still negotiating with USEPA on the possibility of not having to revise draft permits after the June 18 date. We should know in the near future whether we have been successful. However, at this time, your staff should focus on preparing initial Title V draft permits and processing those Title V's that were drafted before June 18, 1999 to proposal then final issuance. Should you have any questions, please feel free to contact Jim Orlemann, Mike Hopkins or me.

In advance, thank you for immediately distributing this important guidance to your permit review staff.
Tom

CC: Bob Hodanbosi ; Jeanne Mallett; Joe Koncelik

June 18, 1999

Robert F. Hodanbosi, Chief
Division of Air Pollution Control
Ohio Environmental Protection Agency
122 South Front Street
P. O. Box 1049
Columbus, Ohio 43266-1049

Dear Mr. Hodanbosi:

For the past several months, we have had discussions with you and your staff about inconsistencies with incorporating provisions of your State Implementation Plan (SIP) as applicable requirements in operating permits under your Title V Permit Program. More specifically, we are concerned that the Best Available Technology (BAT) requirements, nuisance regulation, and toxics policy which are contained in the SIP and/or SIP-approved permits, are not identified as federally enforceable terms in your Title V permits.

On March 31, 1999, John Seitz, Director of the U. S. Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards, wrote a letter to the California Air Pollution Control Officers Association in response to their questions regarding federal enforceability. In that letter, Mr. Seitz stated our view that "all provisions contained in an EPA-approved SIP and all terms and conditions in a permit issued under any SIP-approved permit program are...federally enforceable.... [A]ll such terms and conditions are also federally enforceable "applicable requirements" that must be incorporated into the Federal side of a Title V permit." This position was reiterated in a May 20, 1999, letter to you from Mr. Seitz.

BAT is a requirement of State's Permit to Install (PTI) program, approved into the Ohio SIP. The PTI program serves, in part, to meet the general (or "minor") new source review requirements of section 110(a)(2)(C) of the Clean Air Act (Act), which requires SIPs to include a program for the regulation of the modification and construction of any stationary source as necessary to assure that national ambient air quality standards are achieved. Specific BAT limitations for individual sources are established in specific PTIs. Because BAT terms and conditions are created under the PTI program, which is in turn contained in the Ohio SIP, they are federally enforceable. As requirements under the SIP they also are "applicable requirements" within the meaning of the Act section 504(a)

and 40 CFR - 70.2 and, therefore, must reside in the Federal and State enforceable section of the Title V permit. Similarly, the terms and conditions implementing Ohio's nuisance regulation and toxics policy are included in the SIP and/or a SIP-approved permit and thus are considered federally enforceable applicable requirements for Title V purposes. They should be reflected as such in the Title V permit.

Section 505(b)(1) of the Act calls upon EPA to object to any proposed permit that is not in compliance with applicable requirements, including the requirements of a SIP. Accordingly, Title V permits which are issued with BAT, nuisance, and toxics policy terms and conditions that are misrepresented as State-only enforceable are subject to EPA objection.

It is our understanding that you intend to submit a SIP revision package requesting removal of the BAT requirements, thus making them State enforceable only. We ask that, prior to this resource intensive effort, you make all necessary assurances that this action will meet all of the planning requirements of the Act, including both specific and general requirements intended to assure the attainment and maintenance of the National Ambient Air Quality Standards and the prevention of significant deterioration of air quality. The BAT program appears to be integral to Ohio's plan for meeting many of these requirements. In addition, sections 110(l) and 193 of the Act are "antibacksliding" provisions that prohibit the approval of a SIP revision that would interfere with any applicable requirement of the Act and, in the case of nonattainment areas, require that control requirements be replaced by measures of ensuring equal or greater emissions reductions. Thus, before we could approve the removal of the BAT program from the SIP, you must demonstrate that removal of BAT would not adversely affect the various statutory requirements that BAT addresses. This will also enable our review process to be done in a timely fashion. In addition, if you choose to make the nuisance regulation and toxics policy State enforceable only, we ask that this be included as part of your SIP revision package.

Please keep in mind that the removal of these provisions from the SIP will not affect the continuing Federal enforceability of existing PTIs. As noted above, either inclusion in the SIP or in a permit issued pursuant to a SIP-approved program renders a requirement federally enforceable. Here, the BAT requirements are contained in PTIs issued pursuant to Ohio's SIP-approved PTI program. Therefore, for sources with existing PTIs containing BAT, the BAT requirement still would have to be included on the federally enforceable side of the Title V permit. This is true also for nuisance and state toxics requirements contained in existing PTIs. We continue to have the authority to enforce BAT and the other provisions at these sources until appropriate regulatory steps are taken.

We look forward to continuing to work with you on this issue. If you have any questions or wish to discuss this issue further, please call Genevieve Damico, of my staff, at (312) 353-4761.

Sincerely yours,

/s/

Stephen Rothblatt, Chief
Air Programs Branch



Ohio Environmental Protection Agency
Division of Air Pollution Control

Misty
INTER-OFFICE COMMUNICATION

TO: Distribution - By mail and E-Mail

FROM: Mike Hopkins, Manager, AQMS&P and Jim Orlemann, Manager, Engineering through Bob Hodanbosi, Chief, DAPC *Jim*

DATE: July 23, 1999

RE: Location of BAT Terms and Conditions

We recently had several discussions with U.S. EPA concerning the proper location of BAT-based emission limits and associated terms and conditions. It is U.S. EPA's belief that BAT requirements should be included on the State and Federally Enforceable side of our permits. Their reasoning is that the requirement for BAT in rule 3745-31-05 is currently included in an approved part of the State Implementation Plan (SIP). Since it is included in the SIP, it is federally enforceable.

We agree that BAT is currently in the SIP. However, it was inadvertently included in our February 29, 1996 SIP submittal. It was included before U.S. EPA decided that this was an important issue. We are preparing a SIP revision to remove references to BAT from the SIP. We expect this SIP revision to be transmitted to U.S. EPA within a couple of weeks. It is likely to take several months before U.S. EPA can act on this request.

Because (1) the BAT provisions are not a required part of the SIP, (2) we are expecting to remove the BAT provisions from the SIP, and (3) we do not want to waste a lot of time changing permits in the future, we believe the BAT provisions should continue to be placed on the State Enforceable side of all PTI and Title V permits.

Since U.S. EPA disagrees with this approach, they will adversely comment on any draft PTI issued. When U.S. EPA does adversely comment during the comment period for a PTI, we should then ask the permittee if it is acceptable for us to move the BAT requirements to the State and Federally Enforceable side of the permit. If they agree, then make the change in the final action recommendation. If the company disagrees and wants to fight U.S. EPA on this issue, please contact Mike Hopkins for further discussion.

U.S. EPA may also comment adversely on Title V permits. We currently plan to continue to process Title V permits as we have - in accordance with the March 21, 1997 IOC from myself and Jim Orlemann (copy attached).

If you have any questions, please call your Title V or New Source Review contact at (614) 644-2270.

MH/ \ioc\BATLocation.wpd

Distribution: All LAA/DO Unit Supervisors
CO permit staff
NSR permit staff



Ohio Environmental Protection Agency
Division of Air Pollution Control

INTER-OFFICE COMMUNICATION

TO: Distribution

FROM: Mike Hopkins, Manager, SAOM&P and Jim Orlemann, Manager, Engineering through Bob Rodanbosi, Chief, DAPC

DATE: March 21, 1997

RE: Location of Permit to Install limitations/requirements in Title V permits

The Division of Air Pollution Control has recently fielded many questions concerning the proper location of PTI limitations/requirements within Title V permits. The purpose of this memo is to clarify which Permit to Install limitations/requirements belong on the federal side of a Title V permit and which limitations/requirements belong on the state side of a Title V permit.

In the past it was thought that all PTI limitations/requirements from permits issued as draft must go on the federal side of the Title V permits. We no longer believe this is true. Instead, you should use the following rules when deciding the location of PTI limitations/requirements.

- A. The following PTI limitations/requirements and all associated terms and conditions (monitoring, recordkeeping, reporting, and testing) must go on the federal side of a Title V permit.
1. New Source Performance Standards (NSPS).
 2. National Emission Standard for Hazardous Pollutants (NESHAP).
 3. Maximum Achievable Control Technology (MACT) standards.
 4. Short term emission limits (lb/hr, lb/day, lb/month, lb/rolling 12-month, lb/rolling 365 day, lb/gallon, etc.) developed to restrict the potential to emit for synthetic minors.
 5. Short term operational restrictions (gallons/hr, gallons/day, gallons/month, gallons/rolling 12-month, gallons/rolling 365-day, etc.) developed to restrict the potential to emit for synthetic minors.

6. Emission limits (other than (B) (1) below) specified in or derived from rules in the federally approved State Implementation Plan (SIP).
 7. Emission limits or control requirements specified to comply with Best Available Control Technology (BACT) requirements for Prevention of Significant Deterioration (PSD).
 8. Emission limits or control requirements specified to comply with Lowest Achievable Emission Rate (LAER) requirements.
 9. Emission limitations, operational restrictions or shutdown requirements for emissions units that are reducing emissions for netting purposes.
 10. Ambient monitoring terms required by one of the above-mentioned regulations.
 11. Emissions limitations, control requirements or operational restrictions for an emissions unit that have been developed specifically to prevent a violation of the National Ambient Air Quality Standards by that emissions unit.
- B. PTI limitations/requirements not listed above should be placed on the State Enforceable side of Title V permits, including:
1. Any limitation developed to comply with Best Available Technology (BAT) requirements.
 2. Any ton/year emission limitation.
 3. Any limitation based upon the application of the DAPC's "Air Toxic Policy."

If you have any questions, please contact Jim Orlemann or Mike Hopkins.

MH/JO/ \ioc\limit1.wpd

Distribution:

All DO/LAA Air Unit Supervisors
All DAPC Section Managers
Jenny Tiell, Dir. Office
Safaa El-Oraby, DAPC

Jeanne Mallett, Legal
Misty Parsons, DAPC
Alan Lloyd, DAPC

Memo

To: Mike Hopkins, Jim Orlemann, Tom Rigo, Jeanne Mallett
From: Bob Hodanbosi
Date: June 14, 1999
Subject: Letter from U.S. EPA

Attached is a letter from U.S. EPA to STAPPA/ALAPCO that addresses federal enforceability NSR/PSD Lookback, and supersession. This interpretation is what Region V is using to require BAT to be on the federal side of the Title V permit. At the STAPPA meeting, John Seitz stated that he did not believe this letter would have much impact and expected permit issuance to continue to progress.

Attachment

BH/alp

May 20, 1999

Mr. Robert Hodanbosi
Mr. Charles Lagges
STAPPA/ALAPCO
444 North Capitol Street, NW
Washington, DC 20001

Dear Messrs. Hodanbosi and Lagges:

I am writing in response to your May 15, 1998 and December 11, 1998 letters. Your May 15, 1998 letter addressed the Environmental Protection Agency's (EPA's) use of its authority to object to permits proposed by State permitting authorities under the Clean Air Act's (CAA's or the Act's) title V operating permit program and focused primarily on interface issues between title V and title I [or new source review (NSR)] of the Act. You expressed concern that EPA's use of its review authority leading to comments and objections to proposed permits was impacting permit issuance rates. Your letter also detailed a number of concerns and disagreements with the positions underlying certain objections and comments that have been made by EPA Regions. In your December 11, 1998 letter, you raised concerns regarding maximum achievable control technology (MACT)/title V interface issues.

As you are aware, EPA has listened to your concerns and thoroughly evaluated your views. Since receipt of your letters, there has been continued dialogue on the many issues raised in the letters among permitting authorities, Regions, and EPA Headquarters. Examples include our July 8, 1998 meeting, monthly STAPPA/ALAPCO title V committee calls, Regional/State title V workshops, specialty meetings such as the MACT/title V issues meeting, and, most recently, the STAPPA title V workshop in Dallas. In these interactions we have heard each other's views and, in most cases, reached some common understanding of the issues and solutions. In fact, the number of objection letters has dropped significantly over the past few months. Through the efforts of the permitting authorities and Regions, we have become increasingly successful at resolving specific permit issues.

I believe it is important to share EPA's views on the issues your letters highlighted. Thus, Enclosure A sets forth EPA's policy on the title I/title V interface issues and concerns raised in your May 15, 1998 letter. Enclosure B provides our present understanding of the

MACT-title V interface issues raised in your December 11, 1998 letter. I seek your thoughts on these MACT-title V issues with a view toward resolving any disagreements we may have as soon as possible.

Two issues in your May 15 letter that do not readily fall into either attachment are periodic monitoring and the State implementation plan (SIP) backlog. Our views on these follow.

Periodic Monitoring

We believe that the issuance of the September 15, 1998 periodic monitoring guidance addressed your questions on this issue. Presently, we are working on the Periodic Monitoring Technical Reference Document. This document will provide general technical guidance for complying with the title V periodic monitoring requirements and will present specific examples of monitoring that satisfy these requirements. This document is primarily targeted toward the plant managers and operators who will design and operate such monitoring appropriate to site-specific situations. The document will also be helpful for permitting authorities and permit writers who review and supplement or prescribe monitoring for individual permits. A draft of this document was made available for public review via EPA's website on April 30.

SIP Backlog

The EPA understands that the SIP backlog is limited primarily to California. Budgetary constraints in FY 1999 will hamper our ability to completely eliminate the backlog in the near term. However, Region IX has redirected significant resources within its air program to address this issue during FY 2000. Region IX will continue to work closely with the California Air Resources Board and local air districts to prioritize their crucial SIP submittals for expeditious action by EPA in order to minimize the impact on title V permit issuance. The Region is also actively exploring additional mechanisms to expedite SIP actions.

I believe that the responses set forth in this letter and the enclosures will be helpful in informing you of the principles that will guide future EPA action in reviewing draft and proposed title V permits. Together we can move forward to fulfill the recent Agency goal of issuing all permits by January 2001. Whether and how EPA applies these policies in any particular permit proceeding will depend upon the specific review undertaken for particular permits. As you develop permits over the coming months, I ask that you work with our Regional Offices on implementation and involve management where you feel it necessary. Finally, the responses in this letter are not binding on any party, do not represent final Agency action, and cannot be relied upon to create any legal rights or obligations enforceable by any party.

I appreciate your interest in identifying issues you feel affect the successful implementation of the title V program. The upcoming STAPPA/ALAPCO meeting in May might provide a good forum to discuss EPA's positions on these matters.

Sincerely,

/s/

John S. Seitz
Director
Office of Air Quality Planning
and Standards

Enclosures

cc: Bill Becker, STAPPA/ALAPCO
Bruce Buckheit, EPA/OECA
Robert Colby, Chattanooga-Hamilton County, Tennessee
Alan Eckert, EPA/OGC
Bliss Higgins, Louisiana
Director, Office of Ecosystem Protection, Region I
Director, Division of Environmental Planning and Protection, Region II
Director, Air Protection Division, Region III
Director, Air, Pesticides, and Toxics Management Division, Region IV
Director, Air and Radiation Division, Region V
Director, Multimedia Planning and Permitting Division, Region VI
Director, Air, RCRA, and Toxics Division, Region VII
Assistant Regional Administrator, Office of Partnerships and Regulatory Assistance,
Region VIII
Director, Air Division, Region IX
Director, Office of Air, Region X

bcc: Rich Biondi, EPA/OECA
Karen Blanchard, EPA/OAQPS
Tom Curran, EPA/OAQPS
Jocelyn deGrandpre, EPA/OGC
Anna Duncan, EPA/OAQPS
Bill Harnett, EPA/OAQPS
Steve Hitte, EPA/OAQPS
Greg Jaffe, EPA/OECA
Dave Painter, EPA/OAQPS
Racqueline Shelton, EPA/OAQPS
Mike Trutna, EPA/OAQPS
John Walke, EPA/OGC
Dave Wallenberg, STAPPA/ALAPCO
OPG Staff, EPA/OAQPS

ENCLOSURE A

FEDERAL ENFORCEABILITY

Title V and the part 70 regulations are designed to incorporate all Federal applicable requirements for a source into a single title V operating permit. To fulfill this charge, it is important that all Federal regulations applicable to the source such as our national emission standards for hazardous air pollutants, new source performance standards, and the applicable requirements of SIP's and permits issued under SIP-approved permit programs, are carried over into a title V permit.¹ All provisions contained in an EPA-approved SIP and all terms and conditions in SIP-approved permits are already federally enforceable (see 40 CFR § 52.23).² The enactment of title V did not change this. To the contrary, all such terms and conditions are also federally enforceable "applicable requirements" that must be incorporated into the Federal side of a title V permit [see CAA § 504(a); 40 CFR § 70.2]. Thus, if a State does not want a SIP provision or SIP-approved permit condition to be listed on the Federal side of a title V permit, it must take appropriate steps in accordance with title I substantive and procedural requirements to delete those conditions from its SIP or SIP-approved permit. If there is not such an approved deletion and a SIP provision or condition in a SIP-approved permit is not carried over to the title V permit, then that permit would be subject to an objection by EPA.

¹The term "SIP-approved permit" is used in this letter to refer to permits issued pursuant to major or minor new source review (NSR) or prevention of significant deterioration (PSD) permit programs approved into SIP's (or promulgated under 40 CFR § 52.21 in States implementing the federal PSD program via delegation from EPA), as well as federally enforceable State operating permits (FESOP's) issued pursuant to SIP-approved operating permit programs. For purposes of this discussion, the term "NSR" includes major nonattainment NSR, minor NSR and PSD.

²By the term "federally enforceable," I refer to EPA's and citizens' ability to enforce a provision under sections 113/167 and 304 of the Clean Air Act, respectively. The term "Federally enforceable" has also been used in the past in another context to identify a smaller subset of provisions that may be used to limit a source's "potential to emit." See memorandum from John S. Seitz, Director, Office of Air Quality and Planning Standards, EPA, re Options for Limiting the Potential to Emit (PTE) of a Stationary Source Under Section 112 and Title V of the Clean Air Act (Jan. 25, 1995), at 2 (explaining that for purposes of limiting a source's PTE, "limitations must be enforceable as a practical matter"). This letter does not address this second usage.

NEW SOURCE REVIEW LOOKBACK (INCLUDES BEST AVAILABLE CONTROL TECHNOLOGY/LOWEST ACHIEVABLE EMISSION RATE LOOKBACK)

All sources subject to title V must have a permit to operate that "assures compliance by the source with all applicable requirements." See 40 CFR § 70.1(b); CAA section 504(a). Applicable requirements are defined in section 70.2 to include: "(1) any standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under Title I of the [Clean Air] Act. . . ." Such applicable requirements include the requirement to obtain preconstruction permits that comply with applicable preconstruction review requirements under the Act, EPA regulations, and SIP's. See generally CAA sections 110(a)(2)(C), 160-69, & 173; 40 CFR §§ 51.160-66 & 52.21.

For the PSD and major nonattainment NSR permit programs, as you know, preconstruction review requirements include use of best available control technology (BACT) or lowest achievable emission rates (LAER), respectively, for each regulated pollutant that would be emitted in significant amounts and at each emissions unit at which an emissions increase would occur. In determining BACT and LAER, as in implementing other aspects of the PSD or NSR programs, the State exercises considerable discretion. Thus, EPA lacks authority to take corrective action merely because the Agency disagrees with a State's lawful exercise of discretion in making BACT and LAER or related determinations. State discretion is bounded, however, by the fundamental requirements of administrative law that agency decisions not be arbitrary or capricious, be beyond statutory authority, or fail to comply with applicable procedures. Consequently, State-issued preconstruction permits must conform to the applicable requirements of the Clean Air Act and the SIP, and failure to do so may result in corrective action by EPA.

In addition to Clean Air Act enforcement authorities, another form of corrective action available to EPA is the title V objection authority under CAA section 505(b). The Agency may object to issuance of any permit that EPA determines is "not in compliance with the applicable requirements of the Act, including the requirements of an applicable implementation plan." See CAA section 505(b)(1); see also CAA section 113(b)(1) (enforcement authority available for violations of "any requirement or prohibition of an applicable implementation plan or permit.")

Pursuant to EPA policy, the Agency generally will not object to the issuance of a title V permit due to concerns over BACT, LAER, or related determinations made long ago during a prior preconstruction permitting process. However, regarding recently issued NSR/PSD permits, note that EPA policy is to provide adverse comments concerning the substantive or procedural deficiencies of a preconstruction permit during the NSR/PSD permitting process. EPA may thereafter take corrective action, including objecting to the title V permit if its comments were not resolved by the State. Similarly, where the BACT/LAER determination is made during a concurrent or "merged" preconstruction permit and title V permit process, EPA may object to the title V permit due to an improper determination. Finally, the Agency may object to or reopen a

title V permit in response to a public petition showing that title I preconstruction permitting requirements have not been met.

Moreover, where EPA believes that an emission unit has not gone through the proper preconstruction permitting process (and therefore one or more applicable requirements are not incorporated in the draft or proposed title V permit), EPA may object to the title V permit. The permitting authority may then resolve the issue either by demonstrating to EPA's satisfaction that preconstruction permitting requirements were not applicable or by incorporating a schedule requiring the source to obtain a preconstruction permit.

Where an EPA Region is unable to obtain adequate information during its review period to support an objection, the permit may be issued with "placeholder" language stating that the permit shield does not attach to the emission units at issue. In such instances, the permitting office should also consider a referral to the enforcement office for further investigation. The placeholder language would say that while EPA is evaluating the applicability of the PSD/NSR program, a permit shield is not available with respect to applicability of PSD/NSR and that additional applicable requirements may apply should EPA's evaluation show that PSD/NSR applies. If EPA determines that the source is not subject to any additional requirements, the permit can be reopened to provide a permit shield with respect to these requirements.

As a final point, EPA believes that confusion over the "lookback" issue may have arisen from a misunderstanding of language in White Paper I. We would like to take this opportunity to clarify the meaning of that language. Specifically, White Paper I states that:

Companies are not federally required to reconsider previous applicability determinations as part of their inquiry in preparing part 70 permit applications. However, EPA expects companies to rectify past noncompliance as it is discovered. Companies remain subject to enforcement actions for any past noncompliance with requirements to obtain a permit or meet air pollution control obligations. In addition, the part 70 permit shield is not available for noncompliance with applicable requirements that occurred prior to or continues after submission of the application. [White Paper for Streamlined Development of Part 70 Permit Applications, Office of Air Quality Planning and Standards, EPA (July 10, 1995) at 24].

This passage is intended to convey EPA's belief that a company's responsible official does not have a federal obligation to reconsider previous applicability determinations for the purpose of certifying to the truth, accuracy and completeness of the permit application. Noncompliance of which companies are aware must be reported in the title V applications and corrected expeditiously. This passage further states that noncompliance arising from previous applicability determinations is subject to enforcement and is not covered by the part 70 permit shield. This language does not limit EPA's ability or authority to object to proposed title V permits based on such previous determinations or to request information (from States and sources) related to such decisions in order to assure compliance with applicable requirements.

SUPERSESION

It is the Agency's view that title V permits may not supersede, void, replace, or otherwise eliminate the independent enforceability of terms and conditions in SIP-approved permits. To assure compliance with "applicable requirements" such as SIP-approved permit terms and conditions, title V permits must record those requirements, but may not eliminate their independent existence and enforceability under title I of the Clean Air Act (i.e., may not supersede them). Title V permits may state that they "subsume" or "incorporate" SIP-approved permit terms and conditions as EPA interprets such statements to mean that the title V permit includes all SIP-approved permit terms, but does not supersede, void, replace, or otherwise eliminate their independent legal existence and enforceability. Regardless of terminology, to the extent that title V permits are used to accomplish the legal result of supersession, EPA believes that such use is improper.

As noted in the previous section, title V permits must assure compliance with terms and conditions in SIP-approved permits. In enacting title V, Congress did not amend title I of the Act and did not intend the title V permitting program to replace the title I permitting programs. SIP-approved permits must remain in effect because they are the legal mechanism through which underlying NSR requirements (from the Act, federal regulations and federally-approved SIP regulations) become applicable, and remain applicable, to individual sources. NSR programs provide the relevant permitting entity with the authority to impose source-specific NSR terms and conditions in legally enforceable permits, and provide States, EPA and citizens with the authority to enforce these permits. Because State title V programs do not provide the authority for the establishment and maintenance of SIP-approved permit requirements, the title V permit cannot "assure compliance" with those requirements unless the underlying implementation and enforcement mechanism for the NSR requirements--the SIP-approved permit--remains valid.

The supersession of SIP-approved permits poses additional problems that EPA believes are inconsistent with the structure and purposes of title V and title I of the Act. First, while SIP-approved permits impose continual operational requirements and restrictions upon a source's air pollution activities and, accordingly, may not expire so long as the source operates, title V permits could expire or become unnecessary.³ If the title V permit supersedes the source's SIP-approved permit and then subsequently expires, neither the superseded SIP-approved permit nor the expired title V permit would provide the legal authority to enforce the site-specific operational requirements and restrictions imposed upon the source pursuant to preconstruction

³Title V permits could expire if a source fails to submit a timely and complete title V permit renewal application. See 40 CFR §§ 70.5(a)(1)(iii), 71.5(a)(1)(iii), 70.7(c) & 71.7(c). In addition, a title V permit could become unnecessary if a source limits its actual and potential emissions below major source thresholds, and the source is not otherwise required to maintain its title V permit.

review. Even if title V permits expire, of course, sources are still required to comply with applicable requirements that remain independently enforceable outside of title V permits, as all applicable requirements must.

Moreover, the continuing existence of SIP-approved permits independent of title V preserves the ability of permitting authorities and EPA to reopen title V permits that failed to include all SIP-approved permit terms, or to make such corrections upon permit renewal. Finally, title V regulations allow a permitting authority to include in the title V permit a "permit shield" stating that "compliance with the conditions of the [title V] permit shall be deemed compliance with any applicable requirements as of the date of permit issuance" [40 CFR §§ 70.6(f) & 71.6(f)]. The fact that compliance with the title V permit may be "deemed compliance" with underlying applicable requirements, including applicable requirements contained in SIP-approved permits, indicates that those underlying requirements must remain in force and may not be superseded. If those requirements could be superseded by the title V permit, there would be no need for a mechanism in the title V permit clarifying the source's obligations and compliance status.

ENCLOSURE B

Response to STAPPA/ALAPCO Recommendations On MACT/Title V Interface Issues (from December 11, 1998 Letter to John Seitz)

[General note: Any responses referring to part 70, or permit revision processes, are based on the present part 70 rule promulgated in 1992.]

A. MANAGEMENT OF CHANGE

A-1. Retrospective application of 112(g)

STAPPA/ALAPCO Recommendation: In cases where NSR violations are addressed for historical construction projects that pre-date the effective date of the Section 112(g) rule, 61 Fed. Reg. 68,384 (December 27, 1996), STAPPA and ALAPCO recommend that Section 112(g) MACT controls not be mandated by EPA.

EPA Response: The EPA agrees that, for historical construction projects which pre-date the effective date of the section 112(g) rule, where a source has violations for operating without valid NSR permits, the EPA will not mandate section 112(g) MACT controls on those historical construction projects.

A-2. Issuance of the permit before MACT compliance details are available

STAPPA/ALAPCO Recommendation: When the title V permit is issued prior to the compliance date of the MACT standard or prior to specific compliance details being available, STAPPA and ALAPCO suggest that the permit initially may include an identification of applicable requirements for the facility at the Subpart level, and that additional details may be added through minor permit modification procedures with public and EPA review occurring at permit renewal.

EPA Response: The EPA agrees that when a permit is issued prior to the MACT compliance date, one option is for the initial permit to describe MACT applicability at the Subpart level, and for all other compliance requirements (including compliance options and parameter ranges) of the MACT that apply below the Subpart level to be added at a later time. Because this more detailed information describes for the first time in the permit specifically how the source will comply with the standard, it is important to have EPA and public review and thus, it must be added as a significant permit modification.

Another option is for the initial permit to identify the MACT standards or requirements that apply at the section or subsection level, including anticipated compliance options, along with the information identified in the Initial Notification required by the General Provisions, see 40 CFR Part 63, Subpart A, or by the applicable Subpart. For example, a permit for a source subject to 40 CFR Part 63, Subpart T would identify, in part, each solvent cleaning machine and the anticipated compliance option. [See 40 CFR § 63.468(a) and (b)]. Additional compliance information required in the Notice of Compliance Status (e.g., parameter values) would be added as a minor permit modification when the NCS is submitted. As clarified at the Dallas workshop, the current Part 70 regulations require that minor permit modifications have an EPA review (but no public review) at the time of the permit modification.

A-3. Changes in the selected compliance option

STAPPA/ALAPCO Recommendation: Where the permit does not initially contain a compliance option that the source wishes to use, STAPPA and ALAPCO recommend that EPA permit additional compliance options already allowed under the MACT standard to be added to the permit as a minor modification with public and EPA review occurring at renewal.

EPA Response: We agree that if a source wishes to add compliance options that are a part of the MACT standard, the compliance options usually can be added to the permit through the minor permit modification process. However, some compliance options, such as those with emissions averaging, would require a significant permit modification due to the amount of judgment involved. Again, the current Part 70 regulations require that minor permit modifications have an EPA review at the time of the permit modification. As you know, a permit modification may be avoided if the initial permit includes compliance options as alternative operating scenarios under § 70.6(a)(9).

A-4. "Once-In-Always-In" and pollution prevention

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that EPA revise its current guidance to recognize that, where greater reductions are achieved through pollution prevention and those emission reductions are practically enforceable, the MACT-specific requirements should no longer apply.

EPA Response: A workgroup consisting of representatives from STAPPA/ALAPCO, OECA, OPPT, and OAQPS has been established to address this issue. Our staff continues to work on this issue with the workgroup. Once the workgroup has completed its efforts and has made a recommendation, a decision will be made by EPA and sent to STAPPA/ALAPCO.

B. LEVEL OF DETAIL FOR POINT SOURCES

B-1. Use of generic groups that do not identify specific emission units

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that EPA allow the identification of emission units by generic groups in permits for smaller MACT-affected emission units that are frequently added, removed or changed and for similar multiple control devices subject to the same monitoring, recordkeeping, reporting and testing requirements. This approach would allow emissions units subject to specific applicable requirements not to be specifically identified or listed in the permit. A contemporaneous on-site log could be used to identify specific units and to document changes to and from generic groups.

EPA Response: We interpret your suggestion to recommend that small units subject to MACT standards which are frequently added, removed or changed could be identified in an on-site log, rather than specifically identified in the permit. We further interpret your suggestion as recommending that control devices to which similar MACT requirements apply could be identified in a log, rather than specifically identified in the permit. Finally, we understand your suggestion for a log to be a voluntary mechanism to help the source keep track of units or control devices added to the facility without revising the permit.

As a general rule, the permit must identify not only the applicable requirements, but the specific emissions units to which those requirements apply, to assure compliance by specific units with specific applicable requirements. Linking of applicable requirements to emission units in the permit is important because it retains applicability decisions with the permitting authority instead of transferring these decisions to the source. It also clearly identifies the requirements that apply to each unit and eliminates any disputes as to whether a unit fits a generic group description. Therefore, we believe it is appropriate for the permit to identify specific units. As a practical matter, however, we believe that generic grouping could be appropriate in two situations: 1) where the applicable requirements apply generically; and 2) in certain circumstances where many small units make identification of individual units infeasible. In addition, we are currently involved in several pilot projects that may identify other situations in which generic grouping of emission units may be appropriate.

The first situation where generic grouping may be appropriate is where applicable requirements apply generically to a facility, rather than to an identified class of units. The EPA's White Paper I allowed for the use of generic groups to identify units subject to requirements that apply in the same way to all units at a facility, such as facility-wide opacity limits of the implementation plan (SIP). See White Paper I at 24. An example is a regulation that states "no person shall cause emissions in excess of 20% opacity." Since the requirements do not apply to specific types of units, it is not necessary for the permit to identify specific units subject to the requirement, and hence, generic grouping may be appropriate. [See § II.4 of White Paper I.]

The second situation where generic grouping may be appropriate is where the sheer numbers of units make identification of individual units infeasible, and where the applicable requirement is open to such an approach. Examples where this could be the case include pumps, valves, or flanges covered by leak detection and repair (LDAR) requirements, and manhole

covers or drains covered by wastewater work practice standards. In these situations, instead of identifying specific units, the permit could place affected units into a group in which all units are subject to the same applicable requirement, provided that the permit clearly defines the type of unit in each group and the applicability criteria. If required by the MACT standard, the owner or operator must develop a mechanism to identify which individual units belong to which group, and the permit should reflect this obligation. For example, 40 CFR Part 63, Subpart H requires the source to maintain lists of equipment subject to different requirements of the Subpart, but provides that an on-site recordkeeping system may satisfy this requirement. [See 40 CFR § 63.181(b).]

As to your recommendation of generic grouping for control devices subject to similar requirements, however, we cannot agree. We think it is important for the permit to clearly link emission units to control devices and, in turn, to applicable requirements, so that it is clear which control device is being used to meet which standard for which units. We do not yet understand how this can be done categorically for control devices. We are now working on pilot projects that will allow us to see if certain control devices can be advance-approved and generically grouped. We expect that the size of emission units and the nature of control devices will be considerations.

B-2. Incorporation of multiple compliance options into Title V permits

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that EPA recognize that various compliance options authorized by MACT standards can be placed directly in the permit by referencing the MACT provisions, without identifying them as Alternative Operating Scenarios (AOS). The MACT standard provisions (e.g. periodic reports, Notice of Compliance Status) would provide recordkeeping and notification of changes to compliance options. In addition, STAPPA and ALAPCO believe that once the compliance date is past, the source is obligated to maintain continual compliance even if the compliance option changes.

EPA Response: We read your suggestion to recommend that different compliance options of a MACT standard may be referenced in the permit, but not identified as an AOS.

As to your suggestion not to identify compliance options as an AOS, EPA believes that the appropriate way to define different compliance options is as one or more AOS. This is important because to assure compliance with a MACT standard by specific emissions units, the permit must clearly specify which compliance options a source may utilize, using the on-site log required by 40 CFR § 70.6(a)(9) to indicate which compliance option is in effect at a given time. Part 70's AOS provisions supply the appropriate mechanism to ensure that the permit reflects applicability determinations made by the permitting authority for specific emission units, and that inspectors will have historical records and current information on which compliance option the source is following. The EPA is working on ways to streamline the addition of compliance options into the permit.

When the source changes MACT compliance options, part 63 will require a notification (40 CFR § 63.9(j)) in those cases where the newly instituted option was not already incorporated into the permit. That is, § 63.9(j) triggers a notification only in the instance where "information not previously provided" becomes available. A notification would not be necessary if the permit already included all necessary provisions for employing alternate MACT compliance options.

B-3. Level of Detail Needed to Incorporate General Provisions into Permits

STAPPA/ALAPCO Recommendation: With regard to the General Provisions (40 CFR Part 63, Subpart A), STAPPA and ALAPCO recommend that it be sufficient for the permit to specify that the facility is subject to Subpart A as specified in Table 1 of the applicable MACT standard. While state and local agencies may also choose to include summary conditions for key General Provisions requirements, the reference to Subpart A and the MACT-specific Table 1 should be sufficient to meet Part 70 requirements.

EPA Response: Generally, the EPA agrees with this recommendation, including the recommendation that it is sufficient for the permit to reference the appropriate table in the MACT rule (not always Table 1). In cases where the requirements of the General Provisions are not clear enough to cross-reference, however, then the permit may need to contain additional clarification as to how the General Provisions apply to the facility.

B-4. Level of Detail Needed to Incorporate MACT Standards into Permits

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that state and local agencies be allowed to specify only that the source is subject to the relevant Subpart, or to include additional detail as circumstances dictate. For example, under STAPPA and ALAPCO's recommended approach, standards such as the MACT standard for Industrial Process Cooling Towers, 40 CFR Part 63, Subpart Q, may be appropriately addressed at the Subpart level. Generally, state and local agencies favor including a summary of conditions of the applicable requirement at the section level or lower, along with a reference statement or, alternatively, including a summary of conditions at the section level, along with specification of the applicable Subpart. However, since there may be times when only specifying the Subpart is sufficient, that should be the minimum requirement.

EPA Response: We interpret your suggestion to recommend that EPA endorse a reference to the Subpart level as generally acceptable except where further specificity is required by the permitting authority. We also interpret your suggestion to apply at any stage of the permit, not just prior to the compliance date of a MACT standard.

The permit needs to cite to whatever level is necessary to identify the applicable requirements that apply to each emissions unit or group of emission units (if generic grouping is used), and to identify how those units will comply with the requirements. As EPA indicated in White Paper II, the permit must at least specify the applicable emission limit or standard, and the

emissions unit to which the limit or standard applies. The White Paper also stated that the permit may use referencing where it is specific enough to define how the applicable requirement applies and where using this approach assures compliance with all applicable requirements. We interpret this to require the permit to identify (or reference) the monitoring, recordkeeping and reporting requirements. Accordingly, we cannot agree with your recommendation that a reference to Subpart level is acceptable at the discretion of the permitting authority.

In the example of the Industrial Process Cooling Towers MACT (Subpart Q), we recommend that the permit identify the standard to be met (i.e., a ban on chromium-based water treatment chemicals), and the unit(s) subject to the standard (i.e., industrial process cooling towers). The permit should also reference the notification requirements of 40 CFR § 63.405, the recordkeeping and reporting requirements of 40 CFR § 63.406, and the applicable General Provisions in Table 1 of Subpart Q.

C. LEVEL OF DETAIL FOR NON-POINT SOURCES

C-1. Identification of wastewater streams subject to MACT in the Title V permit

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that each wastewater stream need not be identified individually in the permit. The permit should contain 1) a description of the criteria for determining a wastewater stream's status, or a reference to the relevant MACT provisions that establish those criteria, and 2) the applicable requirements for Group 1 and Group 2 streams. The identification of the wastewater streams affected by MACT (i.e., Group 1 and Group 2 streams) and the applicable group status will be provided in the implementation plan or periodic reports as required by the MACT.

EPA Response: We understand your recommendation to mean that the permit would define wastewater streams as a class (i.e., one class for Group 1, another class Group 2), and would not identify individual wastewater streams within each class. As clarified in Dallas, we interpret your recommendation to apply not only to how the permit identifies wastewater streams existing at the time of permit issuance, but also to how the permit might provide for the addition of new streams without a permit revision.

We do not agree with the idea that individual streams need not be identified. The permit must include a listing of all wastewater streams that designates their status as Group 1 or Group 2, because each Group has different applicable requirements, including monitoring, reporting, recordkeeping and testing requirements. The linkage between individual streams and their Group 1/Group 2 status may be set up as an Alternative Operating Scenario, which would allow individual streams to change status during the permit term, provided that the new status is identified in the on-site log required by part 70. Under this approach, the permit would need to contain or reference the procedures by which the source determines Group 1 or Group 2 status. Also, the permit must be revised in order to identify new wastewater streams. Note that we are experimenting with advance approval of wastewater streams under the MACT standard for

pharmaceutical production, see 63 Fed. Reg. 50, 280 (September 21, 1998) (to be codified at 40 CFR Part 63, Subpart GGG), and may have additional guidance on this topic in the future.

Finally, the permit needs to require the source to provide notification for any change in Group status as required in MACT regulations. For example, Subpart G requires a source to report in the next periodic report any Group 2 emission point that becomes a Group 1 emission point, and include a schedule of compliance as required by § 63.100 of Subpart F. [See 40 CFR § 63.152(c)(4)(iii).]

C-2. Specification of requirements for fugitive and wastewater sources

STAPPA/ALAPCO Recommendation: For fugitive emission requirements, STAPPA and ALAPCO recommend that detail at the Subpart level is generally sufficient (e.g., Subpart H). For wastewater requirements, STAPPA and ALAPCO recommend that the permit contain detail at the section level. If the MACT does not require the source to keep records of the current operating options, the permit could specify such a recordkeeping requirement. Finally, the state and local agencies believe Part 70 does not require the source to notify permitting authorities when they switch compliance options.

EPA Response: We understand your recommendation to apply to equipment leak requirements ("fugitive emission requirements") and wastewater emission points ("wastewater sources.")

As we stated in the response to recommendation B-4, we do not believe that Subpart citation by itself is appropriate. For equipment leak requirements (e.g., Subpart H of part 63, Subpart VV of part 60), different standards, recordkeeping and reporting requirements apply to different types of equipment subject to the rule. For example, one standard applies to pumps in light liquid service, and another standard applies to pumps in heavy liquid service. For this reason, we believe that the applicable requirements of Subpart H (and other similar rules) should be cited at appropriate levels below the Subpart, consistent with the need discussed above to clearly designate the specific applicable requirements for different and specific emission units.

For wastewater streams, citation to the section level (or lower) level of citation is needed to clearly convey the emission limitations of the rules with no ambiguity. We agree that part 70 does not require sources to notify permitting authorities when they switch compliance options that are part of an AOS. However, as noted in the response to recommendation B-2, the MACT general provisions do require reporting and notification when switching to a new compliance option (unless the permit includes the information as an AOS), and these requirements must be met. As we have noted elsewhere, permit revisions can be minimized by including all anticipated options in the permit as AOS's.

C-3. Specification of operating parameters in the permit

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that either the actual value for operating parameters or the process to develop those values be considered sufficient to

meet Title V permit requirements. Where operating parameter values are identified in the permit, STAPPA and ALAPCO recommend that the minor permit modification process be used to add or change operating parameter values. Public and EPA review would occur at permit renewal.

EPA Response: We interpret your suggestion as applying to the parameter ranges or maximum/minimum parameter values (from here on we will refer to them as "parameter ranges"). These parameter ranges are required by many MACT standards. However, we interpret your suggestion as not limited solely to MACT standards; for example, it could apply to NSPS standards that require parameter ranges. We further interpret your suggestion as allowing a permit authority to put in the permit either a process for determining the parameter range, or the parameter range itself. We understand the suggestion to put just the process in the permit to mean that the range itself would not be in the initial permit, and also that the permit would not be revised when a new parameter range is set using the process. In addition, you are recommending that if the actual parameter range is identified in the permit, and then a new parameter range is established, the minor permit modification could be used to incorporate the new parameter range.

We believe that the parameter range must be included in the permit. The parameter range is one of the applicable requirements comprising MACT standards, and is often the means for determining compliance with the emission standard. Including the parameter range as a permit term ensures that the source will be required to promptly report deviations from the range [40 CFR § 70.6(a)(3)(iii)(B)], to submit semiannual reports of such deviations and parameter monitoring [40 CFR § 70.6(a)(3)(iii)(A)], and to certify compliance with the range [40 CFR § 70.6(c)(5)].

We agree that for incorporating a new parameter range into a permit, a minor permit modification could be used. We are also investigating whether this could be done as an administrative change to the permit. This is because we believe that most changes to a parameter range will not be a significant change to monitoring, recordkeeping, or reporting [40 CFR § 70.7(e)(2)(i)(A)(2)]. Note that in accordance with 40 CFR § 70.7(e)(2)(i)(A), a significant change to monitoring, recordkeeping, or reporting would require the significant modification process. Again, the current Part 70 regulations require that minor permit modifications have an EPA review at the time of the permit modification. [40 CFR § 70.7(e)(iii) & (iv)].

In situations where parameter ranges are expected to change so often that a minor permit modification for each change would be impractical, we suggest that you consider the group processing provisions for minor modifications. See 40 CFR § 70.7(e)(3). These provisions are available for changes that are collectively below the thresholds identified in 40 CFR § 70.7(e)(3)(i)(B). We expect that many changes to parameter ranges would be small enough to fit below these thresholds. If so, group processing allows the permitting authority to group up to a quarter's worth of changes, and then to take up to 180 days to act on the group of permit revisions.

This guidance does not alter the flexibility provided under the "Change Management Strategy" set forth in the preamble to the MACT standard for Pharmaceutical Production, or in future Subparts with similar flexibility. In addition, this guidance does not alter the provisions of the compliance assurance monitoring (CAM) rule, which specifically authorize the permit to include procedures for establishing parameter indicator ranges, designated conditions or excursion triggers, rather the particular ranges, conditions or triggers. See 40 CFR 64.4(a)(2) and (c)(2).

C-4. Incorporation of startup, shutdown, and malfunction plans, operating and maintenance plans, and periodic reports in Title V permits

STAPPA/ALAPCO Recommendation: STAPPA and ALAPCO recommend that EPA use the same approach for operation and maintenance (O&M) plans and periodic reports that is contained in a memorandum from John Seitz dated January 17, 1996 addressing startup, shutdown and malfunction (SSM) plans. The associations further recommend that changes in O&M plans not trigger a permit modification procedure.

EPA Response: We understand your recommendation to be that the approach used in the Seitz memorandum [which applies to startup, shutdown and malfunction (SSM) plans] should also apply to O&M plans and to periodic reports. We further understand your recommendation to be that EPA should not require a permit revision when changes are made to an operation and maintenance plan.

To put your recommendation in context, we need to clarify that the General Provisions of part 63 require any SSM plan to be incorporated by reference into the title V permit [§63.6(e)(3)]. In addition, Subpart N requires an O&M plan to be incorporated by reference into the permit [§63.342(f)(3)(i)]. As far as we are presently aware, Part 63 does not require any periodic reports or any other O&M plans to be incorporated by reference into the permit. Since these periodic reports and O&M plans (except Subpart N) are not required to be incorporated by reference into title V permits, these documents need not be incorporated by reference, nor must their content be included as permit terms, in order to assure compliance with the relevant part 63 applicable requirements. Consequently, we agree that a permit revision would not be required when changes are made to these reports or O&M plans. Of course, permits must still require that sources develop, implement or submit, retain, and revise as necessary these plans or reports, consistent with the applicable MACT standard.

That still leaves the SSM plans required under the General Provisions and the O&M plan required under Subpart N. We recognize that requiring the incorporation of these plans by reference into the permit renders the content of the plans enforceable permit conditions and, accordingly, means that changes to plans could result in permit revisions. We believe that this outcome can be avoided, however, by a general reference in the permit to the SSM plan. The permit would still incorporate the plan by reference, but the reference would not cite the date or specific content of any particular SSM plan. This approach would allow the plan to change

without triggering a permit revision. To implement this approach, the permit would state that the SSM plan required under § 63.6(e)(3), and any revision to that plan, is incorporated by reference and is enforceable as a term and condition of the permit. The permit would further state that revisions to the SSM plan are automatically incorporated by reference and do not require a permit revision.

Although incorporation by reference of a document required by an applicable requirement would normally require reference to the document as it exists on a specific date, we believe the approach outlined here for SSM plans is appropriate because it is more consistent with the intent of the General Provisions, which were promulgated subsequent to part 70 and which contemplate that the source will be able to make changes to the SSM plan without the prior approval of the EPA or the permitting authority. See, e.g., §§ 63.6(e)(3)(v) and (e)(3)(vii). For example, any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the source must revise the SSM plan to include procedures for operating and maintaining the source during similar malfunction events, and a program of correction actions for similar malfunctions of process or air pollution control equipment. See § 63.6(e)(3)(viii). In addition, compliance with an SSM plan does not relieve a facility from the responsibility to comply with good air pollution control practices as required by § 63.6(e)(1).

Finally, the permit must contain language that reiterates an enforceable obligation for the source to develop, implement, retain, and revise as necessary the SSM plan. The permit must also contain a reference to the applicable rule requirement that requires the plan. Permit authorities also have the authority to request that the SSM plan be submitted to them. They also can require essential parts of the plan, such as the definition of startup, shutdown and malfunction events, to be included in a permit application, pursuant to § 70.5(c)(5), which states that applications must include all information needed to determine applicability of requirements.

Of course, States retain the authority to incorporate specifically identified SSM plans by reference into title V permits, if a permitting authority believes it is important to review certain changes to particular SSM plans pursuant to its approved part 70 program. Note that the requirement to incorporate the SSM plan by reference is under review by EPA as part of the settlement of the litigation on the Part 63 General Provisions and may be the subject of future rulemaking.



State of Ohio Environmental Protection Agency

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(614) 644-3020
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George V. Voinovich
Governor

Donald R. Schregardus
Director

MEMORANDUM

DATE: December 8, 1992
TO: Distribution
FROM: Robert Hodanbosi, Chief, DAPC
SUBJECT: BAT for fugitive dust sources

In the past couple of months, several PTI recommendations for fugitive dust sources have come through this office with a variety of BAT determinations. This IOC is intended to clarify the current recommended BAT opacity standard for fugitive dust sources (specifically roadways, parking areas, and storage piles).

The reason for the confusion is because OAC 3745-17-08 is less stringent than BAT. Limitations which are more stringent can be found in OAC 3745-17-12.

For unpaved roadways and parking areas PTI recommendations should include a statement which includes the following:

For the unpaved roadways and parking areas, there shall be no visible particulate emissions except for a period of time not to exceed three minutes during any sixty-minute observation period.

For paved roadways and parking areas PTI recommendations should include a statement which includes the following:

For the paved roadways and parking areas, there shall be no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period.

For material storage piles BAT should be as follows:

For material storage piles, there shall be no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period.

Distribution List
IOC, Page Two

These statements for BAT should be included in the special terms and conditions under "BAT Determination" for each fugitive dust source in these categories.

It is also important to remember to carry forward any special terms and conditions from the PTI to the PTO. We need to try to be consistent between the PTI and PTO to eliminate any confusion on the part of the company receiving the permit.

RH/MH/jse

Distribution

Local Air Agency Directors
District Air Unit Supervisors
Jim Braun, DAPC
Misty Parsons, DAPC
Alan Lloyd, DAPC
Jim Orlemann, DAPC



inter-office communication

to: Tim Wilson, RAPCA date: Nov. 19, 1987
from: Kathleen Shannon, DAPC
subject: Sohio Soil Gas Venting System

The following is in response to your October 22, 1987 request for comments:

Item 1: OAC Rule 3745-31-01 does not define best available technology (BAT). Mr. McArdle is correct in assuming BAT is patterned after the Clean Air Act's definition of best available control technology (BACT) (see Engineering Guide No. 42).

The burden of demonstration of BAT lies with the facility. The application that RAPCA has provided to the Ohio EPA does not satisfactorily show that "no control" is BAT. Indeed, the application states, "By virtue of this application, Sohio Oil requests that a BAT determination be made for this type of source." The Ohio EPA has, on several occasions, permitted both controlled and uncontrolled air stripping operations. In all cases, the decision is based upon several factors that are unique to the source. Some of the factors that influence the BAT determination are:

1. How long will the unit be in operation? Is the unit a permanent or temporary source?
2. What compounds will be emitted? Are they carcinogenic? Will they cause an odor nuisance? What quantities will be emitted?
3. Does the source comply with the Ohio EPA's air toxic policy? What will be the maximum hourly emission rate? What will be the maximum 1-hour concentration?
4. What air pollution control are viable for this source? Are there any alternatives to air stripping? What are the costs associated with controls or other technologies? What is the cost effectiveness?

The information which you have sent me is somewhat confusing. Sohio's application indicates they already employ a carbon absorption system, yet they do not want to use it because of the expense. The application does not contain any cost data, but RAPCA's letter of September 8, 1987 indicates that cost data was submitted. Whatever the case, the Ohio EPA will need a cost study (completed in accordance with Engineering Guide No. 46) as part of the BAT demonstration.

Using the stack parameters provided in the application and some rough estimates on benzene emissions, this unit is violating the Ohio EPA's air toxic policy. Sohio must show compliance with our policy.

inter-office communication

New Source Review Contacts

December 31, 1986

date:

from: Bob Hodanick, Manager, AQM&P

subject: Air Stripping - Determination of Best Available Technology (BAT)

There has been an increasing number of air permit to install (PTI) applications for air stripping operations. These installations usually involve the clean-up of organic compounds that have contaminated soil or groundwater. Please see attached Pollution Engineering article (note: most installations emit more than 0.5 lb/day). The typical PTI application has not included the consideration of air pollution controls on this clean-up equipment.

In the future, these PTI applications will be scrutinized to ensure compliance with OAC 3745-31-05(A)(3); Best Available Technology. In general, we will require air pollution control equipment and/or water treatment on these operations such that the emissions of organic compounds to the atmosphere are reduced. Each PTI application should be reviewed to ensure that the following measures have been considered:

1. The installation of various air pollution controls to reduce the emissions of organic compounds into the atmosphere; and
2. The use of alternative technology to air stripping. Other methodologies are available to reduce the organic concentrations in the liquid phase in combination or as a substitute to air stripping.

These installations are usually temporary, however, in some cases, air stripping is being proposed as a permanent "solution" to a waste water discharge problem. We will also perform an air toxics review in the Central Office to determine the ambient impact of the resultant emissions from these sources. We will not recommend approval of any installation that exceeds the interim DAPC air toxics policy for new sources.

If you have any questions, please do not hesitate to contact me at (614) 466-6116.

BH/jlc

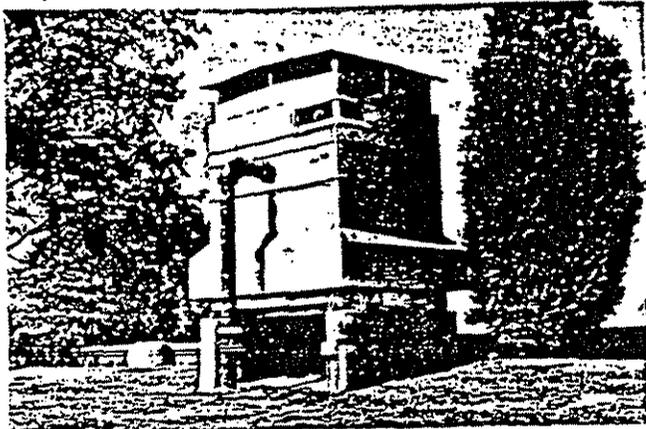
Attachment

cc: Virginia Aveni, Deputy Director
Gary Martin, Water Quality
Chuck Taylor, Hazardous
Ken Schultz, Emergency Response
Andy Turner, Water Pollution
Russ Stein, Groundwater
Pat Walling, Air Pollution
Kathleen Shannon, Air Pollution

Casebook

by Marge Boynton

STRIPPING REMOVES LOW-LEVEL VOC'S FOR AIR FORCE



In later 1985 environmental engineers at Wright-Patterson Air Force Base, Dayton, OH discovered that several of their onbase drinking water wells were contaminated with low levels of several volatile organic compounds (VOCs). Two of the wells involved provided 1800 gpm (2.6 mgd) to two underground storage reservoirs for subsequent discharge into the base distribution system. These reservoirs provide demand surge capacity and primary fire protection storage capacity, so there was a desire to bring them back online as expeditiously as possible. The Air Force decided to install a temporary treatment system for six months to get the wells operational again as soon as possible, and to use this time to explore, design and install a permanent system.

The wells were showing a total VOC contamination level of approximately 30 ppb, with the majority of that coming from trichloroethylene (TCE) and tetrachloroethylene (PCE). Effluent contaminant levels after treatment were to be no more than 5 ppb of any specific VOC. These VOC's are typically used as degreasing solvents and cleaning agents, and several are suspected carcinogens or mutagens. There were no obvious sources of the contamination, and it was felt that it may have resulted from past methods of aircraft cleaning and improper disposal of spent solvents.

DETOX, Inc., Dayton, OH was selected to supply and install this temporary VOC treatment system. The stripper unit has a total cross-sectional area of 120 ft², resulting in a unit hydraulic loading rate of 15 gpm/ft². A maximum of 72,000 scfm of air is possible with the unit, resulting in a maximum air-to-water ratio of 300:1 on a volume/volume basis. After distribution through a spray nozzle system, the water is trickled over 4 ft of a structured media containing approximately 70 ft³/ft² of surface area. After treatment, the stripped water flows by gravity from the unit into the nearby underground reservoir. Chlorination of the water is performed in the stripper effluent line prior to discharge into the reservoir.

The unit was designed to be fully automatic and self-regulating, requiring no operator attention and very little maintenance attention. A flow sensor switch was installed in the influent line to sense water flow. This switch automatically actuates the fan motor, as well as a solenoid switch controlling chlorinated blend water to be mixed with the effluent.

If all of the influent VOCs were removed by the stripper,

(Continued on page 50)

DECEMBER 1986

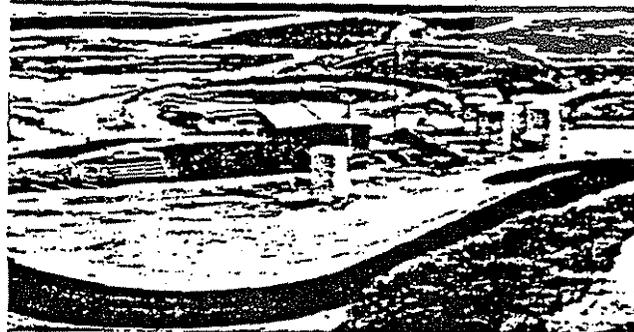
Casebook

(Continued from page 10)

the unit would emit approximately 0.5 lb/day of VOCs into the atmosphere (based on 18 hr/day of operation). Based on the maximum airflow rate of 72,000 scfm, this would result in an air discharge concentration of 80 ppb on a weight/weight basis. These emission rates and concentrations are well below those levels warranting regulation and vapor phase control at the installation.

The unit was designed to remove a minimum of 58 percent of the specified VOCs, and is currently achieving better than 85 percent removal of total VOCs. Total costs of the system including amortized capital costs and daily power costs are approximately \$0.02/1000 gal treated, or \$39/day. This cost compares favorably with other air stripping total costs of \$0.06/1000 gal or greater. Based on cost estimates of both temporary and permanent treatment systems, this one-time installation resulted in a savings of approximately \$175,000 to the Air Force. For more information Circle 245.

WET OXIDATION UNIT RUNS ROUND THE CLOCK ON HAZ WASTES



A wet air oxidation unit, installed in California in 1983 as part of a U.S. Environmental Protection Agency demonstration project, is now operating nearly around the clock treating and destroying a variety of hazardous wastes. The unit, built by Zimpro Inc. of Rothschild, WI, is located at a Class I landfill site operated by Casmalia Resources in northern Santa Barbara County. It is designed to process a maximum of 10 gpm of waste and is mounted on transportable skids for rapid field erection.

It was initially installed by Casmalia Resources to commercially test innovative hazardous waste treatment technologies and during 1983-4 was successfully demonstrated on six specific waste streams: cyanides, phenols, organic sulfurs, pesticides, solvent still bottoms, and general organic wastes. Following the demonstration project, the unit has been operated commercially, treating a variety of wastes produced by some 50-75 chemical plants, refineries, metal platers, laboratories, utilities, heavy equipment makers, and military installations in the southern California area.

During 1986, the unit has operated essentially 24 hr/day, 6 days/wk, processing over 200,000 gal/mo of waste. Liquid wastes are screened for treatability, trucked to the Casmalia Resources site, and then stored in tanks before wet oxidation.

Effluent from the wet air oxidation unit contains water and short-chain, low molecular weight compounds such as acetic acid, and is directed to existing evaporation ponds at the landfill. Process off-gases are passed through a two-stage water scrubber and carbon bed, as required by local regulatory agencies. For more information Circle 246.

Inter-office communication

to: Dennis Bush, NEDC _____ date: July 9, 1986

from: Bob Hodanosti, Manager, AQM&P

subject: PTI/BAT Requirements for Water Supply Air Stripping

Question: When is a permit to install (PTI) required for a contaminated water supply air stripping operation?

Answer: The PTI regulations do not cite any exemptions for air stripping operations from the PTI requirements. However, the Division of Air Pollution Control (DAPC) realizes that these operations are usually emergency projects and require a prompt response. Field offices are at liberty to make this judgement. Decisions should take into account the type of air contaminant, the total potential emissions, and the expected duration of the project. Should a field office determine that a PTI is not required, DAPC asks that they notify the Central Office of their decision and the reasoning behind that decision.

Question: What is best available technology (BAT) for such an operation?

Answer: A BAT decision would also take into account the type of air contaminant, the total amount of emissions, and the duration of the project. In the past, some air stripping operations have been required to use a carbon absorption system, but this may not be true for all operations.

If you have any questions, please call me at (614) 466-6116.

KS/BH/jlc

OHIO EPA POLICY ON
BEST AVAILABLE TECHNOLOGY FOR
SMALL COAL-FIRED BOILERS

September 10, 1984

Particulate Emission Limits

Sources on which construction was begun prior to 1/1/74:

The requirements of OAC 3745-17-10 apply, including the alternative found in paragraph (C)(7) of that rule.

Sources on which construction was begun from 1/1/74 to 7/1/78:

The requirements of OAC 3745-17-10 apply, except that the limits found on curve P-1 of Figure I are used regardless of the location of the source. Also, the alternative found in OAC 3745-17-10 (C)(7) does not apply to these sources.

Sources on which construction was begun from 7/1/78 to 1/1/84:

The limit for boilers with capacities from 1 to 3 million Btu's per hour is 0.40 pounds per million Btu's.

The limit for boilers with capacities between 3 and 10 million Btu's per hour is 0.30 pounds per million Btu's.

The limit for boilers with capacities from 10 to 20 million Btu's per hour is 0.20 pounds per million Btu's.

Sources on which construction was begun after 1/1/84:

Boilers with capacities from 1 to 3 million Btu's per hour must have over-fire air, no flyash reinjection, a dust collector if the boiler has a spreader stoker, and must meet an emission limit of 0.40 pounds per million Btu's.

Boilers with capacities greater than 3 and up to 20 million Btu's per hour must, except as indicated below, have at least a mechanical dust collector. Maximum emission limits are 0.30 pounds per million Btu's for boilers with capacities between 3 and 10 million Btu's per hours, and 0.20 pounds per million Btu's for boilers with capacities from 10 to 20 million Btu's per hour.

Exempted from the mandatory control equipment requirement are the following: 1) anthracite coal-fired boilers with traveling grate stokers and capacities up to 10 million Btu's per hour; 2) boilers on which a stack test, showing that the above emission limit can be met on a continuous basis, has been performed.

Sulfur Dioxide Emission Limits

Sources on which construction was begun prior to 12/28/79:

Boilers with capacities of 10 million Btu's per hour or less are exempt.

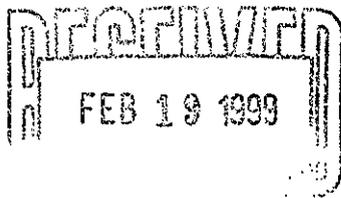
For all other boilers, the limits found in OAC 3745-18 are applicable.

Sources on which construction was begun after 12/27/79:

Boilers with capacities from 1 to 10 million Btu's per hour must meet the respective general county emission limit found in OAC 3745-18.

Boilers with capacities from 10 to 20 million Btu's per hour must meet an emission limit based on the use of locally available coal, or 3.0 pounds per million Btu's, whichever is less.

If a boiler (with a capacity of up to 20 million Btu's per hour) which had previously burned coal is converted back to coal, the applicable emission limits are those which were in effect during the last period that the boiler burned coal.



DIVISION OF AIR POLLUTION CONTROL

INTER-OFFICE COMMUNICATION

TO: Distribution

FROM: The BAT Study Team, a sub-committee of the Permitting & Enforcement Committee through Mike Hopkins, AQM&P, DAPC, OEPA

DATE: February 17, 1999

RE: Proposed "Is a Best Available Technology Study Needed?" guidance document

The attached proposed guidance document and accompanying flow chart are intended for both the permit applicant and the permit reviewer at the District Office or Local Air Agency. Please take some time to review the guidance document and flow chart.

The guidance document may be employed if no controls or pollution prevention alternatives are proposed. If the proposed pollutant management methods are less stringent than the state's BAT requirements for similar sources, one could use the guidance as well. This guidance document is meant to supplement available resources that applicant and reviewer already have.

Our team had hoped to determine a minimum VOC ton per year level which was most likely to be economically feasible to control or employ pollution prevention measures. We considered cost factors from 12 BAT studies (11 to control VOC emissions and 1 to control NO_x emissions) as received from our survey results of November 1998. However, a clear relationship among various cost factor comparisons is not apparent with our current, limited database. In the mean time we suggest that an allowable rate of 75 tons/year or more of VOC emissions be considered for a BAT cost effectiveness study.

Any additional BAT study data would help us develop a more realistic VOC trigger level. You may send the attached "Cost Effective Information" table to Bradley Miller of the Hamilton County Environmental Services. You may contact Mr. Miller at (513) 946-7731 or via fax at (513) 946-7778.

A second guide, "BAT Study checklist", will be proposed and distributed for comments in a few months. It will offer a format for a state BAT study.

Please send written comments via e-mail to christine.mcphee@epa.state.oh.us by **March 19, 1999**.

CM/eaf

Attachments

BAT Study IOC
Page 2
February 17, 1999

DISTRIBUTION:

Fred Klingelhafer, SEDO
Ron Hancher, SEDO
Glen Greenwood, SEDO
Dan Aleman, Canton
Brad Miller, Cincinnati
Cindy Charles, Portsmouth

Bob Goulish, NEDO
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Phil Hinrichs, SWDO
Cesar Zapata, CDO
Tim Wilson, RAPCA
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Henry Derstine, SBA
Rick Carleski, SBA
Jeanne Mallet, Legal
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Jim Orlemann, Eng.
Misty Parsons, AQM&P
Tom Tucker, AQM&P
Joe Loucek, AQM&P
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Kay Gilmer, AQM&P
Tammy Van Walsen, Eng.
Tom Rigo, FO

Is a Best Available Technology Study Needed?

I. INTRODUCTION

A. Purpose of the flow chart

The purpose of the flowchart is to provide a consistent decision making process for Best Available Technology (BAT) studies throughout the state of Ohio. Permit applicants and permit application reviewers can use the flowchart to determine the need for a BAT study.

Pollution prevention (P2) alternatives should be evaluated as a BAT strategy. For BAT pollution prevention could be evaluated prior to assessing control equipment needs. This method is known as a "top down" analysis where source reduction options are considered before capture, control, and treatment options. The benefits of using P2 can include: a potential decrease in emissions that could exempt the emissions unit from permitting requirements; P2 may be less expensive to implement than add-on controls; lower permit and emissions inventory fees; and applicants may avoid triggering federal permit requirements (e.g., Title V, BACT, LAER or PSD permitting).

For more information on pollution prevention, visit the Ohio EPA's Office of Pollution Prevention web site at www.epa.state.oh.us/opp or call them at (614) 644-3469.

B. Definitions

1. **BAT:** Best Available Technology (BAT), as defined in Ohio Administrative Code (OAC) Rule 3745-31-01 (N), may be any combination of work practices, raw material specifications, throughput limitations, emission limitations, source design characteristics, an evaluation of the annualized cost per ton of air pollutant removed, or air pollution control devices that have been previously demonstrated to operate satisfactorily in Ohio or other states with similar air quality on substantially similar air contaminant sources. The use of BAT to control air contaminant emissions is an Ohio requirement for any air contaminant source, installed after January 1, 1974, that requires a Permit to Install (PTI).
2. **BACT:** Best Available Control Technology (BACT) is a more stringent standard for major stationary sources or major modifications, as defined in OAC Rule 3745-31-01(SS) and in OAC Rule 3745-31-01(RR), respectively, subject to federal New Source Review permitting under the Prevention of Significant Deterioration (PSD) permitting program. BACT is defined in OAC Rule 3745-31-01(M) as an emissions limitation (including a visible emissions standard) based upon the maximum degree of reduction for each air pollutant subject to regulation under the Clean Air Act that would be emitted from any proposed major stationary source or major modification that the director, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such major stationary source or major modification through application of production processes or available methods, systems and techniques, including fuel combustion techniques for control of such air pollutant.
3. **PSD:** Prevention of Significant Deterioration, is a permitting process that prevents deterioration of the air quality in areas that are in attainment of the National Ambient Air Quality Standards. The PSD requirements are specified in 40 CFR Part 52.21.
4. **LAER:** Lowest achievable emission rate, for any stationary source, means the more

stringent rate of emissions based on the following, as specified in OAC Rule 3745-31-01(OO):

- a. The most stringent emissions limitation that is contained in the implementation plan of any state for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
- b. The most stringent emissions limitation that is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within the stationary source. In no event, shall the application of this term permit a proposed new or modified stationary source to emit any air pollutant in excess of the amount allowable under applicable new source standards of performance.

See OAC Rule 3745-31-01(RRR) for the definition of a stationary source.

5. **Major MACT (Maximum Achievable Control Technology) source:** as defined in OAC Rule 3745-31-01(QQ), means any process or production unit that in and of itself has the potential to emit ten tons per year or more of any single hazardous air pollutant or twenty-five tons per year or more of any combination of hazardous air pollutants (as listed in section 112(b) of the federal Clean Air Act).

A "MACT Determination" must be developed and approved of by U.S. EPA for Major MACT sources, constructed on or after June 29, 1998 and which do not have an applicable MACT category standard. Major MACT sources which are exempt from obtaining a "MACT determination" include:

- a. a source which is regulated or exempted by an industry specific MACT standard as found in 40 CFR Part 63 (For a list of MACT categories see www.epa.state.oh.us/dapc/mact/mactmain.html);
- b. an electric utility steam generating unit(s); and
- c. research and development activities.

See OAC Rule 3745-31-28 for further information.

6. **MACT Determination:** as defined in OAC Rule 3745-31-01(PP), means any combination of emission limitations, work practices, raw material specifications, throughput limitations, source design characteristics, and air pollution control devices that achieve the level of hazardous air pollutant control required by Rule 3745-31-28(E) of the Administrative Code.
7. **NESHAP:** National Emissions Standards for Hazardous Air Pollutants, these are emissions standards for asbestos, benzene, radio nuclides, beryllium, mercury, vinyl

chloride, arsenic and coke ovens emissions. A list of the NESHAP categories can be found in 40 CFR Part 61. You may wish to download a copy of Part 61 from the website, <http://www.access.gpo.gov/nara/cfr/index.html>. Click on the "Browse" feature to search for Title 40, then search for "40CFR61 Part 61".

8. **NSPS:** New Source Performance Standards, are emissions or performance standards for new or older emissions units. A list of NSPS categories can be found in 40 CFR Part 60. You may wish to download a copy of the Table of Contents for Part 60 from the website, <http://www.access.gpo.gov/nara/cfr/index.html>. Click on the "Browse" feature to search for Title 40, then search for "40CFR60 Part 60".
9. **BAT Study:** A BAT study documents the results/findings of the permit applicant's evaluation of the technical and economic feasibility of various control methods to minimize and control air contaminant emissions from emissions units in a construction or modification project, as proposed in a PTI application. A BAT study may be required for an individual emissions unit or for a combination of emissions units. A BAT study must be submitted with a PTI application in order for the application to be deemed complete by the permit reviewing agency.
10. **Modification:** Defined in OAC Rule 3745-31-01(VV), means any physical change in, or change in the method of operation of any air contaminant source that:
 - a. results in an increase in the allowable emissions;
 - b. results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 of any type of air contaminant not previously emitted;
 - c. results in the relocation of the air contaminant source to a new facility, including, but not limited to, the movement of any existing air contaminant source from another state, county, or other geographic location;
 - d. is otherwise defined as a major modification, or is defined as a modification under applicable regulations promulgated by the Administrator of the USEPA regarding New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAPS) or Section 112 of the Clean Air Act.
11. **Pollution Prevention:** For the State of Ohio, pollution prevention (P2) is the use of source pollution reduction techniques in order to reduce risk to public health, safety, welfare, and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Source reduction is the reduction or elimination of waste and emissions at the point of generation. Source reduction measures may include process modification, good operating and management practices, increasing the efficiency of machinery, and recycling within a waste generating or other production process. For example, in a coatings operation, P2 options might include the use of low volatile organic compound (VOC) paints and solvents, or switching to powder coating.

Is a BAT Study Needed?

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C. Using Discretion with this Flow Chart

This flow chart involves decision making and requires discretion when determining if a BAT study is required. Usually the entire combination of new emission units, or the entire project must first be considered for the BAT study. If none of the proposed technologies are cost effective, then a BAT study should be performed for the larger emission unit(s) to see if it is cost effective for that unit(s). For modifications, the BAT study should be considered for the amount of the emissions increase occurring due to the modification. The requirement of a BAT study must always be determined on a case-by-case basis. It is advisable to consult the appropriate permit review agency prior to submittal of the permit application and any BAT study.

II. FLOWCHART

A. Is the project a modification as defined in OAC Rule 3745-31-01(VV) and/or does the project involve the installation of new emissions unit(s)? Permit applicants should discuss their facility's plans with their district or local air agency contact person to confirm this decision.

- Yes - Move to the next question.
- No - BAT study is not required, no permits required.

B. Does the emissions unit and/or project comply with the Air Toxic Policy, see Engineering Guideline #69 available on www.epa.state.oh.us/dapc/engineer/eguides.html, if applicable.

- Yes - Move to the "Attainment for pollutant" box.
- No - Methods to ensure compliance with the air toxic policy shall be included in the BAT determination. The emissions unit and/or project have to comply with the air toxic policy before moving to the next question.

Note: Emissions unit(s) that are subject to a MACT category standard, an NSPS standard or a NESHAP standard, that was finalized within five years, and will have operational restrictions to limit the potential to emit may be subject to the federal emission limit noted in the rule. The allowable hazardous air pollutant emissions from these types of "area (MACT)" emissions units may be exempt from the dispersion modeling requirements of the Air Toxic Policy. However, the allowable criteria pollutants (i. e. particulate matter, carbon monoxide, nitrogen oxides or sulfur dioxide) would still need to be modeled.

C. Is the county attainment for criteria pollutants (i. e. particulate matter, volatile organic compounds, carbon monoxide, nitrogen oxides or sulfur dioxide) to be emitted? Note: this question should be analyzed for each pollutant separately. Contact the appropriate permitting agency for information. A list of Ohio EPA District and Local Air Pollution Agencies is included with the Permit to Install Application.

- Yes - Move to major project in attainment area box.
- No - Move to major project in non-attainment area box.

Is a BAT Study Needed?

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- D. Is this a major stationary source or major modification, as defined in OAC rule 3745-31-01(SS) and in OAC Rule 3745-31-01(RR), respectively?
- Yes - A state BAT study is not required. If a facility is in a non-attainment area, the lowest achievable emissions rate (LAER) is applicable to that project. If a facility is in an attainment area, the Prevention of Significant Deterioration (PSD) rules are applicable and a Best Available Control Technology (BACT) review is required. In either case, LAER or BACT will meet state BAT requirements.
 - No - Move to MACT, NSPS, NESHAP box.
- E. Are the requirements of Maximum Available Control Technology (MACT) category standards, New Source Performance Standard or NESHAP applicable?
- Yes - Move to five (5) years question box.
 - No - Move to 112(g) box.
1. Is the applicable MACT standard, NSPS regulation and/or NESHAP older than five (5) years old?
- Yes - Move to "check previous BAT for similar emissions unit(s)" box.
 - No - No BAT study required. According to Ohio Revised Code (ORC) 3704.03(T), BAT is determined to be the NSPS requirements for that emissions unit(s) if the standards have been finalized within the past five years. Likewise, compliance with a MACT category standard or NESHAP standard, which were finalized within the past five years should meet state BAT requirements.
- F. Do the 112(g) regulations apply?
- Yes - Conduct a 112(g) control technology study and obtain a "MACT determination".
 - No - Move to "check previous BAT for similar emissions units" box.
- G. Check previous BAT determinations for similar emissions units. The determination of similar sources is a judgement, which takes into account the following factors:
1. Do the processes have the same design and operation?
 2. Do the processes have approximately the same capacity?
 3. Do the processes emit the same or similar air pollutants?

Is a BAT Study Needed?

Page 6

4. Can the processes be controlled by the same type of control technology?
5. Is the volume or concentration of the pollutants approximately the same?

Check the BAT database, previously issued PTIs, and BACT databases. The state BAT database can be found on the Ohio EPA's web page, www.epa.state.oh.us/dapc/files/files.html. The allowable limits may be based on restrictive limits that were accepted to avoid federal requirements and these restrictive limits may not constitute state BAT. You may contact the appropriate permitting agency for further assistance.

Another source of information is the national BACT/LAER clearinghouse available at <http://www.epa.gov/ttn/>, then select the RBLC option.

Is the proposed BAT for the new or modified emissions unit(s) similar to previous BAT determination(s)?

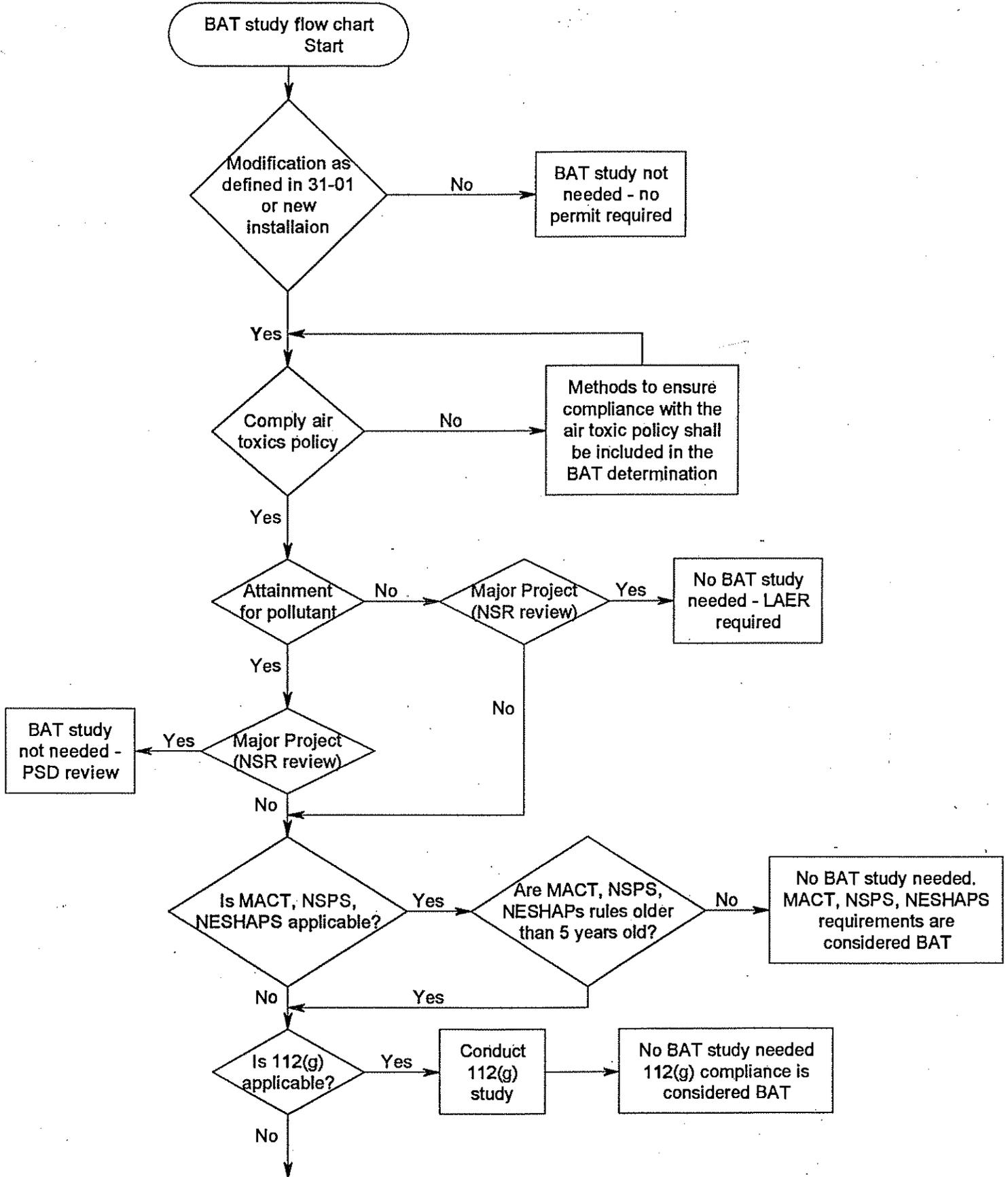
- Yes - No BAT study is needed. Supply BAT survey for similar emissions unit(s) with permit application.
- No - Move to "trigger levels exceeded" box.

H. Do the potential emissions (prior to controls or pollution prevention alternatives) or the requested permitted limits from the emissions unit or project exceed the trigger levels: 75 TPY OC? There are no established trigger levels for other pollutants.

- Yes - Move to "BAT study required" box.
- No - No BAT study is required.

I. BAT study required. Please refer to the BAT study checklist for more information about how to conduct and submit a BAT study. The "Guidance for Estimating Capital and Annual Costs of Air Pollution Control Systems" study can be found in Engineering Guide #46 on the Ohio EPA web page, www.epa.state.oh.us/dapc/engineer/eguides.html.

BAT STUDY NEEDED?
Evaluate for each pollutant separately



BAT Study Checklist

I. INTRODUCTION

- A. **Purpose:** The purpose of this document is to provide a convenient checklist for preparers and reviewers of BAT studies conducted in conjunction with an Ohio EPA Permit to Install (PTI) application. This document gives clarification as to the format and content required of the BAT Cost Effectiveness study, but does not discuss how to do the study. For detailed reference on how to complete a BAT Cost Effectiveness study, use an Engineering Economics text or refer to Engineering Guide No. 46.
- B. This document covers the basics in a general manner, however, before starting a specific study, confirm with the reviewing engineer at your local Ohio EPA field office to ensure the proper scenarios are covered. If you are not familiar with BAT studies or engineering economics, you may find a consultant helpful.

II. PROCESS INFORMATION:

- A. **Process Description:** A step by step description of the process. Materials used in each step of the process. List of the material information shall include the material's state of matter (solid, liquid, gas), as well as the purpose of the material (catalyst, part of product, etc.). Usage shall be given in a rate form (lb/hr, lb/batch etc.). The description will also include an operational flow diagram.
- B. **Steady State Vs. Batch:** Does the emissions unit operate continuously or is it a batch process?
1. For continuous processes, what are the maximum hourly and average input rates (in pounds per hour)?
 2. For batch processes, what are the batch times and the down time between batches? What are the maximum and average batch process weights (in pounds per batch)?

III. EMISSIONS INFORMATION

- A. **Pollutants Emitted:** A list of any regulated pollutant that could be emitted from the source (Criteria and HAP).
- B. **Concentrations:** At what concentration are the pollutants found in the air stream to be controlled (mass/volume)?

- C. **PTE - Uncontrolled Potential to Emit (PTE):** Based upon a 24 hr. per day, 365 days per year at a maximum operational rate, ~~A~~ as defined in OAC Rule 3745-31. Include both the short term PTE in lbs./hr., or lbs./batch, and the long term PTE in tons/yr.
- D. **Allowable Limits (Rule Basis):** Limits set forward in a specific rule. If applicable, please list all limits set forth in an applicable rule.
- E. **Assumptions:** Explain in detail any assumptions used, such as control efficiency, inherent physical limitations, emission factors, etc. Include the source of the emission factors used.

IV. EXHAUST DATA

- A. **Ventilation System:** Describe or diagram the ventilation system.
- B. **Egress Point Data:** Stack or Fugitive
- C. **Airflow:** The amount of air generated by the emissions units air handling systems such as fans, hoods and ducts, the characteristics (velocity, moisture content and temperature) of the air flow should also be known and considered.
- D. **Make Up Air For Ventilation:** Is air added for ventilation for worker safety or cooling?
- E. **Capture:** What percentage of the pollutants emitted from the emissions unit is captured by the air handling systems, as a percentage? How was this percentage determined?
- F. **Exhaust System:** Describe or diagram the exhaust system.

V. CONTROL TECHNOLOGY OPTIONS/PROCESS MODIFICATIONS (POLLUTION PREVENTION)

- A. **Technical Feasibility:** What control technologies are technically feasible to control the pollutants from the emissions unit given the parameters listed above? Explain feasibility of all options.
- B. **Design Efficiency:** What are the design capture and control efficiencies for the technologies considered?
- C. **Pollution Prevention (PP):** Can any pollution prevention initiatives be considered to reduce, reuse or recycle emissions from the emissions unit? If so, explain what was considered and indicate whether or not it was implemented.

VI. ANALYSIS (COST)

For each feasible control technology, complete the cost analysis section. At least two vendor quotes should be included for each feasible control technology. **Include Explain** what is included with the quotes, i.e., does the system come turn key, or are some components or accessories required but not **included noted** in the quote? To properly perform a cost analysis, please refer to Ohio EPA Engineering Guide No. 46.

For your convenience, ~~the following~~ excerpts from Engineering Guide No. 46 are **included below on the following pages**, you may find them helpful in preparing the cost analysis portion of the BAT study. If you would like to view the Engineering Guide in its entirety, go to: <http://www.epa.ohio.gov/dapc/engineer/eguides.html>.

TABLE C-1. EXAMPLE FORMAT FOR COMPUTING AND PRESENTING CAPITAL COSTS

Cost Item	Computation Method			Cost, dollars
<u>Direct costs</u>				
Purchased equipment:				
Basic equipment (A)	Purchased cost of control device			_____
Auxiliary equipment (B)	Purchased cost of auxiliaries			_____
Total equipment costs (A+B)	Total of above (A+B)			_____
	Average cost factor x	Adjustment factor x	(A+B)	
Instruments/controls	(0.10)	()	()	_____
Taxes (unless exempt)	(0.05)	()	()	_____
Freight	(0.05)	()	()	_____
Base price ©	Subtotal of above plus (A+B)			_____ ©
Installation costs, direct:				
	Average cost factor x	Adjustment factor x	©	
Foundations/supports	()	()	()	_____
Erection/handling	()	()	()	_____
Electrical	()	()	()	_____
Piping	()	()	()	_____
Insulation	()	()	()	_____
Painting	()	()	()	_____
Site preparation ^b	Estimate () x adjustment ()			
Facilities/buildings ^b	Estimate () x adjustment ()			
Total installation costs (D)	Subtotal of above			_____ (D)
TOTAL DIRECT COSTS (E)	Base price © + installation cost (D)			_____ (E)
Installation costs, indirect:				
	Average cost factor x	Adjustment factor x	©	
Engineering/supervision	()	()	()	_____
Construction/field expenses	()	()	()	_____
Construction fee	(0.10)	()	()	_____
Start-up	()	()	()	_____
Performance test	(0.01)	()	()	_____
Model study	()	()	()	_____
Contingencies	(0.03)	()	()	_____
TOTAL INDIRECT COSTS (F)	Total of above indirect costs			_____ (F)
TOTAL CAPITAL COSTS (G)	Direct costs (E) + indirect costs (F)			_____ (G)

^a Absence of parenthesis in the adjustment factor column means no such factor is available.

^b Costs for these are unrelated to equipment costs © and are developed independently on an individual item basis. General estimates for these items can be modified with cost adjustment factors. Case specific estimates entered directly in the cost column.

TABLE C-2. EXAMPLE FORMAT FOR COMPUTING AND PRESENTING ANNUALIZED COSTS

Cost Item	Computation method	Cost, dollars	
Direct operating costs			
Operating labor			
Operator	____, \$/h x ____ h/Yr	_____	(a)
Supervision	15% of operator labor cost	_____	
Operating materials	As required	_____	
Maintenance (general)			
Labor	____, \$/h x ____ h/Yr	_____	(b)
Materials	100% of maintenance labor	_____	
Replacement parts	As required	_____	
Labor	100% of replacement parts cost	_____	
Utilities			
Electricity	____, \$/kWh x ____ kWh/Yr	_____	
Fuel oil	____, \$/gal x ____ gal/Yr	_____	
Gas	____, \$/10 ³ ft ³ x ____ 10 ³ ft ³ /Yr	_____	
Water	____, \$/10 ³ gal x ____ 10 ³ gal/Yr	_____	
Steam	____, \$/10 ³ lb x ____ 10 ³ lb/Yr	_____	
Other (specify)	As required	_____	
Waste disposal	____, \$/ton x ____ ton/Yr	_____	
Wastewater treatment	____, \$/10 ³ gal x ____ 10 ³ gal/Yr	_____	
TOTAL DIRECT OPERATING COSTS (A)	Subtotal of above		_____ (A)
Indirect operating (fixed) costs			
Overhead	80% of O/M labor costs (a+b)	_____	
Property tax	1% of capital costs (\$ ____)*	_____	
Insurance	1% of capital costs*	_____	
Administration	2% of capital costs*	_____	
Capital recovery	CRF ____ (at __%, __yrs) x capital costs*	_____	
TOTAL FIXED COSTS (B)	Subtotal of above		_____ (B)
Credits			
Product recovery	____, \$/ton x ____ ton/Yr	(_____)	
Heat recovery	____, \$/10 ⁶ Btu x ____ 10 ⁶ Btu/Yr	(_____)	
TOTAL CREDITS (minus C)	Subtotal of above		(____) ©
TOTAL ANNUALIZED COSTS (D)	(A+B) minus ©		(____) (D)

* Total capital costs (G) from Table C-1.

VII. CALCULATIONS:

Include a copy of the calculations used to determine emissions, control efficiency, cost of control and cost per ton of reduction. Explain any assumptions used, present any data and/or background information (pertaining to the calculations) considered while making the calculations.

VIII. CONCLUSIONS

A. Narrative - explain the decisions made. **Include Make a record of the reasons** why other alternatives were dismissed. Include a cost effectiveness table similar to the one below for each pollutant emitted and **include place it in the conclusion** section of your BAT study.

B. Cost Effectiveness Table Example:

Summary of Results, and Emissions Table

Pollutant: Organic Compounds/HAPs

Control Technology	Total Annualized Cost	Potential Emissions (TPY uncontrolled)	Control Efficiency	Annual Emission Reduction (TPY)	Cost per ton removed (\$/ton removed)
<i>Thermal Incinerator</i>	<i>\$777,250.05</i>	<i>185.90</i>	<i>98.60%</i>	<i>183.30</i>	<i>\$4,240.32</i>
<i>Catalytic Thermal Oxidizer</i>	<i>\$698,628.10</i>	<i>185.90</i>	<i>95.50%</i>	<i>177.50</i>	<i>\$3,935.93</i>
<i>* Carbon Adsorption</i>	<i>\$202,565.60</i>	<i>185.90</i>	<i>90.40%</i>	<i>168.05</i>	<i>\$1,202.17</i>

* Allows for the recycling of the captured solvents

Engineering Guide No. XX

Is a Best Available Technology Cost Effectiveness Study Needed?

I. INTRODUCTION

A. Purpose of This Guide

The use of Best Available Technology (BAT) is a State of Ohio requirement for new air contaminant sources that require a Permit to Install (PTI). A Cost Effectiveness Study of various control methods is required for some permit applications; yet it can be a time consuming task. This guide is intended to provide a consistent decision making process for Best Available Technology (BAT) Cost Effectiveness studies. Permit applicants and permit application reviewers can use this guide and accompanying flowchart to determine the need for a BAT Cost Effectiveness study.

In the first part of the flow chart, the federal rules are identified so that they may be evaluated for applicability to some or all portions of a new project. Often, federal requirements take precedence over state BAT requirements.

A BAT determination for many common operations is available by contacting the appropriate ~~field office~~ **district office or local air pollution agency (DO/LAA)**. It may be necessary to study the BAT determinations of other similar operations. The second part of the flow chart provides guidance on comparing BAT determinations from similar operations, to see if a BAT determination for the proposed project may be made. Such a BAT determination process usually does not require a BAT Cost Effectiveness study.

If a cost effectiveness study is required, the permit applicant will find the BAT Study Checklist useful. It identifies the criteria for developing a cost study of various technologies and provides a suggested format. This checklist should be used in conjunction with Engineering Guide No. 46, *Guidance for Estimating Capital and Annual Costs of Air Pollution Control Systems*.

Pollution prevention (P2) alternatives should be evaluated as a BAT strategy. For BAT, pollution prevention could be evaluated prior to assessing control equipment needs. Source reduction options are considered before capture, control, and treatment options. The benefits of using P2 can include: a potential decrease in emissions that could exempt the emissions unit from permitting requirements; P2 may be less expensive to implement than add-on controls; lower permit and emissions inventory fees; and applicants may avoid triggering Federal permit requirements (e.g., Title V, BACT, LAER or PSD permitting). For more information on pollution prevention, visit Ohio EPA's Office of Pollution

Prevention web site at www.epa.state.oh.us/opp or call them at (614) 644-3469.

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The use of BAT to control air contaminant emissions is an Ohio requirement for any air contaminant source, installed after January 1, 1974, that requires a PTI.

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3. **PSD:** Prevention of Significant Deterioration is a permitting process that prevents deterioration of the air quality in areas that are in attainment of the National Ambient Air Quality Standards. The PSD requirements are specified in 40 CFR Part 52.21 and in OAC Rule 3745-31-11 through OAC Rule 3745-31-20.
4. **LAER:** The Lowest Achievable Emission Rate is a requirement that limits emissions of major sources or major modifications in areas that are in non-attainment of the National Ambient Air Quality Standards. The LAER requirements are specified in 40 CFR Part 51, Appendix S and in OAC Rule 3745-31-21 through OAC Rule 3745-31-27. See OAC Rule 3745-31-01(RRR) for the definition of a stationary source.
5. **"Major MACT (Maximum Achievable Control Technology) Source:** Means any process or production unit that in and of itself has the potential to emit ten tons per year or more of any single hazardous air pollutant or twenty-five tons per year or more of any combination of hazardous air pollutants (as listed in section 112(b) of the Federal Clean Air Act)." ✓

A "MACT Determination" must be developed and approved of by U.S. EPA for Major MACT sources, constructed on or after June 29, 1998, and

which do not have an applicable MACT category standard. See OAC Rule 3745-31-28 for further information.

6. **NESHAP**: National Emissions Standards for Hazardous Air Pollutants are emissions standards for asbestos, benzene, radionuclides, beryllium, mercury, vinyl chloride, arsenic and coke ovens emissions. A list of the NESHAP categories can be found in 40 CFR Part 61. You may wish to download a copy of Part 61 from the website, <http://www.access.gpo.gov/nara/cfr/index.html>. Click on the "Browse" feature to search for Title 40, then search for "40CFR61 Part 61."
7. **NSPS**: New Source Performance Standards are emissions or performance standards for new or older emissions units. A list of NSPS categories can be found in 40 CFR Part 60. You may wish to download a copy of the Table of Contents for Part 60 from the website, <http://www.access.gpo.gov/nara/cfr/index.html>. Click on the "Browse" feature to search for Title 40, then search for "40CFR60 Part 60."
8. **BAT Study**: A BAT study documents the results/findings of the permit applicant's evaluation of the technical and economic feasibility of various control methods, to minimize and control air contaminant emissions from emissions units in a construction or modification project, as proposed in a PTI application. A BAT study may be required for an individual emissions unit or for a combination of emissions units. A BAT study, when needed, must be submitted with a PTI application, in order for the application to be deemed complete by the permit reviewing agency **DO/LAA**.
9. **"Modification"**: Means any physical change in, or change in the method of, operation of any air contaminant source that:
 - a. results in an increase in the allowable emissions; or
 - b. results in an increase in emissions of greater than the de minimis levels in OAC Rule 3745-15-05 of any type of air contaminant not previously emitted; or
 - c. results in the relocation of the air contaminant source to a new facility, including, but not limited to, the movement of any existing air contaminant source from another state, county, or other geographic location; or
 - d. is otherwise defined as a major modification, or is defined as a modification under applicable regulations promulgated by the

Administrator of the U.S. EPA regarding New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAPS) or Section 112 of the Clean Air Act."

10. **Pollution Prevention:** For the State of Ohio, pollution prevention (P2) is the use of source pollution reduction techniques in order to reduce risk to public health, safety, welfare, and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Source reduction is the reduction or elimination of waste and emissions at the point of generation. Source reduction measures may include process modification, good operating and management practices, increasing the efficiency of machinery, and recycling within a waste generating or other production process. For example, in a coatings operation, P2 options might include the use of low volatile organic compound (VOC) content paints and solvents, or switching to powder coating.

C. Using Discretion With This Guide

This flow chart involves decision making and requires discretion when determining if a BAT study is required. Usually the entire combination of new emission units, or the entire project must first be considered for the BAT study for each pollutant. If none of the proposed technologies are cost effective, then a BAT study should be performed for the larger **individual** emissions units to see if it is cost effective for ~~that~~ **those** units. For modifications, the BAT study should be considered for the amount of the emissions increase occurring due to the modification. The requirement of a BAT study must always be determined on a case-by-case basis. It is advisable to consult the appropriate ~~permit review agency~~ **DO/LAA** prior to submittal of the permit application and any BAT study. **A list of Ohio EPA District and Local Air Pollution Agencies (DO/LAA) is included with the PTI application.**

D. Request for Rule Exemptions

A BAT Study must be performed by applicants that request an exemption to the requirements of OAC Rule 3745-21-07(G) or OAC Rule 3745-21-09(U), as specified in OAC Rule 3745-21-07(G)(9)(g) or OAC Rule 3745-21-09(U)(2)(f), respectively. Contact the appropriate ~~field office~~ **DO/LAA** for further information.

II. FLOWCHART

- A. An evaluation must be performed for each pollutant. Is the project a modification as defined in OAC Rule 3745-31-01(VV) and/or does the project involve the

installation of new emissions unit(s)? Permit applicants should discuss their facility's plans with the appropriate field office to confirm this decision.

- Yes - Move to the next question.
- No - BAT Cost Effectiveness study is not required, no PTI application is required.

B. Is this a major stationary source or major modification, as defined in OAC Rule 3745-31-01(SS) or in OAC Rule 3745-31-01(RR), respectively?

- Yes - A State BAT study is not required. If a facility is in a non-attainment area, the lowest achievable emissions rate (LAER) is applicable to that project. If a facility is in an attainment area, the Prevention of Significant Deterioration (PSD) rules are applicable and a Best Available Control Technology (BACT) review is required. In either case, LAER or BACT will meet state BAT requirements.

✓ Contact the appropriate ~~field office~~ **DO/LAA** to find whether a county is in attainment status for criteria pollutants (i.e., particulate matter, volatile organic compounds, carbon monoxide, nitrogen oxides or sulfur dioxide). ~~A list of Ohio EPA District and Local Air Pollution Agencies is included with the PTI application.~~

- No - Move to 112(g) box.

C. Are the 112(g) regulations applicable?

- Yes - Conduct a 112(g) control technology study and obtain a "MACT determination." A BAT Cost Effectiveness study is not needed, since compliance with 112(g) meets State BAT requirements. The pollutant does not need to meet the Air Toxic Policy.
- No - Move to MACT, NSPS, NESHAP box.

D. Are the requirements of Maximum Available Control Technology (MACT) category standards, New Source Performance Standard or NESHAP applicable?

- Yes - Move to five (5) years question box.
- No - The pollutant is subject to the Air Toxic Policy.

Is the applicable MACT standard, NSPS regulation and/or NESHAP older than five (5) years old?

- Yes - The pollutant is subject to the Air Toxic Policy.
- No - No BAT Cost Effectiveness study required. According to Ohio Revised Code (ORC) 3704.03(T), BAT is determined to be the NSPS requirements for that emissions unit(s) if the standards have been finalized within the past five (5) years. Compliance with a MACT category standard or NESHAP standard, which was finalized within the past five (5) years, **may is considered to meet State BAT requirements**; **The Air Toxic Policy does not apply.** Contact your local air agency or district office representative **the appropriate DO/LAA** for further assistance. ~~The Air Toxic Policy does not apply.~~

E. Does the pollutant need to comply with the Air Toxic Policy?

- Yes - The results of the air toxic policy evaluation should be included in the BAT determination.
- No - Move to "Identify all similar emissions units" box.

F. Check previous BAT determinations for substantially similar emissions units **that operate satisfactorily in the state of Ohio or other states with similar air quality**. The determination of similar sources is a judgement, which takes into account the following factors:

1. Do the processes have the same design and operation?
2. Do the processes have approximately the same capacity?
3. Do the processes emit the same or similar air pollutants?
4. Can the processes be controlled by the same type of control technology?
5. Is the volume or concentration of the pollutants approximately the same?

Check the BAT database, previously issued PTIs, and BACT databases. The state BAT database can be found on Ohio EPA's web page, www.epa.state.oh.us/dapc/files/files.html. The allowable limits may be based on restrictive limits that were accepted to avoid federal requirements and these restrictive limits may not

constitute State BAT. You may contact the appropriate field office for further assistance.

Another source of information is the National BACT/LAER clearinghouse available at <http://www.epa.gov/ttn/>, then select the RBLC option.

- G. Do the potential emissions (prior to controls or pollution prevention alternatives) or the requested permitted limits from the emissions unit or project exceed the trigger levels: 200 TPY CO, 80 TPY NO_x, 80 TPY SO_x, 50 TPY PE, 30 TPY PE₁₀, PM₁₀, 80 TPY VOC, and 1.2 TPY Lead.

- Yes - Move to "Contact the Field Office" box.
- No - Move to "Are the new sources within 12% of best similar sources" box.

Are the new sources exactly identical to recent BAT sources? The comparison of BAT for similar sources is a judgement, which takes into account the following factors:

1. Do the sources have identical equipment?
2. Do the sources have identical maximum capacity?
3. Do the sources have identical emission rates?
4. Do the sources have identical pollutants?
5. Do the sources make identical products?
6. Have the sources been installed within the past five (5) years?

Yes - No BAT Cost Effectiveness study is required.

No - A BAT Cost Effectiveness study is required. Please refer to the BAT study checklist for more information about how to conduct and submit a BAT study. The "*Guidance for Estimating Capital and Annual Costs of Air Pollution Control Systems*" study can be found in Engineering Guide No. 46 on Ohio EPA web page, www.epa.state.oh.us/dapc/engineer/eguides.html.

- H. Do contact the appropriate ~~field office~~ **DO/LAA** for guidance in conducting a BAT determination study of substantially similar sources, especially if they are not exactly identical. A permit applicant may wish to employ the services of a

consultant to prepare the study of similar sources and propose a BAT determination.

I. Are the sources within 12% of the best controlled similar sources?

Yes - No BAT Cost Effectiveness study is required.

No - Move to "Are the new sources better than average of top five (5) of best controlled similar sources" box.

J. Are the new sources better than average of top five (5) of best controlled similar sources?

Yes - No BAT Cost Effectiveness study is required.

No - Ohio EPA will review the similar sources and make a BAT determination.

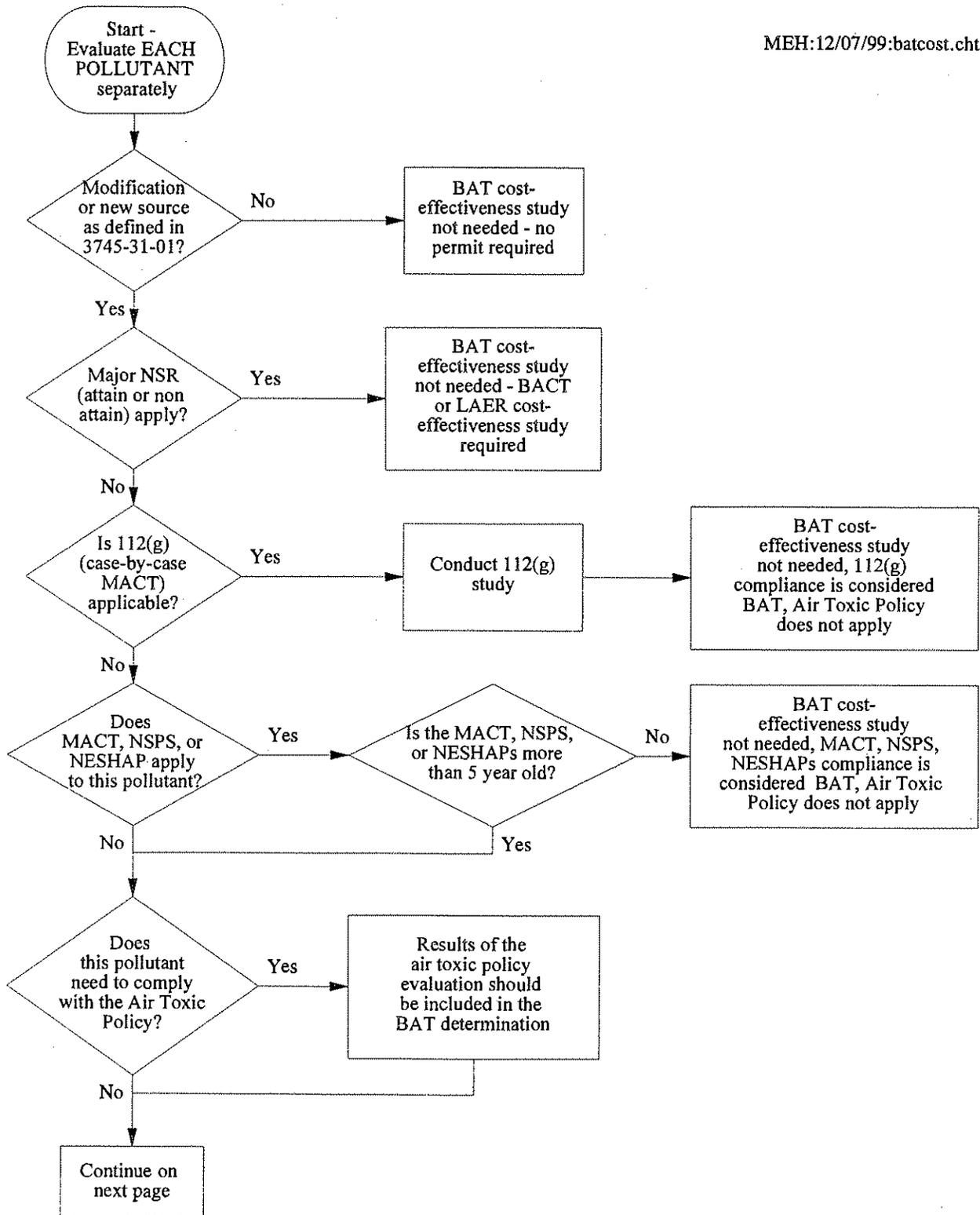
K. Do the new sources meet Ohio EPA BAT determination?

Yes - No BAT Cost Effectiveness study is required.

No - The permit applicant agrees to install BAT or do a cost effectiveness study.

BAT Cost-Effectiveness Study Decision Flow Chart

MEH:12/07/99:batcost.cht



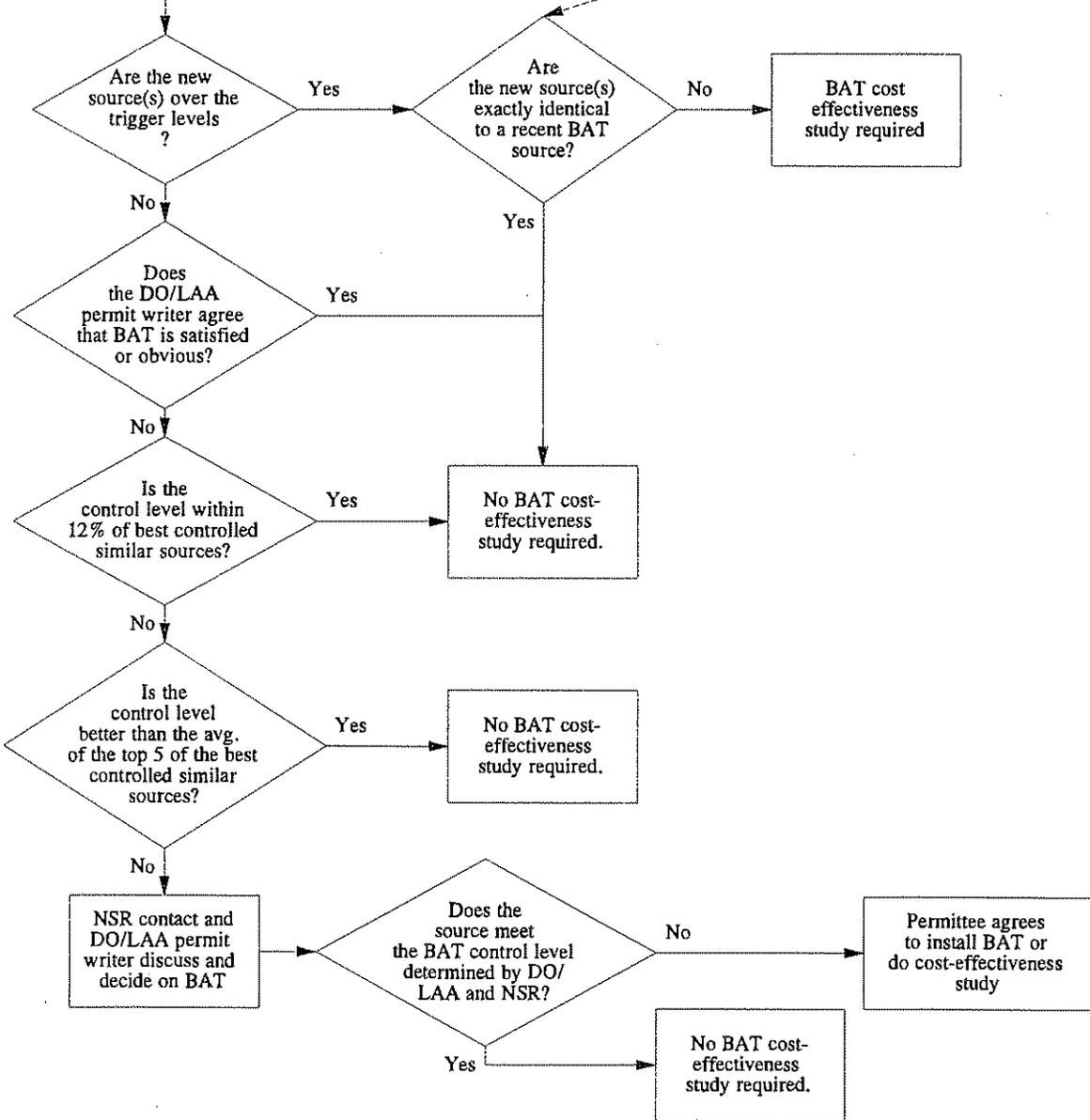
Identify all substantially similar emissions units permitted w/in 5 years

To determine similar emissions units use the Ohio EPA BAT Database, USEPA BACT/LAER Clearinghouse and general knowledge of requirements in other similar states. This should include company knowledge of other similar sources (either company owned or competitor owned sources) in other states. Note this evaluation may not be necessary because BAT may already be well defined. Please contact your DO/LAA permit writer to determine if this step is necessary. See the text in the guide for assistance in determining a substantially similar source.

BAT Study Trigger Levels

	Tons/yr
CO	200
NOx	80
SOx	80
PM	50
PM10	30
VOC	80
Lead	1.2

identical equipment
 identical maximum PWR
 identical emission rate
 identical pollutants
 identical product produced within the past 5 years



Cooper Engineering Products

CAPITAL COSTS	Cost Factors	Units	Adjustment Factor	Costs	Formula
Direct Costs					
Control Equipment				360000	Purchase Cost, A
Instruments and controls	0.1		1	36000	CF*A
Taxes	0.0575		1	20700	CF*A
Freight	0.05		1	18000	CF*AF*A
Base Price				434700	Total of Above, C
Installation	0			142000	CF*C
Indirect Costs					
Engineering & Supervision	0.1		1	43470	CF*C
Construction/Field Exp	0.05		1	21735	CF*C
Construction Fee	0.1		1	43470	CF*C
Start-up	0.02		1	8694	CF*C
Performance Tests	0.01		1	4347	CF*C
Model Study	0.01		1	4347	CF*C
Contingencies	0.03		1	13041	CF*C
Total Indirect Costs				139104	Total of Above
Total Capital Costs				715804	Base Price + Install + Indirect,D

ANNUALIZED COSTS

Direct Costs					
Operating Labor	18.23 \$/hr			9951	E
Supervision	0.15			1493	CF*E
Operating Materials	1,100 per month	12 month/yr		13200	CF*E
Maintenance Labor	18.23			9954	CF*E, F
Maintenance Materials	1			9954	CF*F
Replacement Parts	0.01			7158	CF*D, G
Labor	1			7158	CF*G
Utilities					
Electricity	0.05 kWh			12702	both
Fuel	2.7 \$kCF			25781	
Cooling Water				0	
Waste Disposal					
Indirect Costs					
Overhead	0.8			15924	CF*(E+F)
Property Tax	0.01			7158	CF*D
Insurance	0.01			7158	CF*D
Administration	0.02			14316	CF*D
Equipment life	10 years				
Capital Recovery Interest	8 %				
Capital Recovery	0.1490295			106676	CF*D
Total Annualized Costs				248583	
VOCs Controlled, Tons/yr				3.65	
COST EFFECTIVENESS, \$/ton				\$68,104.88	

Best Available Technology (BAT) Requirements

Does everything in a permit to install go in the "State and Federally Enforceable Section", except for the Air Toxic language?

Yes, except for rules that are not part of the SIP and not referenced as a BAT requirement.

What about rules that are not part of the State Implementation Plan (SIP)?

In general, rules that are not part of the SIP will go on the "State Enforceable Section" of the permit; however, if compliance with a rule that is not part of the SIP is determined to be part of BAT, then that rule will have to be placed on the "State and Federally Enforceable Section" of the permit. In addition, we have developed clarifying language for OAC Chapter 3745-17 that is in the "State and Federally Enforceable Section" even though the revised rule language has not been incorporated into the SIP (see language below).

OAC rule 3745-17-07(B)(7) - "The procedures related to Test Method 9 reflect the settlement agreement reached between Ohio EPA and the Ohio Electric Utilities concerning the Utilities' appeal to the Ohio Environmental Review Appeals Commission of the 1991 revisions and additions to OAC Chapter 3745-17. The revised rule containing these procedures was adopted by the Director of Ohio EPA in December, 1997. The USEPA and the Ohio Electric Utilities have agreed to consider the procedures as federally enforceable during the time from the effective date of this permit to the effective date of USEPA approval of the procedures as a revision to the Ohio SIP for particulate matter."

OAC rule 3745-17-11(B)(5)(a) and (b) - "The emission limitation specified in this rule citation has been revised based upon a change in the applicable emission factor contained in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors. The revised rule was adopted by the Director of Ohio EPA in December, 1997. The USEPA has agreed to consider this revised rule as federally enforceable during the time from the effective date of this permit to the effective date of USEPA approval of this limitation as a revision to the Ohio SIP for particulate matter."

What about ton-per-year emission limitations that are not rolling or that are redundant with the short term emission limitations?

All of the ton-per-year emission limitations should go in the "State and Federally Enforceable Section" of the permit.

On which side of the permit should OAC rule 3745-15-07 be cited?

OAC rule 3745-15-07 is already cited in the "State Only Enforceable Section" of the General Terms and Conditions (see Term and Condition B.5.) It will not be necessary to cite OAC rule 3745-15-07 in the "State and Federally Enforceable Section" of the permit unless the rule is referenced as part of BAT. If compliance with OAC rule 3745-15-07 is considered part of BAT,

then the rule would be referenced using the "equally stringent" language specified below; however, the applicable requirement would be OAC rule 3745-31-05.

What language should be used to address "less stringent" or "equally stringent" SIP emission limitations when there is an overriding BAT emission limitation?

If the emission limitation from the OAC rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05, the following language can be used:

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
stationary gas turbine <i>(for example)</i>	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-11(B)(4). <i>This wording would be used in situations where the BAT determination includes requirements that are rule-based <u>and</u> requirements that are not rule-based. This wording should be expanded, if necessary, to identify all the OAC rules that comprise part of the BAT determination.</i>
	OAC rule 3745-17-11(B)(4)	Particulate emissions shall not exceed .040 lb/mmBtu of actual heat input.
	OR	
	OAC rule 3745-31-05(A)(3)	The requirements established pursuant to this rule are equivalent to the requirements of OAC rule 3745-17-11(B)(4). <i>This wording would be used in situations where the BAT determination includes <u>only</u> rule-based requirements. This wording should be expanded, if necessary, to identify all OAC rules that comprise the BAT determination.</i>
	OAC rule 3745-17-11(B)(4)	Particulate emissions shall not exceed .040 lb/mmBtu of actual heat input.

If the emission limitation from the OAC rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05, the following language can be used:

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emission Limitations/Control Measures
stationary gas turbine <i>(for example)</i>	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed .020 lb/mmBtu of actual heat input.
	OAC rule 3745-17-11(B)(4)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

Should paragraphs (A)(3) and (D) of OAC rule 3745-31-05 be the only paragraphs cited for requirements established in a permit to install?

No, if requirements are created in the permit to install specifically pursuant to paragraphs (C), (E), (F), and/or (G), and they go beyond BAT or paragraph (D) requirements, then that paragraph should also be cited as an applicable requirement in the permit.

(02/23/00)

SHOULD BE COMPARED TO
THE VALUES IN THE ENGINEERING GUIDE

McKwell International Newark



	Cost Factors	Units	Costs	Formula	
CAPITAL COSTS					
Direct Costs					
Control Equipment			1300000	Purchase Cost, A	
Instruments and controls	0.1		0	CF*A	} ZEROED OUT BECAUSE BID INCLUDES COSTS IN PURCHASE PRICE
Taxes	0.05		0	CF*A	
Freight	0.05		0	CF*A	
Base Price			1300000	Total of Above, C	
Installation	0.3		390000	CF*C	→ IMPROVED AT. ALL OTHER COSTS ARE BASED ON THIS.
Indirect Costs					
Engineering & Supervision	0.05		65000	CF*C	
Construction/Field Exp	0.1		130000	CF*C	
Construction Fee	0.1		130000	CF*C	
Start-up	0.02		26000	CF*C	
Performance Tests	0.01		13000	CF*C	
Model Study	0		0	CF*C	
Contingencies	0.03		39000	CF*C	
Total Indirect Costs			403000	Total of Above	
Total Capital Costs			2093000	Base Price + Install + Indirect, D	
ANNUALIZED COSTS					
Direct Costs					
Operating Labor	14.5 \$/hr		3625	E	
Supervision	0.15		543.75	CF*E	
Operating Materials	0.0075		6912	CF*E	
Maintenance Labor	0.1		362.5	CF*E, F	
Maintenance Materials	1		362.5	CF*F	
Utilities					
Electricity	0.07 kWh		278009	both	
Fuel	4 \$/MMB		0		
Cooling Water			0		
Waste Disposal					
Indirect Costs					
Overhead	0.8		3190	CF*(E+F)	
Property Tax	0.01		20930	CF*D	
Insurance	0.01		20930	CF*D	
Administration	0.02		41860	CF*D	
Equipment life	10 years				
Capital Recovery Interest	8.5 %				
Capital Recovery	0.15241		318989.3	CF*D	
Total Annualized Costs			695714.1		
VOCs Controlled, Tons/yr			120.9		
COST EFFECTIVENESS, \$/ton			5754.459		

Sometimes inflated

INCORPORATE COSTS

CFM	CONTROL TYPE	ESTIM. COST
3000	CATALYTIC	45 128,000
3000	REGULATED	45 116,000
15,000		375,000
25,000		750,000
50,000		1,000,000
10,000	THRUML	4,27,000
10,000	CATALYTIC	410,700
10,000	CONCENTRATOR	500,000
90,000	REGULATED	1,300,000
90,000	REGULATED	1,870,000
40,000	CATALYTIC	1,199,000
14,000	REGULATED	335,000

→ INCORPORATE THAT OPERATE CONTINUOUSLY CAN HAVE A 15 YR LIFE
→ CAPITAL RECOVERY CAN RANGE FROM 6-15%. 8.5% IS TYPICAL.
DEPENDING ON RATE BANKS ARE WILLING TO GIVE TO COMPANY.
ANYTHING AT 10 OR ABOVE SHOULD BE JUSTIFIED.



inter-office communication

to: DO Air Unit Supervisors/LAA Directors date: April 27, 1989
 from: Bob Hodanbosi, Manager, AQM&P Section/DAPC
 subject: Use or Substitution of CFC's

We have recently received two questions from industry regarding the use or substitution of CFC's. The questions and our responses are as follows:

Question 1: Our existing facility presently uses a CFC that is exempt under the volatile organic compounds (VOC) rules, but is considered a "controlled" CFC under the Montreal Protocol. We plan to switch to a CFC that is less harmful to the upper level ozone layer in order to comply with the Montreal Protocol. Must our company apply for a permit to install (PTI) to accommodate this change?

Answer 1: No, a new PTI is not required, provided that the substitute CFC is considered to be less than or equal to in toxicity to the present CFC and the substitute CFC is not considered to be a VOC by U.S. EPA.

Question 2: Our company plans to install a new facility that will employ substitute CFC's that will comply with the Montreal Protocol. Is a PTI necessary for the construction of the new source?

Answer 2: Yes, a PTI is required. Under the PTI rules, all new sources of air contaminants must obtain a PTI. The rules do not exempt CFC's from the requirement for a permit. During the review for best available technology (BAT), applicants should be required to examine standard control technologies for organic compounds. Also, facilities should evaluate the use of substitute CFC's (chlorodifluoroethane HCFC-142b, dichlorofluoroethane HCFC-141b, tetrafluoroethane HFC-134a, dichlorotrifluoroethane HCFC-123) that are less harmful to the upper atmosphere instead of the CFC's controlled by the Montreal Protocol (trichlorofluoromethane CFC-11, dichlorodifluoromethane CFC-12, trichlorotrifluoroethane CFC-113, dichlorotetrafluoroethane CFC-114, chloropentafluoroethane CFC-115, bromochlorodifluoroethane Halon 1211, bromotrifluoroethane Halon 1301, dibromotetrafluoroethane Halon 2402).

If you have any questions, please contact me at (614) 644-2270.

BH:jlc

MAY 04 1989

PORTSMOUTH LOCAL
AIR AGENCY

PETE V. DOMENICI
NEW MEXICO

S/C Directors,

MIKE H 933317

United States Senate
WASHINGTON, DC 20510-3101

COMMITTEES:
BUDGET
APPROPRIATIONS
ENERGY AND NATURAL RESOURCES
BANKING
INDIAN AFFAIRS

BC
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'93 AUG 23 AM 11:40

July 30, 1993

OFF
REGIONAL

AUG 30 1993

The Honorable Carol Browner
Administrator, Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Dear Carol:

Recently the Air and Radiation Division of EPA's Region V wrote to the Michigan Department of Natural Resources regarding a General Motors proposal to switch from coal and oil fuels for a number of industrial boilers to cleaner burning natural gas.

That letter indicated, in brief, that since the change would not increase use, and would result in lower emissions, New Source Review provisions of the Clean Air Act would not be triggered, thereby relieving GM of the regulatory paperwork burden which might otherwise have been invoked.

I would like to commend the Region for this carefully reasoned approach to application of the regulations, and ask that you consider making this a national policy. Since the goal of the Clean Air Act is to provide better air quality, it makes a great deal of sense to make it easier for businesses to switch to cleaner burning fuels when that will reduce their overall emissions. Encouraging businesses nationwide to switch to such fuels could achieve significant environmental improvement, while lowering costs for many industries.

Sincerely yours,



Pete V. Domenici
United States Senator

PVD/lmk

Received
3/10/93 KRC



Inter-office Communication

TO: NSR Contacts *BA* **DATE:** June 23, 1993
FROM: Bob Hodanbosi, Chief - DAPC
SUBJECT: New Source Review topic of interest.

Please review the attached memo from David Kee of the U.S. EPA. The U.S. EPA recently determined that the conversion from coal to natural gas for a boiler would not entail New Source Review if there was no increase in emissions due to the change in fuel. The determination was based on specific circumstances and data presented by General Motors to U.S. EPA. Apparently, GM was able to demonstrate that the emission factors for all relevant pollutants would decrease, and that neither the rate of production nor hours of operations of the facilities would increase. This determination is contrary to the policy of reviewing emissions based on the potential to emit. Furthermore, it appears that U.S. EPA is acknowledging that natural gas is a cleaner burning fuel, and consequently it appears that U.S. EPA does not want to deter companies from switching to cleaner burning fuel. Please note, however, that we do not know what information GM presented to U.S. EPA which allowed for this determination.

Please insert the attached memo into your New Source Review guidebook for future reference.

attachment



State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
FAX (614) 644-2329

MISTAKE
MAY 13 1993
** IMPORTANT **
NOTE THE CHANGE
IN DIRECTION
George V. Voinovich
Governor

Donald R. Schregardus
Director

WE NEED TO KEEP THE
LETTER FOR FUTURE
REFERENCE.

BC

MEMORANDUM

TO: Robert Hodanbosi, Chief, DAPC
FROM: Grant W. Wilkinson, Deputy Director of Legal Affairs
SUBJECT: General Motor's Clean Fuel Boiler Conversions
DATE: May 17, 1993

The General Motor's Chevrolet - Pontiac - Canada Group Plant, located in Parma, Ohio, has requested that the air use permits for two coal-fired boilers (permits to operate NOS. 13-18-45-1029 B001 and B002) be amended to allow the use of natural gas. General Motors was initially informed that the conversions would require permits to install and the application of new source review because the conversion had the potential to result in a significant net emissions increase.

General Motors responded that the use of cleaner fuels should not require new source review. General Motors reasoned that a "significant net emissions increase" will not result from the proposed conversion. Instead, the use of natural gas will decrease the emissions of nitrogen oxide, sulfur dioxide, carbon monoxide, total suspended particulate, and volatile organic compounds. Accordingly, on August 31, 1992, General Motors asked the Cleveland Division of Air Pollution Control to withhold further action on its permit pending a final determination of this issue by U.S. EPA.

By letter dated April 6, 1993, Dave Kee informed Dennis Drake, Acting Chief of Michigan Department of Natural Resource's Air Quality Division, that, in U.S. EPA's view, "General Motor's proposed natural gas conversion projects should not be considered a major modification under the Federal New Source Review regulations". (A copy of the letter is attached for your review).

In light of the above, and given the significant environmental benefit, I encourage you to adopt the same approach in the case of the Parma, Ohio facility. Please notify the Cleveland Division of Air Pollution Control of this development and U.S. EPA's recent interpretation.

cc: Jim Orlemann, Manager, Engineering Section, DAPC
Brian Babb, Acting Deputy Director
Jeanne Mallett, Legal Supervisor

GWW/cmw



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

AIR AND RADIATION DIVISION
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3580

APR 06 1993

John Campbell
AM

REPLY TO THE ATTENTION OF:
(AT-18J)

Dennis Drake, Acting Chief
Air Quality Division
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

Dear Mr. Drake:

This letter concerns a proposal by General Motors (GM) to burn natural gas in existing industrial boilers at an estimated 16 sites in the State of Michigan, and 12 other sites in Region 5. The units at issue currently burn coal or fuel oil. During a February 23, 1993, telephone conference between GM, the United States Environmental Protection Agency (USEPA), and the Michigan Department of Natural Resources to discuss these alternate fuel projects, GM was asked to provide a demonstration that a change in fuels would not affect future auto production rates at these facilities.

The data provided by GM in a March 9, 1993, letter indicate that the utilization rate of the boilers would not be influenced by a switch to this more economical fuel because (1) the total steam cost at a given plant is insignificant when compared to the total operating cost at that plant, and (2) the steam production is primarily determined by climate conditions, not auto production rates.

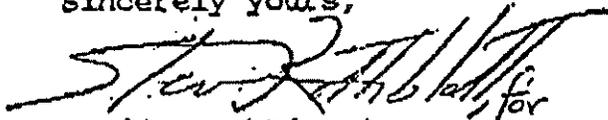
The New Source Review (NSR) regulatory provisions require that a proposed physical change result in an increase in actual emissions in order for the change to be considered a modification and therefore subject to NSR. See, e.g., 40 Code of Federal Regulations 52.21(2)(i). In this case, the proposed switch to natural gas at various GM facilities will result in substantial reductions in the emissions factors of particulate matter, sulfur dioxide, and, in most cases, oxides of nitrogen, as well as air toxics. The use of natural gas will also result in a substantial cost savings for the source. In general, where a source makes a change that reduces the costs of production, such changes usually affect the utilization of the facility. In this case, GM has clearly demonstrated that the utilization rate of the boilers will not be affected by the proposed fuel switch to natural gas. Consequently since the emissions factors for all relevant pollutants will decrease and neither the rate of production nor hours of operations of the facilities will increase as a result of the change, USEPA has determined that the proposed

MAY 13 1993

projects will not result in an increase in emissions. Therefore, based on the specific circumstances and data presented, it is USEPA's view that GM's proposed natural gas conversion projects should not be considered a major modification under the Federal New Source Review regulations.

If you have any questions with regard to this letter, please contact me.

Sincerely yours,



David Kee, Director
Air and Radiation Division

Promoting cost savings . . .

EPA, STATES WORKING WITH GENERAL MOTORS TO DEVELOP FLEXIBLE FUEL-USE POLICY

EPA and several states are working with General Motors Corp. to investigate ways to allow seasonal fuel switches within a source's existing air permit, a move agency officials expect will set a precedent for allowing fuel switching under existing permits at all sorts of facilities. EPA has indicated its intention to develop an "interim policy" excluding fuel switching to cleaner-burning natural gas from new source review as long as increases in actual emissions do not occur. The agency's decision to consider a more flexible fuel-switching policy comes in response to concerns that the NSR regulations discouraged use of lower emitting fuels.

EPA regional officials and state air regulators are collaborating with representatives of the General Motors Corp. to determine whether a federal policy incorporating the ability to fuel switch to natural gas can be extended to all source categories without triggering new source review. The test project participants are reviewing existing state policies to see if the test project with GM facilities can be accommodated within the context of the operating permit program, since any fuel switch would have to be included in a source's permit.

Agency officials decided to team up with GM after the U.S. automaker indicated its desire to add the capability to burn natural gas, which is cleaner than coal and oil. Their operating permit, however, did not allow a fuel switch since their facility permits only allow burning coal.

EPA appears likely to approve a federal seasonal fuel switching policy, particularly since fuel switching is being discussed as a method to meet the requirements of title I for nitrogen oxide reductions (see Feb. 25 issue, p7). The only foreseeable stumbling block appears to be how the policy would be enforced and how EPA will determine whether a company actually did switch to a cleaner burning fuel. State air regulators in Michigan and Ohio, for example, where General Motors operates automobile manufacturing facilities, are being asked to review existing air permits for industrial boilers and their modifications in order to preserve the ability to switch from one fuel to another, explained an EPA official. State officials could not be reached for comment.

The agency currently requires existing units to be permitted in order to burn fuels such as coal, wood wastes and tires, even though burning natural gas emits less air pollution. The agency's "interim" policy change, which was announced at a March 17-18 NSR simplification workshop in North Carolina, would eliminate that requirement, enabling sources to lower their emissions by burning natural gas.

GM representatives are very excited about the prospect of making this compliance option work within the framework of their facility operating permits. One company representative is encouraged that EPA and states are supporting this process without the threat of prevention of significant deterioration reviews, as they think it will work at other industrial and government-owned facilities as well. This is not a resolution unique to GM, the representative stressed.

EPA's interim policy would be incorporated into the NSR rulemaking by memorandum first, according to an agency official. After the new source review proposed rule is issued later this year, the new fuel-switching policy, among several others, would become part of the final regulation. An EPA official explains that the agency is working on an NSR simplification package and a rule package for the program's statutory requirements which likely will be issued as two separate EPA actions.

Initial project results are expected to be available in approximately one month. EPA is expected to make its NSR policy decision sometime later this spring, in time for states to conduct permit reviews regarding sources' ability to fuel switch.

<p>SUBSCRIPTIONS: 703-892-8500 or Toll-free 800-424-9068</p> <p>NEWS OFFICE 703-892-8516</p> <p>FAX: 703-685-2606</p>	<p>Chief Editor: Robert Harrelson Senior Editor: Julie Edelson Associate Editors: Victoria Schobel, Neil Versel, Kara Sissell Documents Coordinator: Debra Creedon Production Manager: Dara Ganoczy; Production Assistant: Jannette Esguerra</p> <p><i>Clean Air Report</i> is published every other Thursday by Inside Washington Publishers, PO Box 7167, Ben Franklin Station, Washington, DC 20044. Subscription rates: \$460/yr in U.S. and Canada; \$510/yr elsewhere (air mail). Contents of <i>Clean Air Report</i> are protected by U.S. copyright laws. Reproduction, photocopying, storage or transmission by magnetic or electronic means is strictly prohibited by law without express permission of Inside Washington Publishers.</p>
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George V. Voinovich
Governor

Donald R. Schragardus
Director

Mr. Doug Seaman
Cleveland Bureau of Air Pollution Control
1925 St. Clair
Cleveland, Ohio 44114

June 22, 1993

Dear Doug:

This letter is in regards to the General Motor's Chevrolet - Pontiac - Canada Group Plant, located in Parma, which would like to switch from coal to natural gas for their boilers (source nos. 13-18-45-1029 B001 and B002). In a memo from Mr. David Kee (U.S. EPA) to Mr. Dennis Drake (Michigan Department of Natural Resources), the U.S. EPA determined that switching to natural gas would not involve the requirements of New Source Review if the emissions did not increase due to the switch. This determination was based on specific circumstances and data presented to U.S. EPA by General Motors Corporation. The U.S. EPA had requested that GM provide a demonstration that a change in the fuels would not affect future auto production rates at these facilities. GM was able to show that the utilization rate of the boilers will not be affected by the proposed fuel switch. Furthermore, GM demonstrated that the emissions factors for all relevant pollutants will decrease and neither the rate of production nor hours of operations of the facilities will increase as a result of the change. Consequently, the U.S. EPA determined that there will not be an increase in emissions, therefore, the sources would not be subject to the New Source Review requirements for major sources. Please review the attached memos. It is important to note, however, that we do not know what information was presented to the U.S. EPA by General Motors.

I believe that the determination by U.S. EPA may apply to the Parma facility as well. Consequently, provided there will not be an increase in emissions due to the fuel change, nor an increase in the rate of production or hours of operation of the facility, this project should be permitted without involving the requirements of New Source Review applicability. Please examine the circumstances involved with the Parma facility to determine if these conditions will be satisfied.

If you have any questions in regards to this letter, please contact Jim Braun of my staff at (614) 644-3617.

Sincerely,


Robert Hodanbosi, Chief
Division of Air Pollution Control

RH/JB
attachment

New Source Review Contacts

FRANK MARKUNAS

~~Jerry Garro~~, Akron

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Dan Schiltz, Canton

Brad Miller, SWOAPCA

DOUG SERMAN

~~Fed Esborn~~, Cleveland

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~~Dan Erchul~~, RAPCA

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Phil Hinrichs, SWDO

BOB HODANBOSI, DAPC

JIM BRAUN, DAPC

ALAN LLOYD, DAPC

MISTY PARSONS, DAPC

July 22, 1992

MISTY - ANY COMMENTS?

Bab

Chevrolet-Pontiac-Canada Group



April 15, 1992

Parma Plant
General Motors Corporation
P.O. Box 30098
Parma, Ohio 44130

Mr. A. L. Ang, Engineer
Division of the Environment
Bureau of Air Pollution Control
1925 St. Clair Avenue
Cleveland, Ohio 44114

APR 20 1992

Re: New Source Performance Review Concerns for the Gas Conversion of C-P-C Parma Boiler Nos. 1 & 2
[Ohio EPA Source Nos. 13-18-45-1029 B001 & B002]

Dear Mr. Ang:

The General Motors Chevrolet-Pontiac-Canada Group Plant, located in Parma, Ohio, operates two coal-fired boilers under Permits to Operate (Ohio EPA Source Nos. 13-18-45-1029 B001 & B002). As you may recall, on February 21, 1991, I met with you and Commissioner T. J. Esborn to discuss the gas conversion project. At the close of the meeting, you were provided new Appendix Bs, with the understanding that our permits to operate would be amended to allow these boilers to also fire natural gas. Based on our discussion, it was our understanding that this was all that was required to allow the conversions to proceed. In fact, when we received Proposed Special Terms and Conditions for Permits to Operate for Two "Gas/Coal-fired" Steam Boilers, Boiler Nos. 1 and 2, it appeared the gas conversion was recognized. However, on March 20, 1992, during your annual inspection visit, you advised us that we needed to file Permits to Install (PTI) for these two burners. When we questioned this requirement, you advised us to contact Mr. Robert Hodanbosi, Manager of the OEPA Air Quality and Planning Section.

Mr. Hodanbosi was contacted on March 24, 1992. He recommended we perform calculations to determine if any contaminants emitted while burning natural gas exceeded by forty (40) tons per year or more those same contaminants when coal is burned. If none are exceeded, no problems exist and PTIs are not required. As you will find in the following information and attached graphs, the use of natural gas does not cause an increase in emissions; indeed, because natural gas generates less pollutants than coal, emissions will decrease.

Boiler Nos. 1 and 2 have a permitted capacity of 128 MMBtu/Hr, each. Using natural gas instead of coal will not affect the steam generating capacity of either boiler, but will result in considerable reductions in emissions of total suspended particulate (TSP), sulfur dioxide (SO₂), oxides of nitrogen (NO_x) and carbon monoxide (CO). Maximum potential emissions from these boilers when burning coal and natural gas are:

Emissions (Tons/Year)	TSP	SO ₂	NO _x	CO	VOC
Coal	146	2,018	627	224	3
Natural Gas	5.34	0.64	190.62	37.38	2.99

We believe the modifications we are implementing are neither physical nor operational changes which trigger new source review analysis. Rather, adapting these boilers to burn natural gas, in addition to coal, results in lower emissions (see attached graphs) and ensures our energy supply. Because emissions will be reduced by use of a less polluting fuel, adapting the units to accommodate the burning of these fuels should not be considered a "physical or operational change." Use of this alternate fuel results in a reduction of air pollution emitted from this facility, and should therefore be excluded from new source review analysis. [see 56 Fed. Reg. 27630, 34-35 (June 14, 1991)]

Even if it were determined that these changes are a physical or operational change, then a new source review permit is required only if a "significant net emissions increase" would result from the physical or operational change. A net emissions increase only occurs where the physical or operational change increases emissions of nitrogen oxide (NOx), sulfur dioxide (SO₂) or volatile organic compounds (VOC) by 40 tons per year, total suspended particulate (TSP) by 25 tons per year, carbon monoxide (CO) by 100 tons per year, or lead (Pb) by 0.6 tons per year. [40 CFR §51.165(a)(1)(x)].

The use of natural gas will decrease all of these emissions. Since a "significant net emissions increase" will not result from the proposed adaptation, a new source review permit is not required. [see 40 CFR §51.165(a)(1)(vi)(A)] Because there is a decrease in all emissions, attributable to the low pollutant fuel, new source review does not apply.

The new source regulatory scheme has always been based on the premise that the physical or operational change in question causes a "significant" increase in emissions. Utilization of existing allowed capacity through increased hours of operation or production rate is specifically excluded from the definition of physical and operational change. [see 40 CFR §51.165(a)(1)(v)(C)(6)] Currently, each boiler is allowed to operate a maximum of 8,760 hours per year. These boilers have not operated at full capacity because of the depressed automobile market and reduced demand at the facility. When the automobile industry recession ends, we will wish to take advantage of the improved market which may require operating boilers at the currently allowed rate. Since we can presently accommodate such projected demand growth independent of the use of an alternate fuel, there is clearly no causal link between the use of this fuel and any increased future emissions. The mere substitution of fuel, made possible by this adaptation, does not cause an increase in emissions; indeed, because natural gas generates less pollutants than coal, emissions will decrease.

Since use of natural gas will result in significant air quality benefits, General Motors requests that this permit modification be expeditiously approved. Should you have any questions regarding this request, please contact me or Ms. Diane M. Palmer at (216) 265-5390 or 5391.

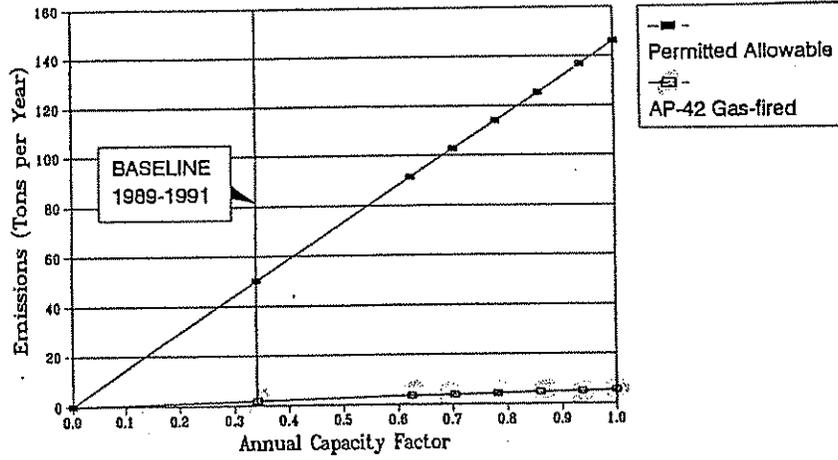
Sincerely,

Stephen P. Krupa

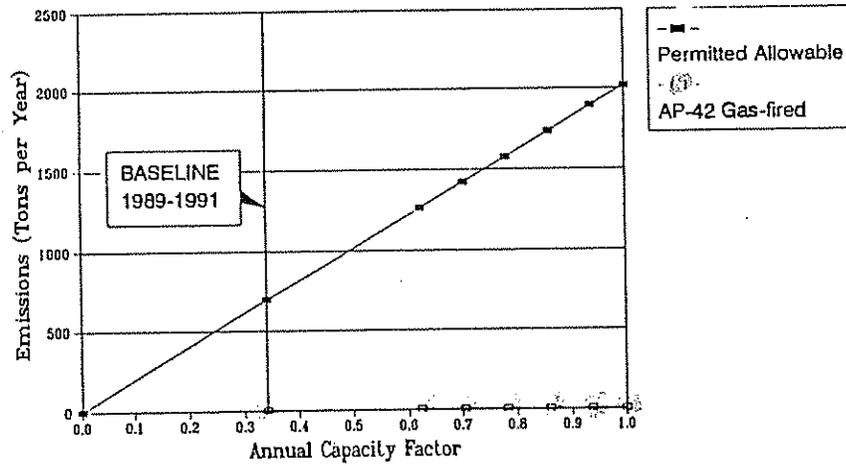
Stephen P. Krupa
Superintendent -
Environmental Activities

cc: R. Hodanbosi
D. M. Palmer

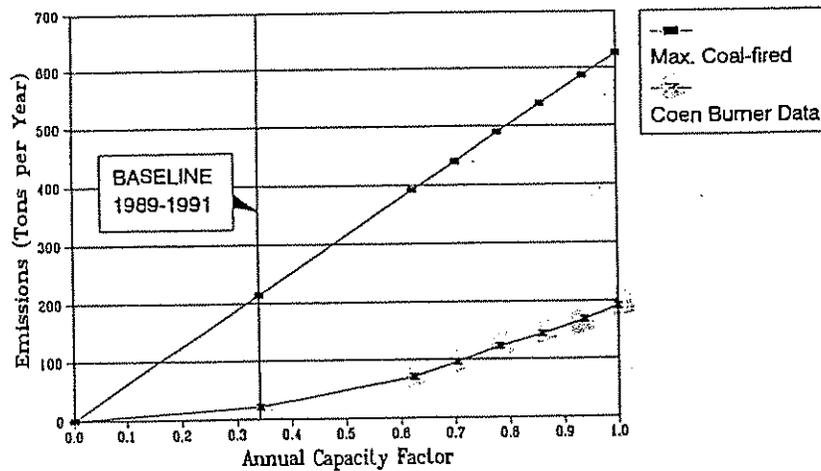
Particulate



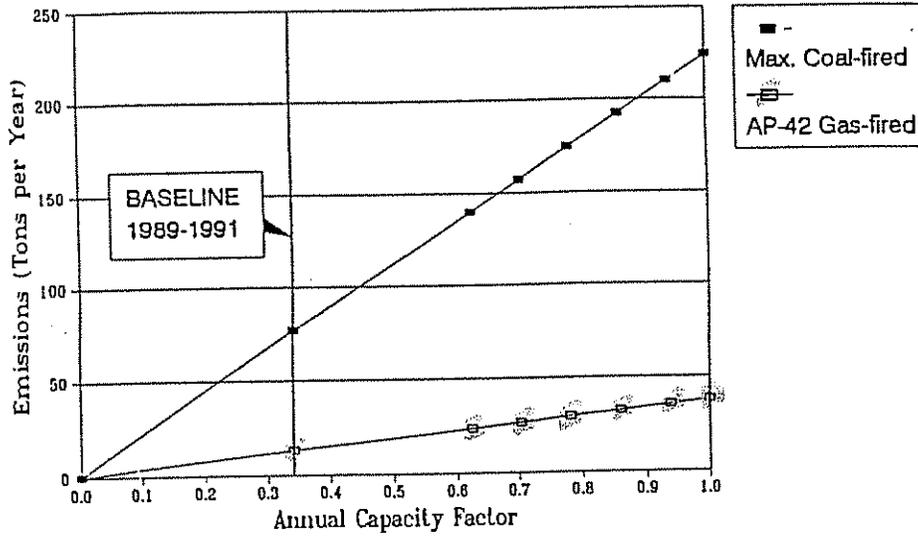
Sulfur Dioxide



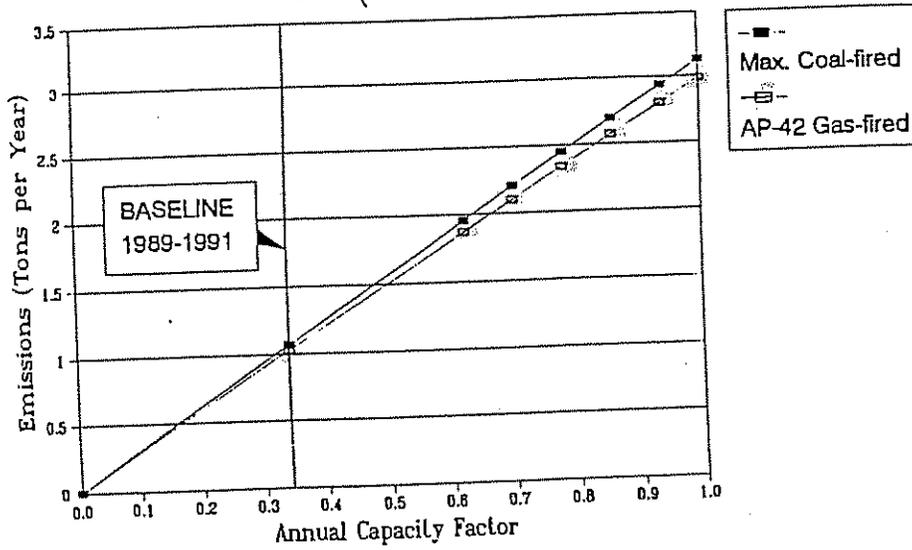
Oxides of Nitrogen



Carbon Monoxide



VOC (Non-Methane)



INTER-OFFICE COMMUNICATION

OHIO EPA, DIVISION OF AIR POLLUTION CONTROL

To: District Offices and Local Air Agencies; Barb Bonds, Chief, DSIWM

From: Robert Hodanbosi, Chief, DAPC

Re: Air Pollution Permit Requirements for Composting Facilities.

Date: April 22, 1993

This memo is intended to clarify the air pollution permitting requirements for composting facilities. First, a little background information is helpful.

In June, 1992, new solid waste composting regulations became effective. These regulations created 3 classes of composting facilities. These classes include:

Class I - Facilities which accept municipal solid waste. They must obtain a solid waste permit and annual solid waste license.

Class II - Facilities which accept source separated yard waste or animal waste plus bulking agents only and are over 15,000 square yards in size. Other materials can be composted if approved by the Director. Solid waste registration and a solid waste operating license are required.

Class III - Facilities which accept source separated yard waste or animal waste plus bulking agents only and are less than 15,000 square yards in size. Solid waste registration is required. No solid waste permits/licenses are needed.

On November 9, 1992, the Director of the Ohio EPA meet with the Ohio Municipal League and various city and village officials regarding yard waste composting facilities. The city and village officials expressed strong concerns that requiring these facilities to apply for and obtain both a Permit to Install (PTI) and Permit to Operate (PTO) were unnecessary and burdensome. After listening to their concerns, he stated that DAPC would not require air permits for yard waste composting facilities.

In a press release on November 9, 1992, the Director announced a moratorium on enforcement of the compost rules for Class II and Class III composting facilities (solid waste compost rules). The press release also stated that Ohio EPA proposed a method to simplify composting requirements for yard waste. This proposal would require facilities that compost only yard waste to simply register with Ohio EPA and notify Ohio EPA if the ownership transfers or when they close. In addition, they would not be required to employ certified operators or meet the siting criteria required for facilities that compost other types of waste, such as animal waste.

INTER-OFFICE COMMUNICATION

OHIO EPA, DIVISION OF AIR POLLUTION CONTROL

It is the Director's desire to minimize the regulatory burden on composting facilities as much as possible. As such, the air requirements will be as follows:

Class I Composting Facilities

Class I composting facilities will be required to apply for and obtain both PTIs and PTOs for all air pollution sources at the facility. This includes the material storage piles, paved and unpaved roadways, gasoline dispensing facilities, heaters/boilers, storage tanks greater than 500 gallons in size and other typical air pollution sources. The normal PTO registration program will be available for small air pollution sources.

Class II and III Composting Facilities

Class II and III composting facilities that compost only yard waste will not be required to apply for and obtain air pollution permits provided that these facilities meet two criteria: (1) Best Available Technology (BAT) requirements for the composting piles, roadways and parking lots associated with these facilities, and (2) no odor or dust complaints have been received. The BAT limits for composting piles are no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period. For paved roadways and parking areas, there are no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period. For unpaved roadways and parking areas, there are no visible particulate emissions except for a period of time not to exceed three minute during any sixty-minute observation period.

If these facilities have other types of sources (gasoline dispensing, organic material storage tanks, heaters etc. then they must apply for and obtain permits for these sources.

If you receive non-air permitting questions concerning what type of operational requirements are being required of these types of facilities, then please direct these questions to DSIWM. If you have any air related questions or comments concerning this policy, please contact Mike Hopkins, at 614-771-7505.

RH/MH

cc: Jim Orlemann, DAPC
Clara Dailey, DAPC
Jim Braun, DAPC
Misty Parsons, DAPC
Alan Lloyd, DAPC



State of Ohio Environmental Protection Agency

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INTEROFFICE COMMUNICATION

To: Bob Hodanbosi, Chief, DAPC

From: Vaughn Laughlin, Chief, GIR

Subject: End of Air Permit Moratorium for CDD Facilities

Date: June 14, 1996

This memo is to confirm that the construction and demolition debris rules "are in place." Effective immediately, the Director has ended the moratorium on the issuance of air pollution control permits for fugitive dust for construction and demolition debris facilities.

Please commence normal processing of the following PTI applications which were on hold because of the moratorium:

PTI #	Facility
02-6390	Ashtabula Recycling and Disposal
02-6422	Lake County C&D Disposal Facility
07-327	Scarberry and Son Demolition, Inc.
14-3343	John R Jurgensen Company
15-799	East 30 Excavating Co.
17-1340	Kuchan Farm.

VL/BB/bks

cc Jenny Tiell, Deputy Director, Programs
Barb Brdicka, Chief, DSIWM
Pat Madigan, Chief, PIC
Mike Hopkins, DAPC
Laura Ephlin, Legal
Julianne Kurdila, Legal

OEPA inter-office communication

to: Distribution date: April 22, 1994
from: Mike Hopkins, Section Manager - AQM&P
subject: PCE Dry Cleaning Source PTIs

As you know, the federal NESHAP for PCE dry cleaner's has been finalized. A copy of the MACT package was sent to all field offices in November 1993. This package contained a summary of the requirements and a copy of the Federal Register notice. Additional special terms and conditions for these sources have been developed for your use. A copy of these conditions was recently sent to all field offices. If you believe that any other conditions are needed, please forward them to Safaa El-Oraby for consideration. A revised version will be distributed if changes are made.

In addition, in this IOC we would like to stress several important things to consider when determining what is applicable to a particular source, and what to include in the PTI.

These three items should be included somewhere in the PTI worksheet paperwork sent to Central Office so that we are aware of them when conducting our review. They determine what control is required and if the source meets the NESHAP and BAT. The items are:

- when the machine was installed (complete date)
- type of machine (dry to dry or transfer - this should be part of the equipment description)
- amount of PCE to be purchased/used yearly (past 12 rolling months)

There are also record keeping, reporting and operational requirements. The federal rule, 40 CFR 63 Subpart M, should be cited in PTI's under the applicable rules. OAC 3745-21-09 (AA) should also still be cited.

If the amount of planned use (and purchase) is less than the potential usage/emissions, a simple restriction on gallons (gal/year or gal/month, for example) should be included in the PTI. This is important because actual amount purchased will determine what category they belong in and the control equipment required, if any.

It has been decided that we will not normally issue these PTIs as drafts. Please be aware of the new requirements as you are reviewing and writing PTIs. If you have any questions, please contact the new source review staff or Safaa, Toxics - MACT Standards, at Central Office.

Thank you.

Distribution

Don Cavote, CDO
Judy Zimomra, Cleveland
Doug Seaman, Cleveland
Fred Klingelhafer, SEDO
Jerry Garro, Akron
Phil Henrichs, SWDO
John Paul, RAPCA
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Barry Burton, Cincinnati
Don Walden, Portsmouth
Don Moline, Toledo
Gerry Rich, NWDO
Jim Braun, AQM&P
Misty Parsons, AQM&P

AQM&P Section
PTI Exemptions Covering Small Fuel Fired Units
Are Generators Included?

We recently received an inquiry concerning whether generators, engines used to produce electrical power, are covered under the OAC 3745-21-03 (A)(1)(a) exemption for fossil fuel fired units less than 10 mmBTU/hr in size. When rule 03 was revised last year, this exemption was changed to include more sources, and the similar exemptions (b) and (c) were added.

Exemption (b) covers the same types of units that are less than 1 mmBTU/hr in size, but they can burn a wider range of fuels and still be exempted.

New (c) exempts furnaces and dryers whose only emissions are water and the products of combustion of the fuel, therefore excluding many industrial process, like burn off ovens, from this exemption (i.e. they need PTIs).

Generators are not listed specifically in these exemptions, therefore, it is the Division's position that they are not exempt from the PTI requirement, no matter how small. However, it is possible that some of them, by their potential emissions, would be De Minimis sources under OAC 3745-15-05. Those that are De Minimis would not need PTIs, and do not have to meet other rule requirements as well.

Please keep this in mind when you are considering permitting for these sources, or when you receive inquiries about our requirements. If any of the District or Local staff have questions about exemptions, please contact one of the Central Office PTI review staff. Thank you.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

O: [redacted] LTR ONLY
CC: [redacted]

MAR 29 1996

RECEIVED
OCT - 2 1995

SEP 27 1995

OFFICE OF REGION 5
ADMINISTRATOR
GENERAL COUNSEL

Loretta King
Deputy Assistant Attorney General
Civil Rights Division
U.S. Department of Justice
P.O. Box 65808
Washington, D.C. 20035-5968

Re: NAACP-Flint Chapter v. Engler, Case No. 95-CV-73224-DT
(E.D. Mich.) (Zatkoff, J.)

Copy
[Handwritten signatures and notes]

Dear Ms. King:

By letter dated September 18, 1995 (copy enclosed), EPA requested that the Department of Justice petition the court for permission to file an amicus curiae brief on behalf of EPA in the above-referenced case. As requested by your staff, we have prepared the enclosed preliminary analysis of Title VI as it applies in the Prevention of Significant Deterioration of Air Quality (PSD) permitting program under the Clean Air Act (CAA). We have just recently received copies of the papers that have been filed in the case and have forwarded copies to your office. Because this case raises fundamental issues of first impression regarding the application of Title VI to EPA-funded State-implemented environmental programs, EPA believes it is important for the United States to file an amicus brief in this case.

As you may know, Plaintiffs allege that the Michigan Department of Natural Resources (MDNR) violated Title VI and EPA's implementing regulations by granting the PSD permit for the Genesee Power woodwaste combustor. They seek declaratory and injunctive relief for violations of Title VI due to the alleged failure to consider racially discriminatory impacts and adverse health effects from operation of the woodwaste combustor. Plaintiffs' argument relies in part on a December 23, 1994 letter from Dan Rondeau, EPA's Director of Civil Rights, which states that "the fact that the recipient does not select the site in a permit application does not relieve the recipient of the responsibility of ensuring that its actions in issuing permits

for such facilities do not have discriminatory effect." (copy enclosed). In its response to the Plaintiffs' preliminary injunction motion, MDNR has denied that Title VI provides any basis for relief.

In this instance, the State issued a Federal permit under a delegation to it of the PSD program. While Title VI is inapplicable to a Federal agency's action in issuing a permit, where a State agency receives Federal funds and conducts a permitting program, Title VI applies to the State agency's action of issuing permits, regardless of whether the permitting program was delegated from EPA or not. It is EPA's position that the Title VI obligations of recipients of EPA financial assistance apply to MDNR's implementation of the CAA PSD permitting program and that those obligations impose certain affirmative duties, as outlined below.

EPA is still deliberating about the position it supports regarding Title VI and permitting programs under the environmental statutes, especially where, as is the case in other statutes, there may not be as much opportunity as under the CAA to incorporate Title VI considerations in State permitting programs. This is a complex policy and legal issue which we and the Department of Justice will want to evaluate carefully. Since the United States may want to argue a more expansive interpretation of Title VI obligations in the future than that advanced in the attached memorandum, we ask that the current brief be drafted in such a way that preserves the ability to do so.

In addition, EPA would like to discuss with you the issue of addressing an appropriate remedy in this case, should the court find that Title VI has been violated. For a variety of reasons, our preliminary position is that the equities in this case probably do not support revocation of the permit. Among those considerations is the fact that additional evidence was produced by the Plaintiffs after the permit was issued. Further, certain allegations relating to environmental justice were presented to EPA during the EPA Environmental Appeals Board's (EAB) review of the 1993 initial permit. The EAB rejected the environmental justice claims for failure to prove intentional discrimination and EPA declined to take further action to halt issuance of the permit at that time. Therefore, unless more fundamental issues regarding the permitting process are presented than we have received to date, EPA would support a suggestion to the court that some form of prospective relief be fashioned for operation of MDNR's PSD program and/or for the woodwaste plan at this site.

If you have any questions regarding this matter, please contact either Mary O'Lone (260-1487) or Tony Guadagno (260-1137) of my staff.

Sincerely,


Jonathan Z. Cannon

Enclosures

cc: Mary D. Nichols
Steven A. Herman
Dan J. Rondeau
Valdas V. Adamkus
Lois J. Schiffer
Poli Marmolejos
Cathy M. Sheafor

Proposed Content of Federal Government's Amicus Curiae Brief

BACKGROUND

I. The Clean Air Act.

The Prevention of Significant Deterioration of Air Quality (PSD) program of part C of title I of the Clean Air Act (CAA) is a preconstruction review and permitting program applicable to new and modified major stationary sources of air pollution. The purpose of the PSD program is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." CAA § 101(b)(1).

The PSD program is a combination of air quality planning and air pollution control technology requirements. In brief, pursuant to § 109 of the CAA, EPA has promulgated national ambient air quality standards (NAAQS) to protect the public health and welfare. Based on these standards, in accordance with section 110(a) of the CAA, States must develop, adopt, and submit to the EPA for approval State implementation plans (SIPs) which contain emission limitations and other control measures to attain and maintain the NAAQS and to meet the other requirements of section 110(a). Each SIP is specifically required to contain a PSD permitting program. CAA § 110(a)(2)(C).

The Clean Air Act Amendments of 1977 established the statutory PSD requirements in part C of title I of the CAA. Part C included provisions to limit deterioration of air quality by establishing maximum permissible increases of air pollution over baseline concentrations, or "increments," and by requiring preconstruction review and permitting of new and modified major stationary sources. In brief, the statutory prerequisites for the issuance of a PSD permit include: 1) air quality impact analysis demonstrating that air quality standards and other requirements will be met; 2) implementation of best available control technology (BACT); 3) consideration of potential impacts on the National Parks, Wilderness Areas, and other areas specified in section 162(a) of the CAA; 4) analysis of air quality impacts projected as a result of growth associated with the project; 5) commitment to an air quality monitoring program; and 6) a public hearing with opportunity for EPA and the public to present their views on the project. See generally CAA § 165.

EPA currently has two sets of PSD regulations implementing the PSD program: (1) 40 C.F.R. § 51.166 specifies the minimum requirements for a PSD SIP to receive EPA approval, and (2) 40 C.F.R. § 52.21 provides for Federal implementation of PSD requirements, including the ability of EPA to delegate the Federal program to States. [Subsequent revisions to the PSD

regulations are not pertinent to this case.] Pursuant to 40 C.F.R. § 52.21(u), EPA has delegated its authority for conducting PSD review and permitting to a number of states, such as Michigan, which have not adopted their own PSD SIP programs. Pursuant to 40 C.F.R. § 52.21(r)(2), the procedures for public participation and administrative appeals concerning such PSD permits are provided at 40 C.F.R. Part 124.

EPA's Environmental Appeals Board (EAB) reviews and decides administrative appeals of EPA permit decisions (including EPA permit decisions delegated to States). Any person, as well as an EPA Region when EPA has delegated its permitting authority to a State, may appeal an initial EPA or delegated State permit decision to the EAB. As discussed below, an appeal of the PSD permit for the Genesee facility was filed with and decided by the EAB.

II. Title VI of the Civil Rights Act.

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin under Federally-assisted programs or activities. It expressly provides that:

No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

42 U.S.C. § 2000d. In addition to barring intentional discrimination, the Supreme Court has ruled that Title VI authorizes agencies to adopt implementing regulations that also prohibit discriminatory effects. Guardian Ass'n v. Civil Serv. Comm'n of New York, 436 U.S. 582 (1983). EPA's regulations implementing Title VI adopt a discriminatory effects standard and contain both general and specific prohibitions. See 40 C.F.R. §§ 7.30 and 7.35. In particular, they expressly provide that:

A recipient shall not use criteria or methods of administering its programs which have the effect of subjecting individuals to discrimination because of their race, color, [or] national origin . . . or have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, [or] national origin. . .

40 C.F.R. § 7.35(b) (emphasis added).

EPA's Title VI regulations define a "[r]ecipient" as "any state or its political subdivision, any instrumentality of a

state or its political subdivision, . . . to which Federal financial assistance is extended directly or through another recipient." 40 C.F.R. § 7.25. As a condition of receiving EPA financial assistance to implement environmental programs, State agencies provide assurances for complying with Title VI and EPA's implementing regulations, which are incorporated by reference into financial assistance agreements. 40 C.F.R. § 7.80:

EPA's Office of Civil Rights (OCR) is charged with EPA's Title VI enforcement and compliance functions. 40 C.F.R. § 1.25(b). Under its Title VI regulations, EPA has established processes for reviewing administrative complaints and for conducting compliance reviews of EPA-funded State programs. In general, EPA monitors Title VI compliance through these processes rather than through a review of individual State-issued permits. The permit at issue in the current litigation is the subject of a Title VI administrative complaint filed by another party and is currently under investigation by OCR.

DISCUSSION

A State agency that receives EPA financial assistance to administer an EPA-delegated PSD program is subject to the requirements of Title VI and EPA's implementing regulations. See 40 C.F.R §§ 7.15, 7.30, and 7.35.¹ Its Title VI obligations include, but are not limited to, ensuring nondiscrimination in the permit review and public participation processes. 40 C.F.R. §§ 7.30 and 7.35(a). Under EPA's Title VI regulations the recipient also is required to ensure that its policies, practices, actions, and decisions do not have the purpose or effect of discriminating based on race, color, or national origin. 40 C.F.R. § 7.35(b).² This means the recipient must

*ENSURE
that*

¹ The Government is only expressing its views on Title VI in the context of State PSD permitting actions, and its positions expressed herein do not necessarily apply to other permitting programs, including other air permitting programs.

² In this case, the key provision in EPA's regulations is 40 C.F.R. § 7.35(b), which prohibits discriminatory effects of activities authorized under permits issued under the PSD program. EPA's Title VI regulations also prohibit the discriminatory effects of actual siting decisions made by recipients. 40 C.F.R. § 7.35(c). In the permitting context, this provision would apply where the recipient selects the site, or arguably where the recipient has the authority to make permitting decisions based on siting considerations.

ensure that: (1) there is no intentional discrimination under its PSD program³ and (2) the activities authorized by the PSD permits it issues do not result in discriminatory effects prohibited by Title VI and EPA's implementing regulations, at least to the extent it can do so without violating any prohibition or limitation under the CAA.⁴ With regard to prohibited discriminatory effects, the recipients must exercise all discretion available, consistent with the CAA, to ensure that there are no such effects as a result of the PSD permits it issues.⁵

The CAA provides plenary authority to PSD permitting agencies to consider and address evidence of disparate impacts prohibited by Title VI where the disparate impact is related to the CAA's requirements. The PSD provisions of the CAA call for a comprehensive preconstruction review of a proposed new or modified stationary source. A significant legislative purpose of the PSD provisions is to

³ Plaintiffs do not allege, although do not concede a lack of, intentional discrimination in the current litigation. However, we note that EPA's EAB reviewed an earlier version of the PSD permit in question and remanded the permit to the State for further proceedings on October 22, 1993. One of the grounds of appeal was that issuance of the PSD permit constituted "environmental racism." Based on the allegations and the record before it at the time, the EAB held that the appellants had not offered evidence sufficient to prove their claims of intentional discrimination. The permit at issue in the current litigation was issued by the State in December 1993 following remand by the EAB.

⁴ Under current Title VI case law, a complainant makes a *prima facie* case by showing that the alleged act has a significant adverse disparate impact on an identifiable population defined by race, color, or national origin. However, this showing alone is not sufficient to establish a violation of Title VI. Once a *prima facie* case is made, the recipient is afforded an opportunity to show that there is no disparate impact, or to provide a legitimate nondiscriminatory reason for its action. The complainant may refute the recipient's defense by showing that the justification is a pretext or that a less discriminatory alternative is available. The recipient may rebut this by showing that the alternative does not meet its legitimate objectives.

⁵ Implicit in the duty to ensure no discriminatory effects is a duty to analyze or consider the disparate effects on populations defined by race, color, or national origin.

assure that any decision to permit increased air pollution in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision.

CAA § 160(5).

Specifically, the BACT⁶ provisions of the PSD program in the CAA authorize the consideration of the "energy, environmental and economic impacts" of the proposed new or modified major stationary source. CAA § 165(a)(4). The legislative history demonstrates that Congress intended the overall impact of the source on the character of the community to be factored into the BACT components of the PSD permitting decision, authorizing the State to condition or to deny the permit based on these considerations:

[W]hen an analysis of energy, economics, or environmental considerations indicates that the impact of a major facility could alter the character of that community, then the State could, after considering those impacts, reject the application or condition it within the desires of the State or local community.

S. Rep. No. 127, 95th Cong., 1st Sess. 31 (1977) reprinted in Senate Comm. on the Environment and Public Works, 95th Cong., 2d Sess., A Legislative History of the Clean Air Act Amendments of 1977, vol. 3 at 1405 (1978) (hereafter 3 1977 Legislative History).

Further, the provisions regarding the maximum allowable increases in air pollution ("increments") for areas subject to PSD, CAA section 163 and 165(a)(3), enable a permitting authority to evaluate and to approve or reject the configuration of a proposed source based on its localized impacts. Congress recognized that States may decline to permit a source in a particular location as an increment management tool, even if the source would not violate the maximum allowable concentration. Under the PSD program, States may judge how much of the increment

⁶ BACT is defined as "an emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under [the CAA] emitted from or which results from any major emitting facility, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such facility through the application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant." CAA § 169(3).

"will be devoted to any major emitting facility" and whether it should "refuse to permit construction, or limit its size." 3. 1977 Legislative History at 1405 (Senate Report).

In consideration of the need to preserve limited clean air resources while providing opportunities for future economic growth, see CAA § 160(3), a State may decline to issue a PSD permit for a source at the proposed site in order to retain a portion of the growth increment. See generally 3. 1977 Legislative History at 1405 (Senate Report). The permitting authority may reasonably conclude that a proposed source that would use most or all of the available increments in a given area but would not violate maximum permissible concentrations should nevertheless not be permitted in the applicant's desired configuration. Such a decision may avoid the need to "ratchet down" on existing sources in the future, which might require an economically wasteful and politically difficult decision to retrofit pollution controls on the source now being permitted in order to accommodate future economic growth. This reasoning also extends to more generalized air quality concerns regarding the projected impacts of a proposed plant in a particular location.

An important aspect of PSD review is a public hearing, the scope of which is defined broadly to include:

opportunity for interested persons including representatives of the Administrator to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations.

CAA § 165(a)(2). Thus, in addition to an assessment of the specific air quality impacts of the proposed source, the statute plainly provides an opportunity for consideration of alternatives to the proposed source and other appropriate considerations. This authority to consider alternatives necessarily includes authority to consider whether other locations would be preferable to the location proposed by the source if the permitting authority decides to do so based upon consideration of appropriate information, including community views concerning the proposed project.

In this case, the specific allegations that MDNR has violated Title VI in the issuance of the Genesee permit are also pending before EPA's OCR which has not completed its investigation under 40 C.F.R. Part 7. It is possible that the administrative process will be rendered moot by this judicial proceeding and/or that the issues will be subject to res judicata or collateral estoppel. In any event, EPA is not in a position to opine on the merits of the claim at this time and seeks to participate as amicus solely to help define the United States'

view of what duties Title VI imposes on a recipient of EPA assistance in this context.



S/L Directors, P/G BC

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO IL 60604-3590

Mick
Mey
Alan
P. Tab

DEC 27 1994

MAR 21 1995

REPLY TO THE ATTENTION

RA-19J

Russell J. Harding
Deputy Director
Michigan Department of Natural Resources
Stevens T. Mason Building
P.O. Box 30028
Lansing, Michigan 48909

Re: Genesee Power Station

Dear Mr. Harding:

Thank you for your August 15, 1994, response to the July 6, 1994, correspondence from Ms. Kary Moss, Executive Director of the Maurice and Jane Sugar Law Center for Economic and Social Justice. We want to address a matter in your correspondence related to the authority to consider the public's views about the site for a proposed major emitting facility under the Clean Air Act's Prevention of Significant Deterioration of Air Quality (PSD) program.

The PSD provisions call for preconstruction review of a proposed permit including consideration of the public's views about the air quality impacts of a source and "alternatives thereto." CAA § 165(a)(2), 42 U.S.C. § 7475(a)(2). The authority to consider the public's views on alternatives to a proposed source necessarily includes the authority to consider comments related to its proposed site. Consideration of public comments addressing siting issues is consonant with the stated purposes of the PSD program to carefully evaluate all the consequences of a decision to permit increased air pollution in an area and to provide adequate opportunities for informed public participation in the decision. CAA § 160(5), 42 U.S.C. § 7470(5). Hence, we believe the Clean Air Act provides authority to consider the public's views related to the proposed site for a major emitting facility including environmental justice concerns.

We recognize that siting issues may be particularly challenging and controversial. We will make every effort to work with you to ensure that PSD permits are the product of fair and reasoned decision-making and appropriately consider the concerns of permit applicants and the interested public. Please do not hesitate to contact us if you would like to discuss these issues further.

Finally, this letter does not address the claims under Title VI of the Civil Rights Act raised by the July 6, 1994, Sugar Law Center correspondence. The Title VI claims and a subsequent October 19, 1994, submittal from the Sugar Law Center are being reviewed by the United States Environmental Protection Agency's (USEPA's) Office of Civil Rights. Any questions you have about the matters related to Title VI of the Civil Rights Act should be directed to Rodney Cash, Acting Deputy Director of USEPA's Office of Civil Rights, or Mike Mattheisen, of his staff, at (202) 260-4575.

Sincerely yours,

/s/ original signed by
Valdas V. Adamkus

Valdas V. Adamkus
Regional Administrator

cc: Dennis Drake, Acting Director
Air Quality Division
Michigan Department of Natural Resources

Rodney Cash
Acting Deputy Director
USEPA, Office of Civil Rights

standard bcc's:official file copy w/attachment(s)
originator's file copy w/attachment(s)
originating organization reading file
w/attachment(s)

other bcc's: K. Westlake, 19J
A. Rowan, 19J
A. Daugavietis, CA-30A
R. Field, CM-29A
N. Zippay, CA-30A
C. Campbell, AT-18J
R. Miller, AT-18J
C. Newton, AR-18J
J. Clesceri, AE-17J
R. VanMersbergen, AR-18J
J. Buzecky, AR-18J
V. Patton, OGC
M. Kataoka, OGC
M. O'Lone, OGC
M. Mattheisen, OCR

ORC:DAUGAVIETIS:ad:12/23/94

DISKETTE/FILE:GP-MDNR.EJ6



State of Ohio Environmental Protection Agency

P.O. Box 163669, 1800 WaterMark Dr.
Columbus, Ohio 43216-3669
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

I N T E R O F F I C E C O M M U N I C A T I O N

DATE: April 21, 1995
TO: Distribution
FROM: Mike *HP* Hopkins, Manager-AQM&P
SUBJECT: Permit to Install Processing Table of Organization

Enclosed are tables of organization of personnel who process permit to install applications for the Districts and Local Air Agencies and personnel who either directly or indirectly process final permits to install for Central Office. These tables do not include personnel not involved in the permit to install process. The purpose of the document is to provide, in one location, the names, phone numbers, e-mail address and organizational structure of all personnel involved in the permit to install process.

Each of the tables contain the following information:

1. name
2. title
3. e-mail address
4. phone number

Those names in Bold print indicates that those people are responsible for reviewing either the final worksheet or permit.

Please note that the e-mail addresses are for internal use only. For e-mail from systems outside the Ohio EPA system the internet address should be used. For instance to send Alan Lloyd an e-mail message from NEDO you would use the dapc:alloyd address. To send Alan a message from outside the Ohio EPA system you would use INTERNET: "ALAN_LLOYD@CENTRAL.EPA.OHIO.GOV" as the address.

It is our understanding that the locals are working on their mail systems to allow e-mail through the recently installed high-speed data lines. Once this is accomplished we will update this document.



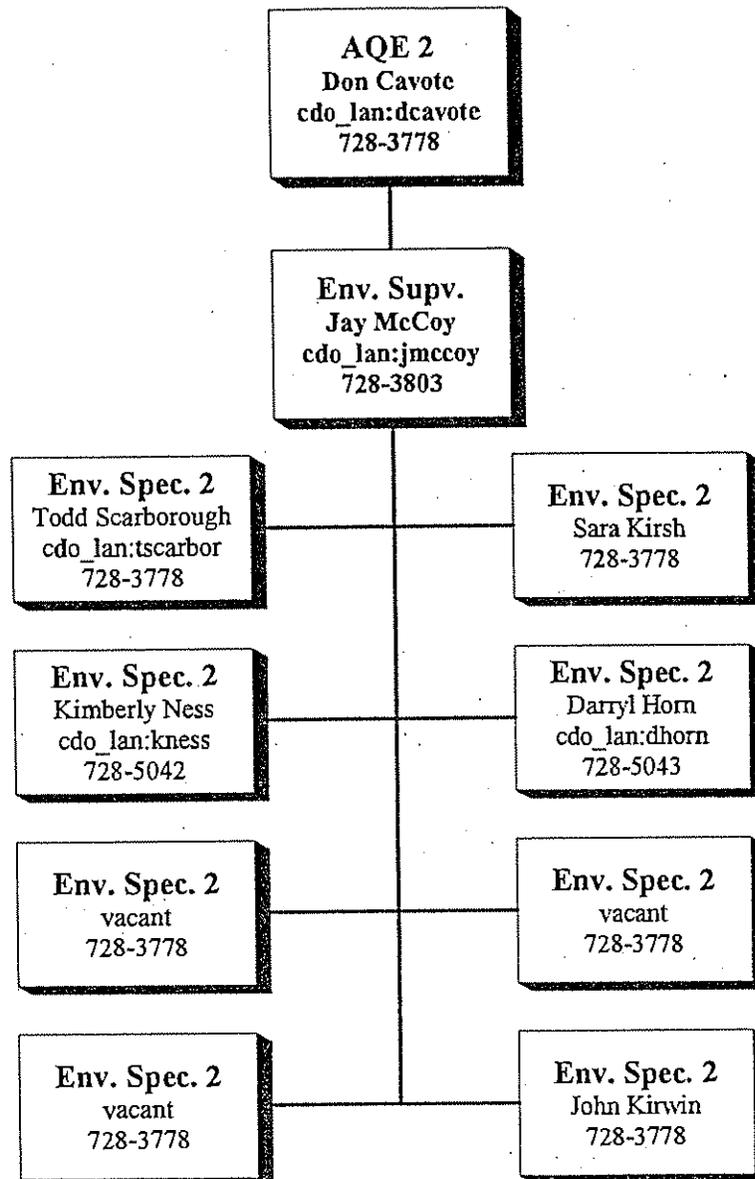
We hope this document will be useful to you. If you have any changes or suggestions to improve this document please contact Alan Lloyd at dapc:alloyd or (614) 644-3613.

MH/AL

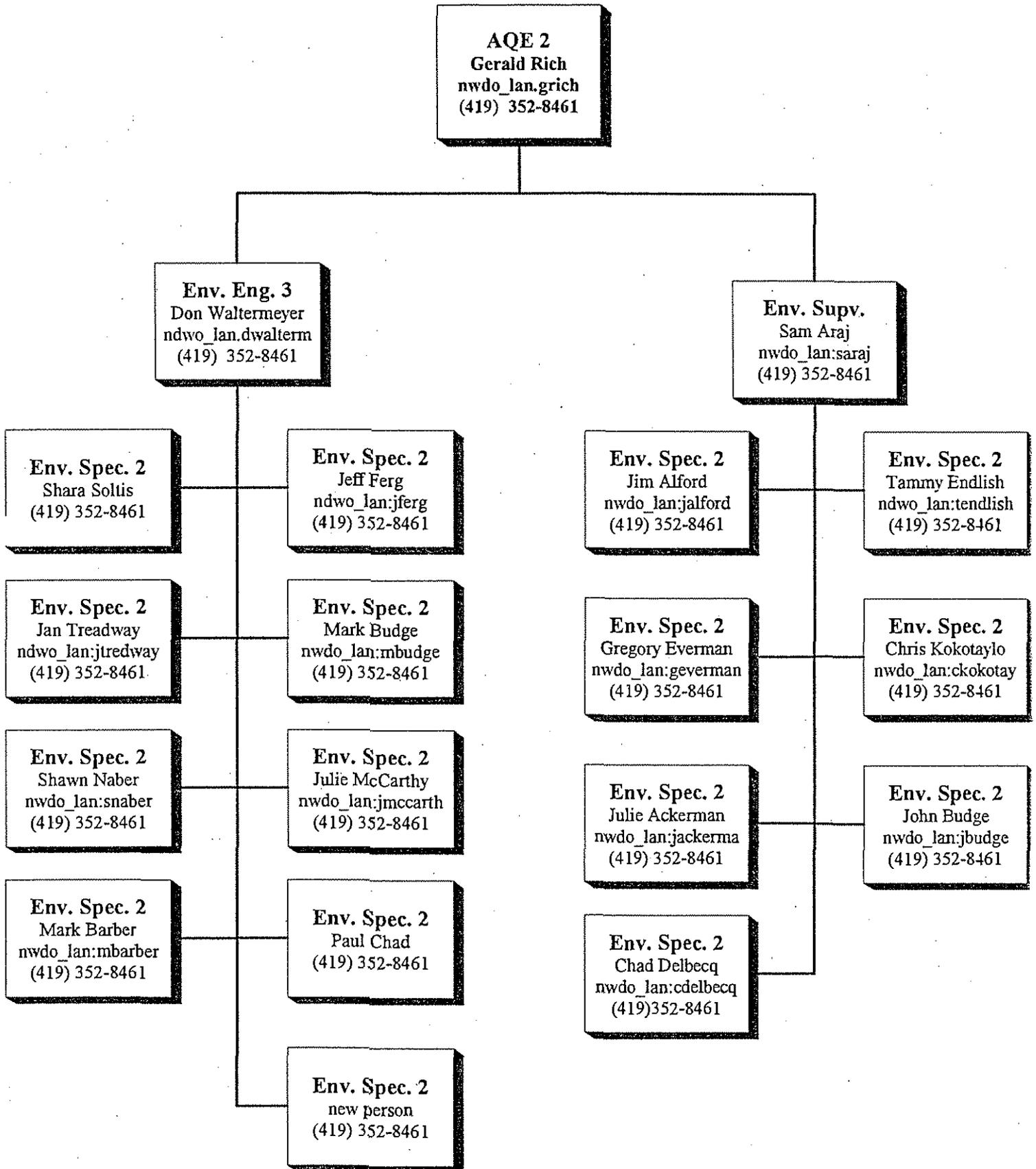
Distribution: All DO/LAA Air Unit Supervisors
Bob Hodanbosi, DAPC
Jim Orlemann, DAPC
Tom Rigo, DAPC
Jeanne Mallett, Legal

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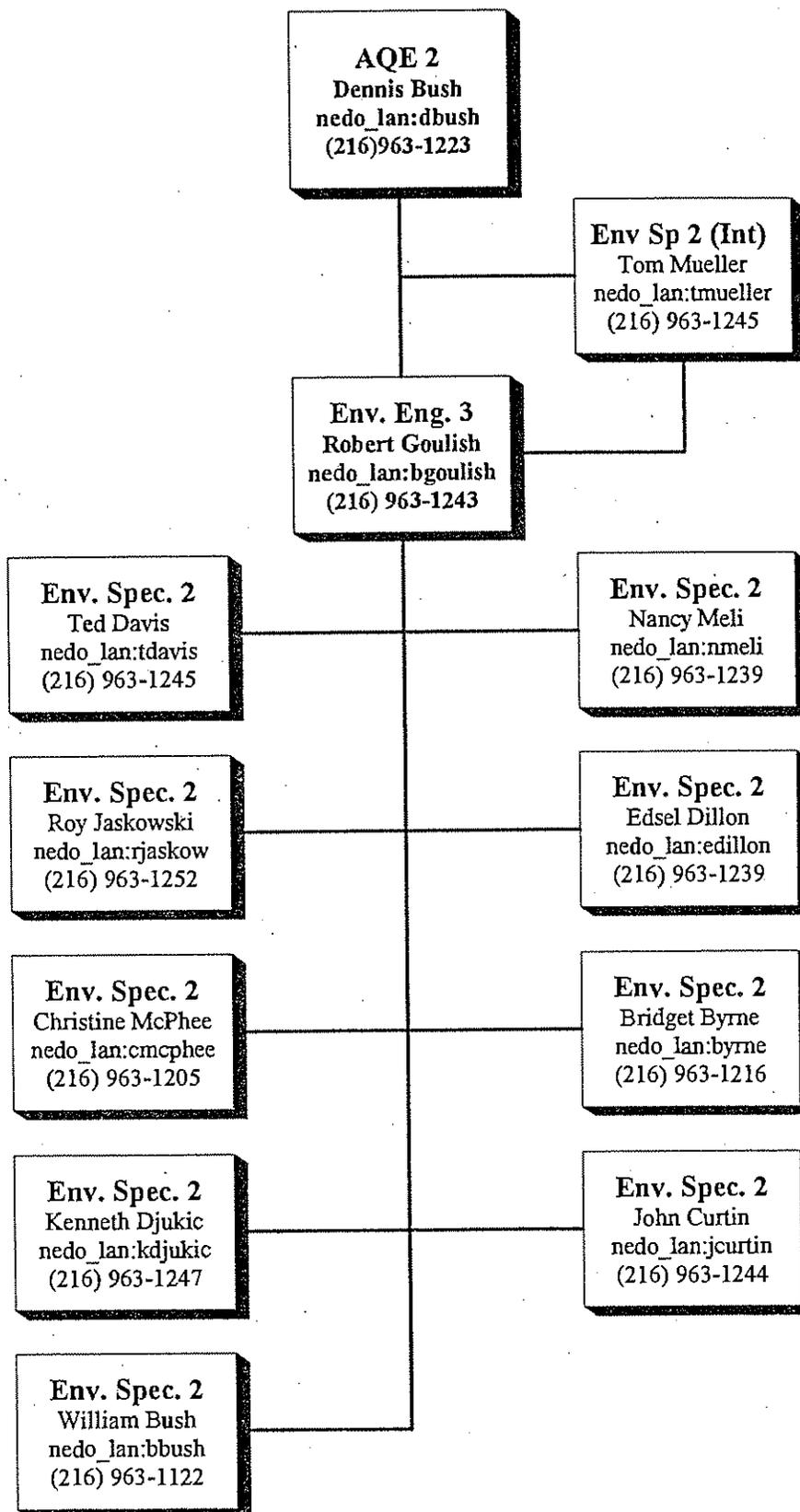
Central District Office Permit to Install Processing



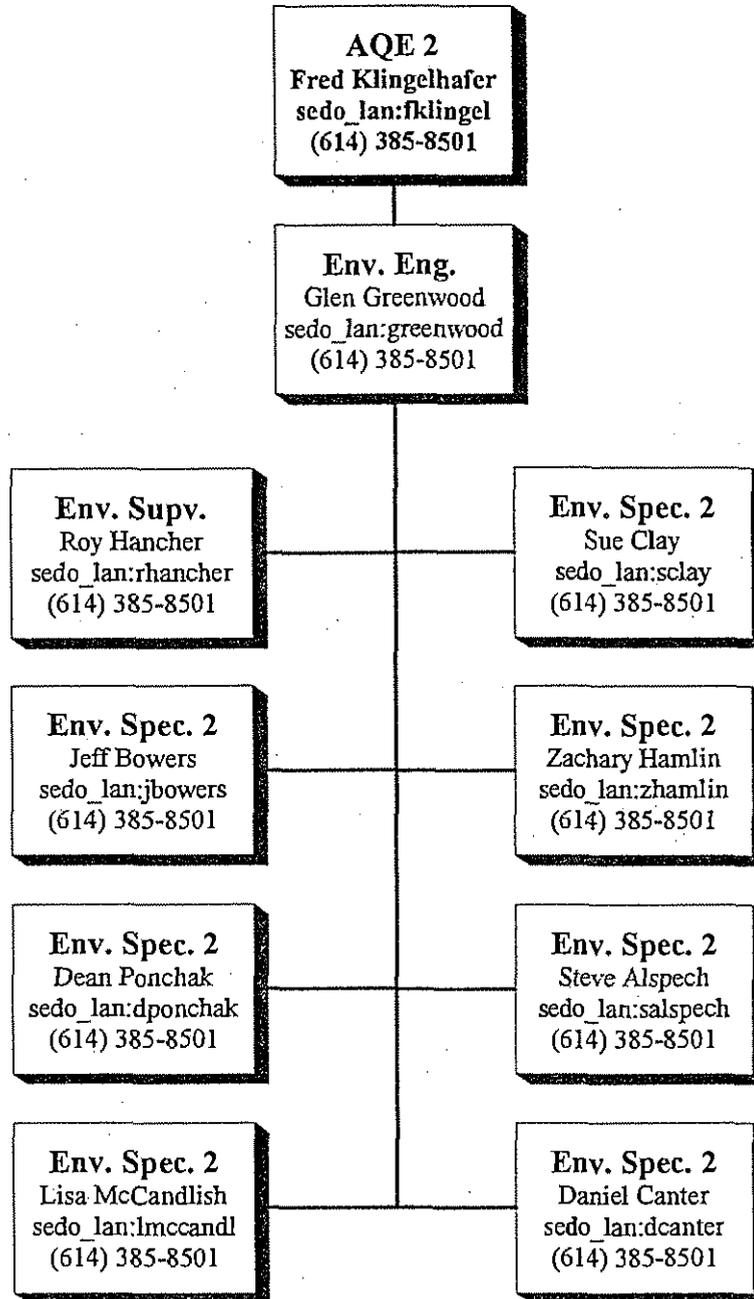
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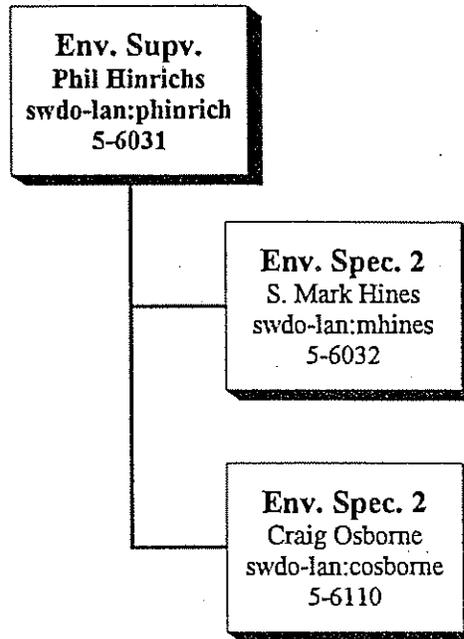
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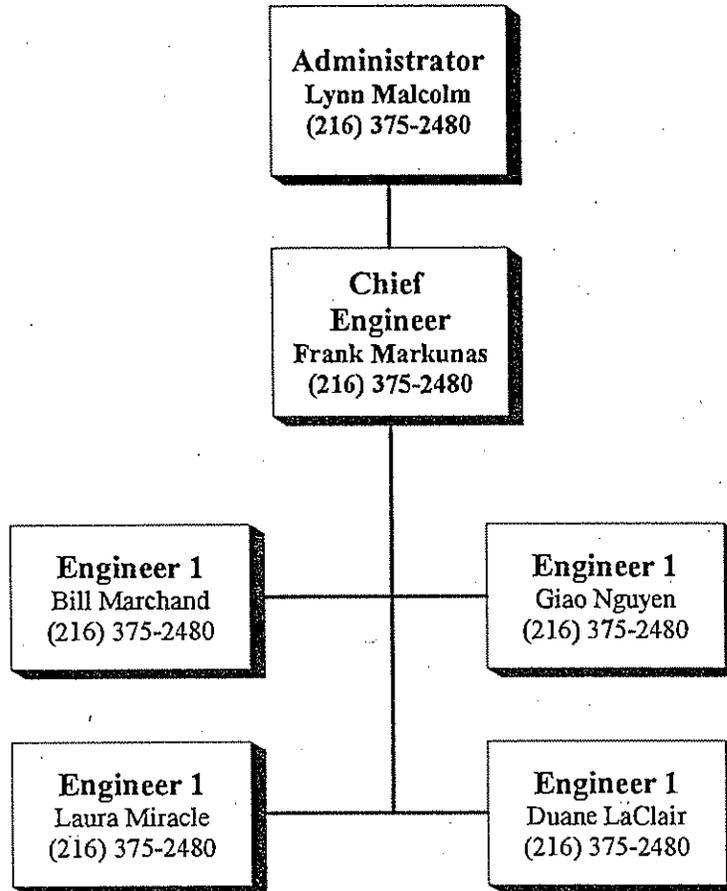
Southeast District Office Permit to Install Processing



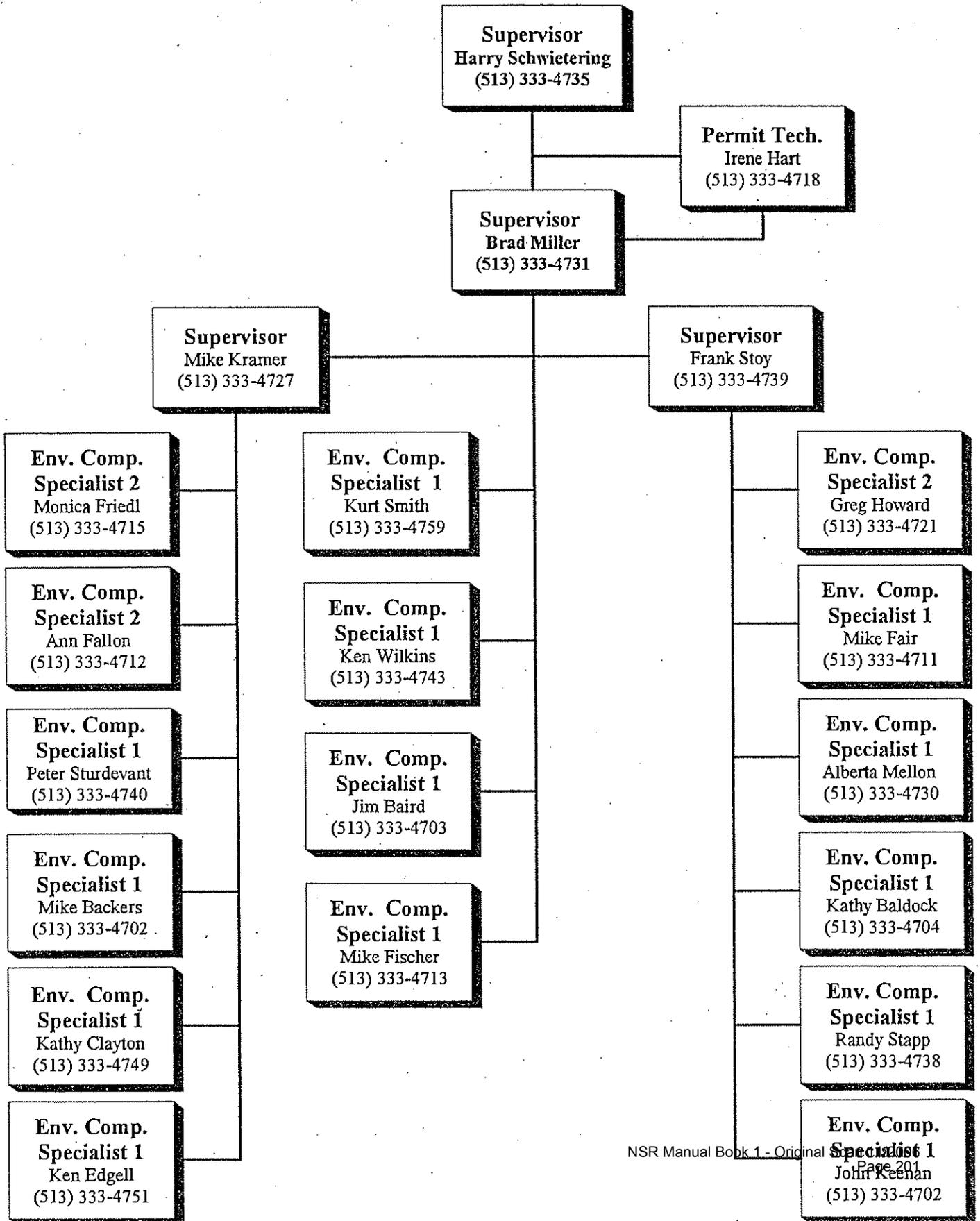
Southwest District Office Permit to Install Processing



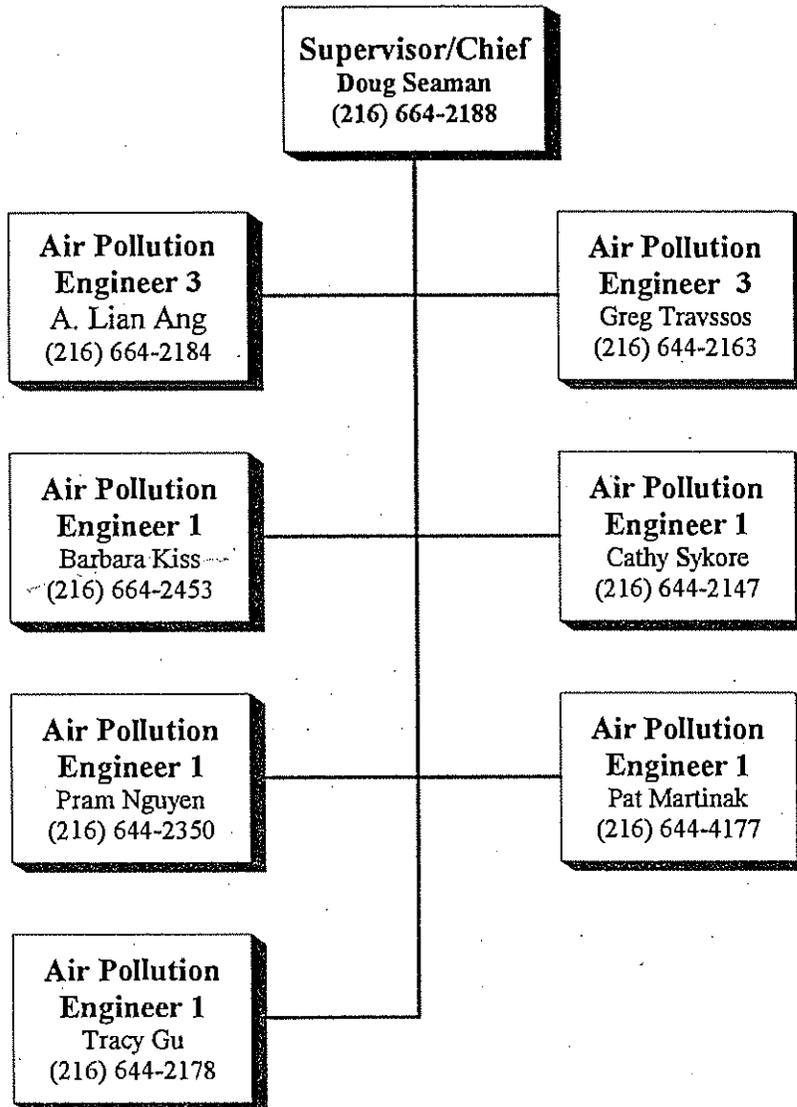
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MANAGEMENT DISTRICT
PERMIT TO INSTALL PROCESSING**



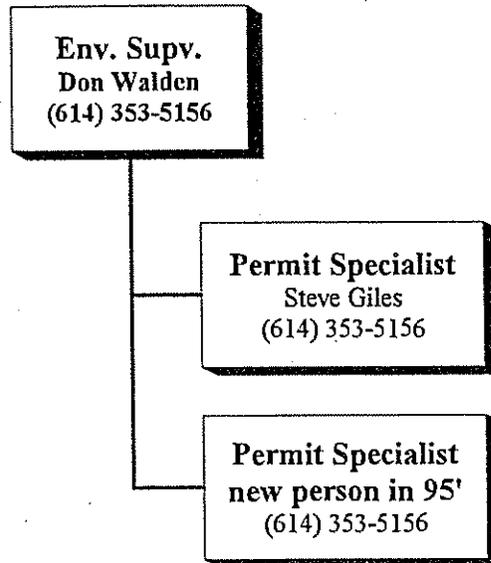
**DEPARTMENT OF ENVIRONMENT SERVICE
AIR QUALITY PROGRAM
PERMIT TO INSTALL PROCESSING**



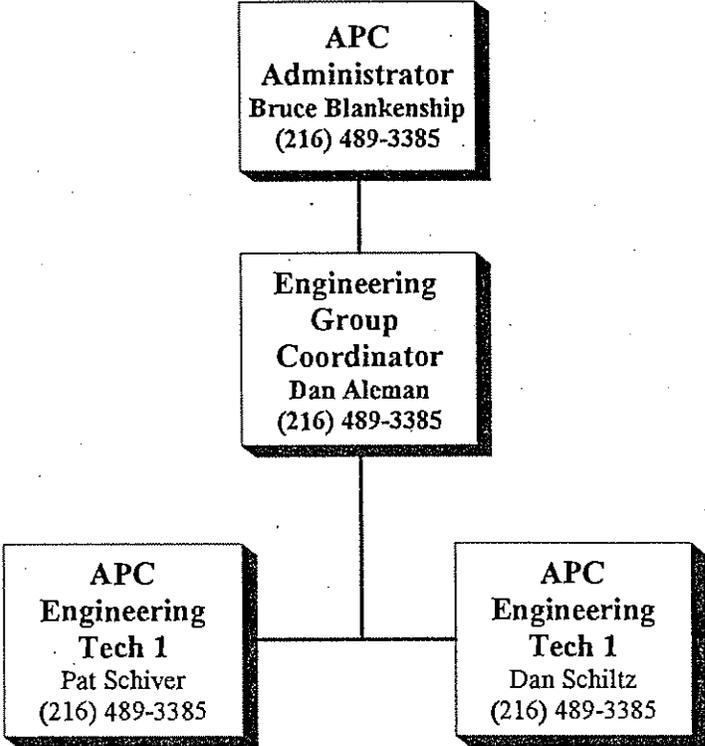
**DIVISION OF THE ENVIRONMENT
DEPT. OF PUBLIC HEALTH & WELFARE
PERMIT TO INSTALL PROCESSING**



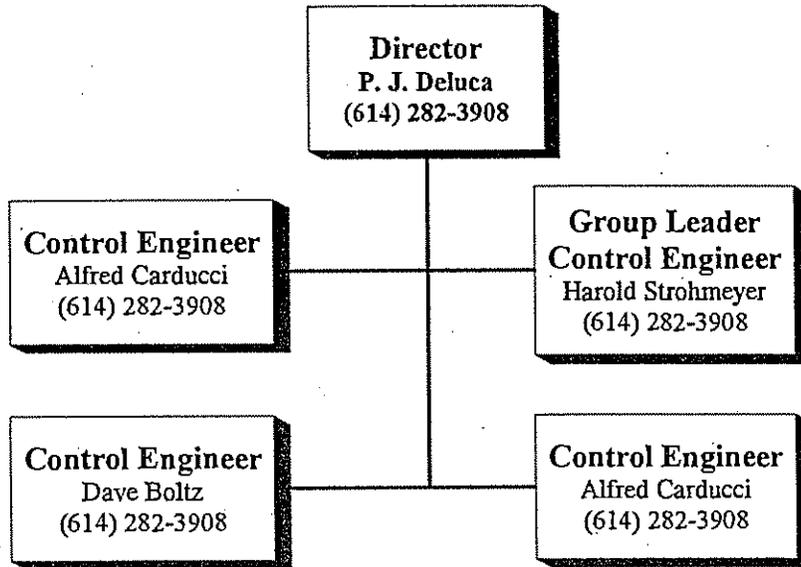
**AIR POLLUTION UNIT
PORTSMOUTH CITY HEALTH DEPT.
PERMIT TO INSTALL PROCESSING**



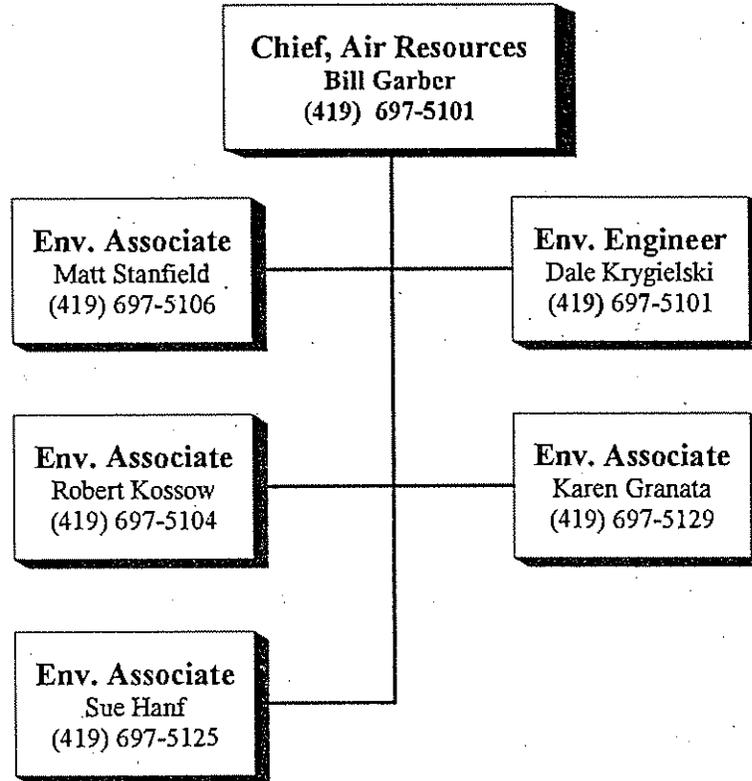
**AIR POLLUTION CONTROL DIVISION
CANTON CITY HEALTH DEPT-CITY HALL
PERMIT TO INSTALL PROCESSING**



**NORTH OHIO VALLEY AIR AUTHORITY
PERMIT TO INSTALL PROCESSING**



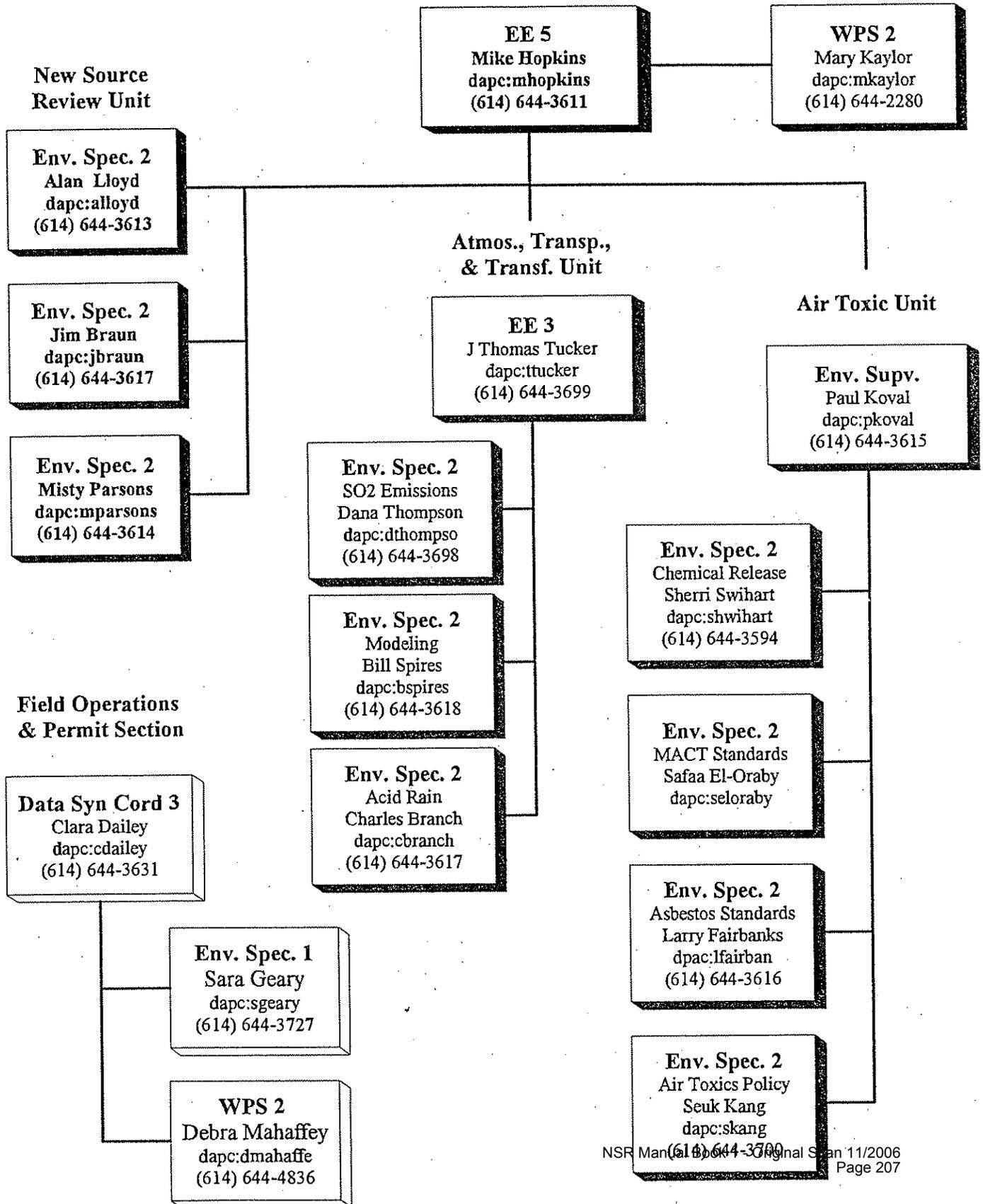
**CITY OF TOLEDO
DIVISION OF
ENVIRONMENTAL SERVICES (DEC)
PERMIT TO INSTALL PROCESSING**



Central Office

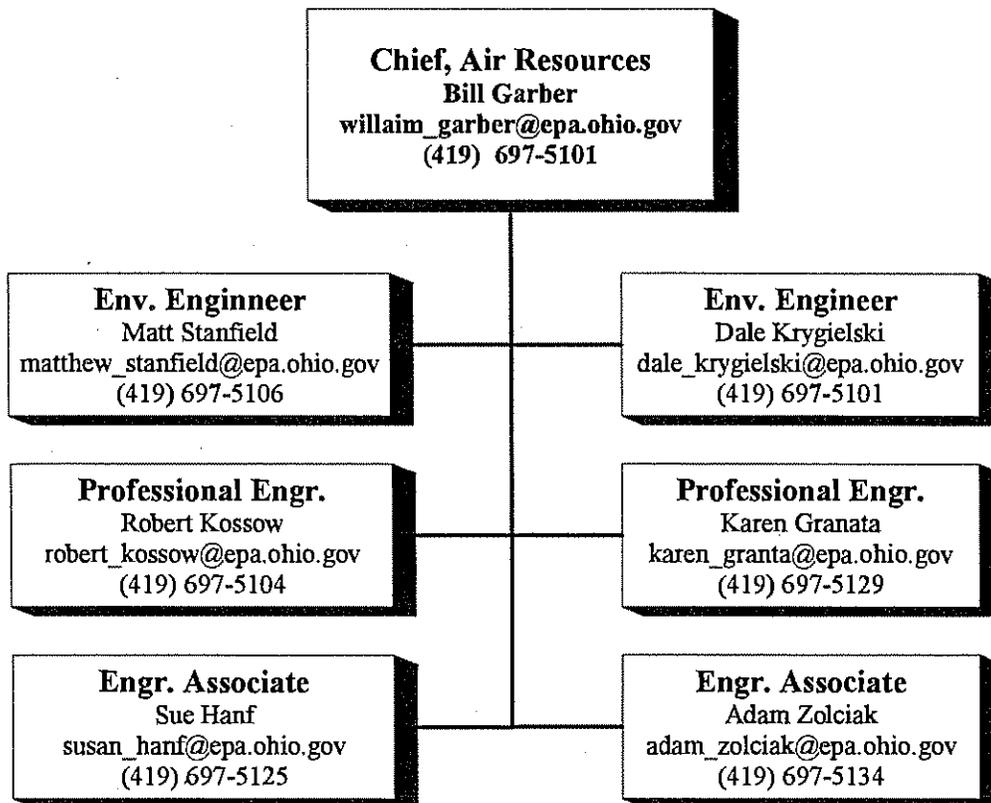
Air Quality Modeling & Planning Section

Permit to Install Processing



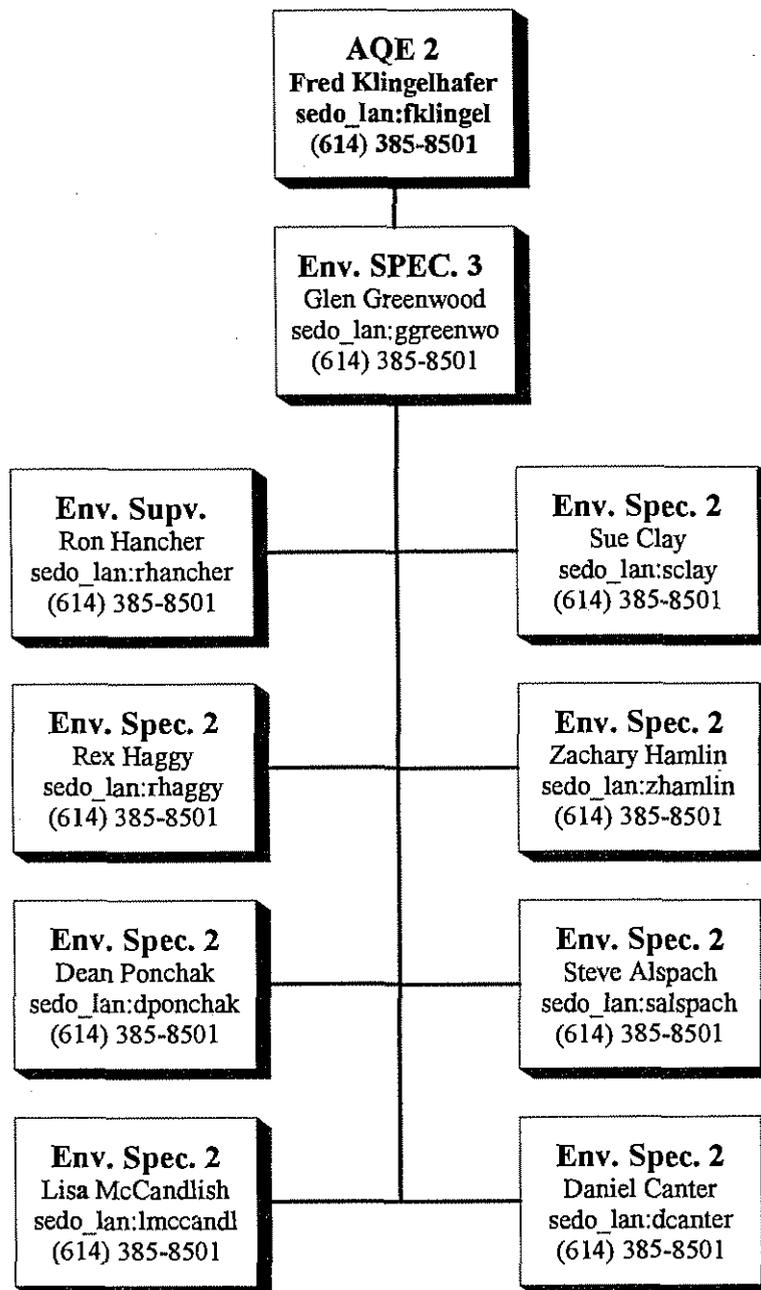
**CITY OF TOLEDO
DIVISION OF
ENVIRONMENTAL SERVICES (DEC)
PERMIT TO INSTALL PROCESSING**

INTERNET: "internet name@EPA.OHIO.GOV"



revised 6/17/96

Southeast District Office Permit to Install Processing





State of Ohio Environmental Protection Agency

*Cl: misty
Alan
Jim
future -> Nicklas*

REET ADDRESS:

1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

TO: District Office Air Unit Supervisors and Local Air Agency Directors

FROM: ^{BH} Bob Hodanbosi, Chief, DAPC

SUBJECT: Foundry Emissions

DATE: October 2, 1995

DAPC staff recently met with the Ohio Cast Metals Association (OCMA) to discuss air pollution control issues related to foundries. The primary issue of discussion was the application of OAC rule 3745-21-07(G)(2), the making of cores and molds. There has been limited testing of the actual emissions from these operations, and the industry is willing to develop additional information on the quantity of emissions from core/mold making. Attached for your information is a letter from Russ Murray of the OCMA.

As a result of the lack of emissions data from core/mold making, there appears to be an inconsistent application of OAC rule 3745-21-07(G)(2) to this type of source. I am requesting that until DAPC provides further guidance on appropriate emission factors and the application of OAC 3745-21-07(G)(2), we not pursue any additional enforcement actions against core/mold making operations for possible violations of OAC 3745-21-07(G)(2). We expect to have a resolution of this issue or further guidance by January 1, 1996. Please contact me if you have any questions.

cc: Al Franks
Mike Hopkins
Jim Orlemann

Attachment

BH/kel



OHIO CAST METALS ASSOCIATION • 2969 SCIOTO PLACE • COLUMBUS, OHIO 43221 • (614) 876-5100 • FAX (614) 876-3615

OFFICERS

President

Charles Rentschler
The Hamilton Foundry & Machine Co.
Harrison
(513) 367-6900

Vice President

Frank De Meo
General Castings Co.
Delaware
(614) 363-1947

Secretary

Arden C. Sims
Globe Metallurgical Inc.
Cleveland
(216) 328-0145

Treasurer

John Burke
OSCO Industries, Inc.
Portsmouth
(614) 354-3183

Past President

Charles T. Carroll
G & C Foundry Co.
Sandusky
(419) 625-5125

Executive Director

Russ Murray
Columbus
(614) 444-7700

BOARD OF TRUSTEES

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Columbus

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Joe Malcosky
Ohio Foundry, Inc.
Tallmadge

Robert M. Purgett
Thompson Aluminum Casting Co., Inc.
Cincinnati

August 10, 1995

Mr. Robert Hodanbosi, Chief
Division of Air Pollution Control
Ohio EPA
1600 Watermark Drive
P.O. Box 1049
Columbus, OH 43266-0149

Dear Mr. Hodanbosi:

On behalf of the members of the OCMA Environmental Affairs Subcommittee on (VOC) emissions, I would like to thank you, Al Franks, Jim Orleman, and Mike Hopkins for taking the time to meet with us last Thursday, August 3, 1995. We are pleased that the Division of Air Pollution Control has indicated a willingness to work with the Ohio metal casting industry to address a woeful lack of scientifically valid data regarding potential VOC emissions from the core/mold making process.

We have begun our efforts to collect existing information on emissions from mold and coremaking operations. We anticipate that we will meet your suggested 30 day time frame. Steps have also been taken to develop a proposal for addressing the requirements of O.A.C. 3745-21-07 (G) (2) as it applies to the foundry process.

Concerning the memorandum on this issue that you indicated would be sent to District Offices, would it be possible for you to send me a copy? Thank you.

I want to reiterate our gratitude for this opportunity to work with the Division of Air Pollution Control to resolve an issue of import to all of us. We are looking forward to working with you to achieve a solution acceptable to everyone. If you have any questions, please do not hesitate to call.

Sincerely,

Russ Murray
Executive Director

- cc: C. Frank De Meo, OCMA President
- Arden C. Sims, OCMA Secretary
- Steve Wilson, OCMA Vice President for Environmental Affairs
- Members of the OCMA Environmental Affairs Subcommittee on VOC Emissions
- Gerry Ioannides, Assistant Director, Ohio EPA
- Al Franks, Ohio EPA
- Jim Orleman, Ohio EPA
- Michael E. Hopkins, Ohio EPA

Ohio EPA
Division of Air Pollution Control

cc: misty
ACAN
SARAA
Review: (Jepkin)

inter-office communication

to: Bill Juris

from: Rick Carleski, ^{PC} Supervisor, SBAP

subject: Permitting and fee requirements for GDF's

date: May 6, 1996

I have prepared a response to your March 20, 1996 memo concerning permit and fee requirements for GDF's. The Small Business Assistance Program has many GDF customers and is equally interested in resolving the issues listed in your memo.

Attached is a flowchart which summarizes the permitting and fee requirements for GDF's throughout Ohio. It has been recent DAPC policy not to include PTI/PTO exempt sources in the non-Title V fee system as outlined in Bob Hodanbosi's IOC of April 17, 1996.

Because they are not included in the OAC Rule 3745-31-03(A)(1)(ee) exemption, GDF's located in the following 29 counties are required to obtain both PTI's and PTO's. This requirement also subjects them to the non-Title V fee system:

Ashtabula	Greene	Montgomery
Butler	Hamilton	Portage
Clark	Jefferson	Preble
Clermont	Lake	Stark
Clinton	Licking	Summit
Columbiana	Lorain	Trumbull
Cuyahoga	Lucas	Warren
Delaware	Mahoning	Washington
Franklin	Medina	Wood
Geauga	Miami	

Bill Juris--Re: GDF's
Page 2

GDF's in all other Ohio counties are exempt from permitting and non-Title V fee requirements as long as the GDF has Stage I vapor control per OAC 3745-31-03 (A) (1) (ee).

About Existing GDF's.....

GDF's that currently have PTO's or registrations and are not in the 29 counties listed above do not have to pay non-Title V fees. These facilities should still submit the blue emission fee cards but will not be billed. The DO/LAA's should indicate on the non-Title V fee summaries these GDF's are exempt. These PTO's and registrations can then be withdrawn upon renewal or IOC to Clara Dailey, PMU.

In addition please note the following:

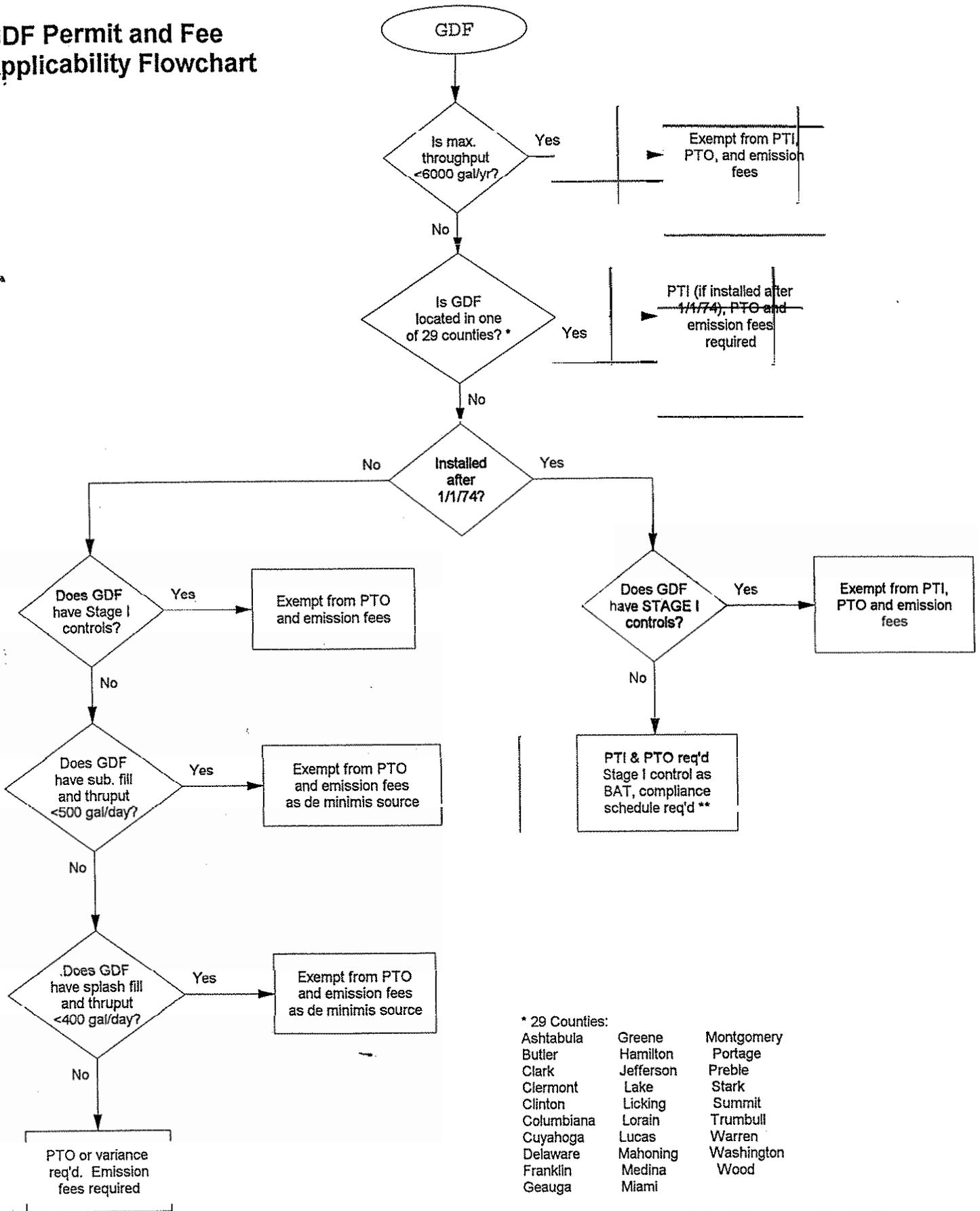
- 1) Regardless of location, any GDF having a maximum annual throughput of less than 6000 gallons is exempt from permits or fees.
- 2) If a GDF requires a PTO or registration, the owner must pay the non-Title V fees.
- 3) GDF's located at Title V facilities must be included as an emission unit in the facility's Title V application.

Please review this flowchart to see if it adequately addresses all of your concerns. Please submit any comments to me by May 20, 1996.

Thank you.

cc: Jim Orlemann, DAPC
Mike Hopkins, DAPC
Andrew Hall, DAPC
Clara Dailey, DAPC
Cindy DeWulf, DAPC
Tom Rigo, DAPC
LAA Directors
DO Unit Supervisors

GDF Permit and Fee Applicability Flowchart



- * 29 Counties:
- | | | |
|------------|-----------|------------|
| Ashtabula | Greene | Montgomery |
| Butler | Hamilton | Portage |
| Clark | Jefferson | Preble |
| Clermont | Lake | Stark |
| Clinton | Licking | Summit |
| Columbiana | Lorain | Trumbull |
| Cuyahoga | Lucas | Warren |
| Delaware | Mahoning | Washington |
| Franklin | Medina | Wood |
| Geauga | Miami | |

** Installation of Stage I controls will then exempt the GDF from permitting and emission fee requirements.

OEPA inter-office communication

to: DO & LAA Supervisors date: 12/3/93
from: JB M.H.
Jim Braun through Mike Hopkins, Manager - AOM&P
subject: Best Available Technology - GDF's

I am requesting your assistance in the determination of Best Available Technology for Gasoline Dispensing Facilities in regards to the Stage II requirements. Central Office has received numerous inquiries as to whether or not Stage II will be considered BAT for any new GDF. In order to develop a policy which can be applied consistently and fairly to all sources, the input from all of the DOs & LAAs is critical. As such, we are asking for your suggestions on how you believe BAT should be defined for GDFs. Once we receive your suggestions, we plan on developing a policy which will be distributed for your comments as well. In suggesting BAT, you should consider the following points:

1. Define the appropriate cut-off limits (e.g. annual & monthly throughputs) which will exempt the source from the Stage II BAT requirement.
2. Define the necessary control levels which should be achieved.
3. Define the appropriate components to be utilized - do the components need to be CARB approved?
4. Need for testing requirements as outlined in 21-09 DDD(2).
5. Recordkeeping requirements as outlined in 21-09 DDD(3).

Any other concerns regarding BAT for GDF's should be addressed as well. I would appreciate the submittal of your suggestions by January 14, 1994. Thank you for your cooperation in this matter.

MEH/JJB

cc: Bob Hodanbosi, DAPC
Jim Orlemann, DAPC
Bill Juris, DAPC
Sherri Swihart, DAPC
Alan Lloyd, DAPC
Misty Parsons, DAPC
Jim Braun, DAPC

OhioEPA

State of Ohio Environmental Protection Agency

INTER-OFFICE COMMUNICATION

TO: Distribution

FROM: Sherri Swihart through Bill Juris, DAPC

SUBJECT: Stage II questions

DATE: November 17, 1993

The following questions regarding Stage II policies were brought to our attention by Mr. Leon Ang from the Cleveland field office:

- (1) ***Will all new or modified GDF's be required to install Stage II control equipment?***
In a Stage II regulated county, newly constructed GDF's (constructed after November 15, 1990) have until September 30, 1993 to be in compliance. Modified GDF's (i.e., existing GDF's with new tanks) would follow the appropriate compliance schedule. Please note that the standard 10,000 gallons/month and independent small business marketers 50,000 gallons/month exemptions apply to existing, modified and newly constructed GDF's. (A separate policy on Stage II BAT for new GDF's may be forthcoming.)
- (2) ***Will all new or modified GDF's be required to install Stage I control equipment?***
Stage I is considered Best Available Technology (BAT) and is basically required for all new sources and modifications which would require a PTI. There is a policy on Stage I BAT.
- (3) ***If an independent small business marketer has 2 GDF's and submitted a PTI application for a third GDF, what Stage II installation schedule would be required?*** The compliance schedule would be the same: 1 GDF by March 31, 1993, 2 GDF's by March 31, 1994, and all GDF's by March 31, 1995.
- (4) ***How soon should the Stage II control equipment be tested?*** All testing should be completed by the compliance deadline.

- (5) ***Will agency personnel be required to monitor the testing of the Stage II control equipment in order to accept the test results?*** Agency personnel should be given the opportunity to witness all tests and should monitor as many as possible. This is the reason for the 30 day test notification under OAC rule 3745-21-09(DDD)(2)(c).
- (6) ***Some companies wanted a simplified operating instruction for the vacuum assisted type Stage II equipment, as the instructions in the regulations were geared for the vapor balance type Stage II equipment. What must be included in the operating instructions for consumers?*** The regulation only specifies operating instructions. If the system is vacuum assist, then the instructions could reflect this. The instructions would still specifically prohibit topping off and include the 1-800 phone number for complaints.
- (7) ***What font, type or letter size is to be used in the Stage II operating instructions?*** There is no font, type or letter size specified in the regulation for operating instructions only that these instructions should be "conspicuously posted" in each gasoline dispensing area. The letter size should be large enough for the motorist to readily see while attempting to pump gasoline.
- (8) ***The "Suspension of Control Requirements" in OAC Rule 3745-21-09(DDD)(5) should also be mentioned (in the terms and conditions). If this rule was suspended in the future, would the source owner or operator still be required to install Stage II control equipment?*** The installation of Stage II control equipment would not be required under these circumstances but it looks as if only the Toledo area will need to be concerned with this issue. Stage II is still currently needed for the required 15% rate-of-progress reduction in the other areas. The "Suspension of Control Requirements" do not need to be mentioned in the terms and conditions.
- (9) ***If a facility submitted a PTI application to replace a diesel storage tank, would the gasoline storage tanks in the GDF be required to install Stage II control equipment?*** The gasoline dispensing facility is required to be equipped with Stage II vapor controls if the GDF is already subject to the Stage II regulations or if the diesel tank was replaced with a gasoline tank thereby increasing their throughput over the exemption level.
- (10) ***How should the difference between the PTI's for the GDF's and the PTI's for all other sources be addressed? For that matter, would the modifications be different from the PTI's?*** The worksheets for the GDF's will remain the same as before.

There have also been a number of questions brought to our attention from other local air agency and district office personnel, gasoline marketers, and industrial firms

regarding Stage II issues which are not stated in the regulations. The following specific remarks and guidelines are based on discussions with the U.S. EPA:

- (11) ***Decertification of CARB Certified Components:*** Some components which were CARB certified may become decertified because of modified testing techniques. These components which had met CARB's specific requirements for approval (95% control), now may not pass with the more rigorous testing standards. If this situation should occur, the facility would be required to replace their decertified components with certified components. The allowable time frame for the phase-out would be the life of the component. That is, when the decertified component is replaced it must be replaced with a current CARB certified component. A time period greater than four years would not be considered reasonable by the U.S. EPA.
- (12) ***Independent Small Business Marketer Exemption and Compliance Deadline:*** The 50% income requirement for independent small business marketers (ISBMs) must be calculated on a facility-by-facility basis. Furthermore, this income must be based on a gross income. This pertains to the condition under OAC rule 3745-21-01(H)(9)(d). Also, when there is more than one facility owned by an independent small business marketer, even the exempted facilities should be included in the compliance deadlines (33 percent by March 31, 1994; 66 percent by March 31, 1995; and 100 percent by March 31, 1996). For example, if an independent small business marketer owns three stations, two of which are less than 50,000 gallons per month, then the owner would already have two GDFs in compliance. Therefore, the third station would need to have Stage II installed by March 31, 1996.
- (13) ***Stage II Exemption Exceedances:*** Facilities which claim a Stage II exemption (i.e., 10,000 gallons per month or 50,000 gallons per month for independent small business marketers) and then dispense gasoline above the exemption level for one month or more are required to install Stage II within the stated compliance deadline appropriate to the facility under OAC rule 3745-21-04(C)(64). (For example, a gasoline dispensing facility which previously had a throughput less than 10,000 gallons per month begins dispensing 15,000 gallons per month in November of 1993. This facility would be required to install Stage II by March 31, 1995.) If the facility has a throughput greater than the exemption level sometime after the final compliance date, then they would provide an expeditious compliance schedule immediately to the appropriate local air agency or district office. At a minimum, a facility would have to comply no later than two years after it exceeded the 10,000 gallons per month. Any non-Stage II dispensing of gasoline from a non-exempted facility, or a previously exempted facility that no longer is exempted, after the appropriate compliance deadline in OAC rule 3745-21-04(C)(64) can be subject to an enforcement action and civil penalties.

- (14) ***Gasoline Dispensing at Automotive Assembly Plants:*** All gasoline dispensing at an automotive assembly plant is collectively subject to the Stage II requirements under OAC rule 3745-21-09(DDD). This applies to the dispensing of gasoline into newly assembled vehicles and to the dispensing of gasoline into vehicles driven onto or around the plant.

If you have any further questions regarding Stage II or the answers above, please call me at (614)644-3594.

xc: NEDO (Dennis Bush)
NWDO (Gerald Rich)
Cleveland (Doug Seaman)
Toledo (Dale Krygielski)
RAPCA (Curt Marshall)
Cincinnati (Harry St. Clair)
Akron (Jerry Garro)
Lake County (Leon Weitzel)
CDO (Don Cavote)
SWDO (Phil Hinrichs)
SEDO (Fred Klingelhafer)
Canton (Bruce Blankenship)
NOVAA (Harold Stroymeyer)
Portsmouth (Don Walden)
Jim Orlemann (DAPC)
Mike Hopkins (DAPC)

inter-office communication

to: New Source Review Contacts date: May 15, 1987
from: Bob Hodanosi, Manager, AQM&P
subject: Best Available Technology for Gasoline Dispensing Facilities

The New Source Review Subcommittee has been evaluating a uniform approach for the definition of best available technology (BAT) for gasoline dispensing facilities (GDFs). After a review of current practices, the following information is provided to define BAT for GDFs in both urban and rural areas.

Urban Areas

All sources with an annual throughput of 6,000 gallons will be required to install Stage I vapor control. Sources with less than 6,000 gallons can be exempted from the Stage I requirement if the applicant provides a valid reason for the exemption. This decision can be made at the field office.

An "urban area" is defined as the following counties: Butler, Clermont, Cuyahoga, Franklin, Greene, Hamilton, Lake, Lorain, Lucas, Mahoning, Medina, Montgomery, Portage, Stark, Summit, Trumbull, Warren and Wood.

Rural Areas

BAT for a GDF in a rural area will be:

1. GDFs less than 6,000 gallons per year will not be required to install a vapor balance system.
2. GDFs between 6,000 and 12,000 gallons per year can be exempted from the Stage I requirement if the facility can provide evidence of a hardship due to the imposition of Stage I vapor control. The field office can make the determination if the source should not be required to install Stage I controls.
3. Sources with an annual throughput greater than 12,000 gallons are required to install a Stage I vapor balance system.

A rural county is any county not listed above under "Urban Areas."

Also, for the sources in the rural counties, a term and condition should be added to the permit to install that requires the applicant to submit a permit to operate application. If eligible, these sources can be placed on registration status.

Please contact me at (614) 466-6116 if you have any questions.

BH/jlc

cc: Jim Orlemann

POTENTIAL TO EMIT - LIMITING HAPS

- WHY? / WHEN?
- SAMPLE CALC
- WHAT LIMITS NEEDED FOR PERMITS?
- TERMS AND CONDITIONS

WHY/WHEN CALC HAP?

- 1990 CAA - 189 HAPS
- 10/25 TITLE V
- AVOID TITLE V
- IF IT IS TITLE V - NO NEED TO CALC.
- PTE < 10 TON - NO NEED TO CALC.
- POSSIBLE MACT LIMITS

EXAMPLE: PAINTING OPERATION

- ONE COATING LINE
- 2 COATINGS - PRIME AND TOP COATS
- 8 H/D, 5 D/W, 50 W/Y
- NO OTHER HAP SOURCES

PRIME COAT

- FROM APPLICATION AND MSDS
- 10% BY VOL XYLENE
- 20% BY VOL TOLUENE
- 70% BY VOL SOLIDS AND WATER
- 5 GALLONS/HR MAX
- 10,000 GALLON/YR ACTUAL

TOP COAT

- FROM APPLICATION AND MSDS
- 7% BY VOL XYLENE
- 2% BY VOL TOLUENE
- 88% BY VOL SOLIDS AND WATER
- 4 GALLONS/HR MAX
- 9,000 GALLON/YR ACTUAL

QUESTIONS

- TITLE V FOR HAPS?
- CAN THEY AVOID TITLE V?

CALCULATION STEPS

- CALCULATE INDIVIDUAL AND COMBINED HAPS FOR EACH COATING
- SUM INDIVIDUAL HAPS FOR EACH HAP
- SUM COMBINED HAPS FOR ALL COATINGS
- SEE HANDOUT

Table 1: Calculation of Individual HAP Emissions for Each Coating

Instructions: Use this chart to calculate the individual HAP emissions and the combined HAP emissions for each coating. Fill out this table for each coating that contains a HAP.

Coating Identification: PRIME COAT

	A	B	C = A x B	D	E = C x D	F = E x 4.38	G	H = C x G / 2000	
Individual HAP	% by Vol	HAP Density	HAP Content <i>% by wt.</i>	Max Gallon Usage	Max Short Term	Max Annual HAP Emission	Annual Gallon Usage	Actual Emissions (Annual)	
	gal HAP ----- gal coat	lb HAP ----- gal HAP	lb HAP ----- gal coat	gal coat ----- Hr	lb HAP ----- hr	ton ----- yr	gal ----- yr	ton ----- yr	
XYLENE	0.10	7.2	0.72	5	3.6	15.77	10,000	3.6	
TOLUENE	0.20	7.2	1.44		7.2	31.5	10,000	7.2	
			7.						
Combined HAPs			2.16		10.8	47.3		10.8	

Table 1: Calculation of Individual HAP Emissions for Each Coating

Instructions: Use this chart to calculate the individual HAP emissions and the combined HAP emissions for each coating. Fill out this table for each coating that contains a HAP.

Coating Identification: TOP COAT

	A	B	C = A x B	D	E = C x D	F = E x 4.38	G	H = C x G / 2000
Individual HAP	% by Vol	HAP Density	HAP Content	Max Gallon Usage	Max Short Term	Max Annual HAP Emission	Annual Gallon Usage	Actual Emissions (Annual)
	gal HAP ----- gal coat	lb HAP ----- gal HAP	lb HAP ----- gal coat	gal coat ----- Hr	lb HAP ----- hr	ton ----- yr	gal ----- yr	ton ----- yr
XYLENE	0.07	7.2	0.504	4	2.02	8.85	9000	2.27
TOLUENE	0.02	7.2	0.144		0.572	2.50	"	0.65
MEX	0.30	6.72	2.02		8.08	35.4	"	9.09
Combined HAPs			2.66		10.66	46.67		12.01

Table 2: Summation of Individual HAP Emissions from All Coatings (Fill out this table for each HAP)

Coating HAP: XYLTNE

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
PRIME COAT	15.77	3.6
TOP COAT	8.85	2.27
Total individual HAP Emissions	24.62	5.87

Coating HAP: TOLUENE

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
PRIME COAT	31.5	7.2
TOP COAT	2.50	0.65
Total individual HAP Emissions	34.0	7.85

Coating HAP: MEK

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
TOP COAT	35.1 35.1	9.09
Total individual HAP Emissions	35.1	9.09

Coating HAP: _____

Coating ID	Maximum HAP Emissions (ton/yr)	Actual HAP Emissions (ton/yr)
Total individual HAP Emissions		

Table 3: Combined HAP Table:

Fill out this table using the results from table 1.

Coating ID	Maximum Annual Combined HAPs (ton/yr)	Actual Emissions Combined HAPs (ton/yr)
PRIME COAT	47.3	10.8
	46.67	12.1
Total Combined HAP Emissions	93.97	22.9

CALCULATION SUMMARY

- NO DIFFERENT THAN VOC
- JUST MUST DO FOR EACH HAP

PERMIT LIMITS - METHOD 1

- MAX INDIVIDUAL HAP CONTENT
- MAX COMBINED HAP CONTENT
- MONTHLY GALLON LIMITATION
- WORKS BEST WITH FEW COATINGS
- USEPA APPROVED

PERMIT LIMITS - METHOD 2

- MONTHLY CALC OF EMISSIONS
- INDIVIDUAL HAP EMISSIONS
- COMBINED HAP EMISSIONS
- NO HAP CONTENT LIMITS
- NO GALLON LIMITS
- WORKS BEST FOR MULTIPLE COATINGS
- USEPA APPROVED? - COURT CASE - STATE PERMITS RESTRICT PTE

TERMS AND CONDITIONS

- ABOVE LIMITATIONS
- RECORDKEEPING
- EXCEEDANCE REPORTING

TERMS AND CONDITIONS

- STILL UNDER CONSTRUCTION
- QUESTIONS/COMMENTS?

W.7 Annual Coating Usage Limitations Based Upon Rolling 365-Day and 12-Month Summations, Where Additional Limitations Are Needed During the First 12 Calendar Months of Operation or During the First 12 Calendar Months Following Issuance of the Permit

- XXXX1 - specify the maximum allowable annual coating usage
- XXXX2 - specify either 365-day or 12-month
- XXXX3 - add the wording "following the issuance of this permit", if applicable
- XXXX4 - for each month, specify the maximum allowable cumulative coating usage (e.g., 15,000 gallons)

The maximum annual coating usage for this emissions unit shall not exceed [XXXX1], based upon a rolling, [XXXX2] summation of the coating usage figures.

To ensure enforceability during the first 12 calendar months of operation [XXXX3], the permittee shall not exceed the coating usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Coating Usage</u>
1	[XXXX4]
1-2	[XXXX4]
1-3	[XXXX4]
1-4	[XXXX4]
1-5	[XXXX4]
1-6	[XXXX4]
1-7	[XXXX4]
1-8	[XXXX4]
1-9	[XXXX4]
1-10	[XXXX4]
1-11	[XXXX4]
1-12	[XXXX4]

After the first 12 calendar months of operation [XXXX3], compliance with the annual coating usage limitation shall be based upon a rolling, [XXXX2].

xxx.a Recordkeeping requirements for a coating line or printing line that emits Hazardous Air Pollutants (HAPs), and it is necessary for the permittee to determine the annual HAP emissions from the line

The permittee shall collect and record the following information each month:

- (a) The name and identification number of each coating, as applied.
- (b) The individual Hazardous Air Pollutant (HAP)¹ content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied.
- (c) The total combined Hazardous Air Pollutant (HAP) content for each HAP of each coating in pounds of combined HAPs per gallon of coating, as applied (sum all the individual HAP contents from b).
- (d) The number of gallons of each coating employed.
- (e) The name and identification of each cleanup material employed.
- (f) The individual HAP content for each HAP of each cleanup material in pounds of individual HAP per gallon of cleanup material, as applied.
- (g) The total combined HAP content of each cleanup material in pounds of combined HAPs per gallon of cleanup material, as applied (sum all the individual HAP contents from f).
- (h) The number of gallons of each cleanup material employed.
- (i) The total individual HAP emissions for each HAP from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period (for each HAP the sum of b times d for each coating and the sum of f times h for each cleanup material).
- (j) The total combined Hazardous Air Pollutant (HAP) emissions from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period (the sum of c times d for each coating plus the sum of g times h for each cleanup material).

¹A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Ohio EPA field office or local air agency contact. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials. This information does not have to be kept on a line-by-line basis.

(Term ID:B.4.e:062895)

xxx.b Reporting requirements for a coating line or printing line in which it is necessary for the permittee to determine the annual HAP emissions from the line

The permittee shall notify the Director of any monthly record showing any deviation from the following:

- (a) An identification of all months during which the Hazardous Air Pollutant (HAP) content limitation(s) were exceeded (pound of individual HAP per gallon of coating or pound of combined HAP per gallon of coating limitations).
- (b) The total individual HAP emissions limitation for each HAP from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period.
- (c) The total combined HAP emissions from all coatings and cleanup materials employed, in pounds or tons per month and pounds or tons per rolling 12 month period.
- (d) Exceedances of the rolling, [XXXXX1] limitation and, for the first 12 calendar months of operation [XXXXX2], all exceedances of the maximum allowable cumulative coating usage levels.

These reports shall include a description of the deviation, as well as the corrective actions that were taken to achieve compliance. The permittee shall submit annual reports which identify all exceedances of the above limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

(Term ID:B.4.e:062895)

Table 1: Calculation of Individual HAP Emissions for Each Coating

Instructions: Use this chart to calculate the individual HAP emissions and the combined HAP emissions for each coating. Fill out this table for each coating that contains a HAP.

Coating Identification: _____

	A	B	C = A x B	D	E = C x D	F = E x 4.38	G	H = C x G / 2000
Individual HAP	% by Vol	HAP Density	HAP Content	Max Gallon Usage	Max Short Term	Max Annual HAP Emission	Annual Gallon Usage	Actual Emissions (Annual)
	gal HAP ----- gal coat	lb HAP ----- gal HAP	lb HAP ----- gal coat	gal coat ----- Hr	lb HAP ----- hr	ton ----- yr	gal ----- yr	ton ----- yr
Combined HAPs								

Table 2: Summation of Individual HAP Emissions from All Coatings (Fill out this table for each HAP)

Coating HAP: _____

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
Total individual HAP Emissions		

Coating HAP: _____

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
Total individual HAP Emissions		

Coating HAP: _____

Coating ID	Maximum Annual HAP (ton/yr)	Actual HAP Emissions (ton/yr)
Total individual HAP Emissions		

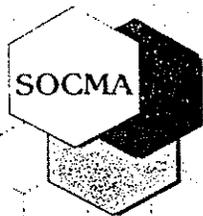
Coating HAP: _____

Coating ID	Maximum HAP Emissions (ton/yr)	Actual HAP Emissions (ton/yr)
Total individual HAP Emissions		

Table 3: Combined HAP Table:

Fill out this table using the results from table 1.

Coating ID	Maximum Annual Combined HAPs (ton/yr)	Actual Emissions Combined HAPs (ton/yr)
Total Combined HAP Emissions		

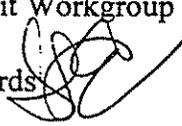


Action Memo

SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION

March 16, 1995

TO: Potential to Emit Workgroup

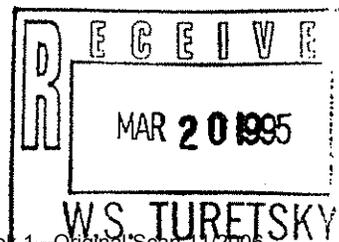
FROM: Sherry L. Edwards 

RE: SOCMA Guidance on Calculating Potential Emissions

Please find attached for your review and comment the draft SOCMA guidance on calculating potential emissions from a batch process. As we agreed, this guidance will be distributed to the SOCMA membership and submitted to EPA in hopes that the Agency will adopt the recommended methodology as official guidance. I have spoken with EPA staff and told them we would forward the revised information to them shortly.

Please submit your comments to me by no later than Thursday, March 23. You may call me at (202) 414-4170 or fax comments to me at (202) 289-8584. Thank you for your prompt attention to this matter.

Attachment



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Page 243

**HOW TO CALCULATE POTENTIAL EMISSIONS FROM A BATCH PROCESS TO
DETERMINE MAJOR SOURCE STATUS
UNDER THE CLEAN AIR ACT**

Graphic

**GUIDANCE PREPARED BY THE SYNTHETIC ORGANIC CHEMICAL
MANUFACTURERS ASSOCIATION**

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SOCMA GUIDANCE ON POTENTIAL TO EMIT

HOW TO DETERMINE IF A BATCH PROCESSING

FACILITY IS A MAJOR SOURCE

1.0 Introduction

- 1.1 Need for Guidance on PTE
- 1.2 EPA Policy on Inherent Operational Limitations
- 1.3 Intended Use for Guidance

2.0 Five (5) Step SOCMA PTE Emission Estimation Methodology

- 2.1 ACT Derived AERs
- 2.2 Percent Equipment Utilization
- 2.3 Interchangeable Equipment Determinations
- 2.4 Data Tabulation
- 2.5 Selection of PTE

3.0 Model PTE Calculations

Appendices

- Appendix A: USEPA Guidance on PTE
- Appendix B: Typical Batch Sheet
- Appendix C: Batch Percent Utilization/Emission Spreadsheet Form
- Appendix D: Batch Potential to Emit Spreadsheet Form

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WHO IS THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION

The Synthetic Organic Chemical Manufacturers Association (SOCMA) is a trade association serving more than 230 companies that have a common interest in the manufacture, distribution and marketing of organic chemical products. The majority of SOCMA's members are small businesses with annual sales under \$40 million. SOCMA member companies are representative of a much larger number of organic chemical manufacturers throughout the United States. Most of SOCMA's manufacturing member companies utilize batch processes and many are custom chemical manufacturers who produce specialty chemicals by contracting with larger companies.

Batch processing provides an efficient and frequently the only method to make small quantities of chemicals to meet specific needs and consumer demands for specialized products. Batch processors must be able to respond quickly to new requirements by customers, fill small market niches and develop new products. They are at the cutting edge of new technology, provide products often made nowhere else in the world and help keep imports down by responding quickly to customer demands for service and delivery. This segment of the chemical industry retains a high degree of entrepreneurship and must retain the flexibility to meet ever changing needs and new technological developments.

Batch processes are distinct from continuous operations in that a continuous operation has a constant raw material feed to each unit operation and continual product withdrawal from each unit operation. A batch process has an intermittent introduction of frequently changing raw materials into the process, varying process conditions imposed on the process within the same vessel and, consequently, an intermittent release of air emissions. Vessels are often idle while waiting for raw materials, waiting for quality control checks, undergoing cleaning, etc. Thus the possibility for emissions from a batch process is substantially different from that of a continuously operating process.

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SECTION 1 - INTRODUCTION

SECTION 1.1 - NEED FOR GUIDANCE ON POTENTIAL TO EMIT

There is a great need for guidance on how to calculate potential-to-emit (PTE) for batch processing facilities. Applicability of most of the Clean Air Act's rules are based on a source's "potential to emit."

SOCMA has repeatedly objected to the Environmental Protection Agency's (EPA's) current definition of "potential to emit" because it allows sources to consider only "federally enforceable" controls or other restrictions on emissions when calculating PTE. There is no statutory requirement that controls be federally enforceable; therefore, SOCMA has recommended that the Agency recognize non-federally enforceable controls.

While this is a legal interpretation of significant concern, this guidance focuses on a technical component of the potential to emit issue: a methodology for calculating potential emissions from batch processes, which accounts for inherent limitations on the operation of such processes. Because batch facilities use the same equipment to manufacture a variety of products in a given year, it is physically impossible for these facilities to produce all of these products on a 24 hours a day, seven day a week basis. Therefore, the calculation of potential emissions from these facilities must consider equipment utilization rates for each product/process and their relationship to one another. This requires the consideration of the physical attributes of a process before controls are even considered.

For instance, a company produces products A and B and owns equipment U, W, X, Y and Z to manufacture them. The company utilizes equipment U, W and X to manufacture product A; and X, Y and Z to manufacture product B. Processes to manufacture products A and B both utilize equipment X; therefore, it is impossible for the facility to run both processes at the same time. The calculation of potential emissions must recognize this equipment utilization factor in order to yield an estimate of potential emissions over time which is physically possible at this particular plant.

The effect of emissions controls is not of concern at this point in the calculation of potential emissions. Of course, controls may further limit a source's actual and potential emissions; however, it is important to consider the issues of a source's actual ability to generate air emissions and the reductions achieved by controls separately.

SOCMA is concerned with this issue because many states are requiring batch facilities to calculate their potential emissions using the same methodology as applied to continuous operations, which requires an assumption of a 24 hours a day, seven days a week operation. This methodology greatly inflates estimates of potential emissions

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beyond what is physically possible for batch facilities that use the same equipment to produce a variety of products.

The Agency has released guidance on PTE issues; however, none of the information adequately addresses the specific concerns of batch processors. For example, the Agency touches upon PTE issues in its February 1994 Alternative Control Technology (ACT) document for batch processes; however, calculation procedures are not addressed. SOCMA has developed guidance to provide a more realistic way of calculating potential emissions from a batch process. The following information is being provided to assist you in working with your permitting agencies to calculate potential emissions from your batch facility. The calculation methodology was developed by SOCMA's Air Committee and is not official government guidance. However, SOCMA is urging the Agency to adopt this methodology as official guidance.

SECTION 1.2 - EPA POLICY ON INHERENT OPERATIONAL LIMITATIONS

The Agency has defined PTE similarly in various Clean Air Act rules. For example, in the Part 63 General Provisions, EPA defines PTE as:

The maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. (40 CFR Section 63.2)

However, under EPA policy not all operational limitations have to be federally enforceable. In January 1995 guidance (see Appendix A), the Agency discusses inherent limitations on the potential to emit which may be considered without being federally enforceable:

Clearly, there are sources for which inherent physical limitations for the operation restrict the potential emissions of individual emission units. Where such inherent limitations can be documented by a source and confirmed by the permitting agency, EPA believes that States have the authority to make such judgments and factor them into estimates of a stationary source's potential to emit.

SOCMA applauds the Agency for including this language in the guidance. Equipment availability (or more appropriately unavailability) is certainly an inherent

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physical limitation on a particular operation. The SOCMA methodology provides for documentation of both the products manufactured and the equipment used to manufacture these products. The methodology begins with the largest emitting product/process and methodically rules out other processes that cannot be manufactured at the same time. These physical restraints on the facilities operations are not based on a decision to limit production requiring enforceability. Quite simply, it is physically impossible to operate beyond this worst case scenario given a finite list of products and equipment. The documentation required in SOCMA's methodology is sufficient to demonstrate this.

SECTION 1.3 - INTENDED USE OF GUIDANCE

This guidance was developed to assist companies that must calculate potential emissions to determine major source status under the Clean Air Act. It is not intended as the sole method of calculating potential emissions. There are other methods and scenarios under which a source may need to calculate potential emissions. For instance, a batch facility that is already considered major and required to apply for an operating permit may wish to pursue another methodology that results in the highest PTE conceivable in order to avoid triggering permit modifications when making a change that increases its PTE.

The methodology does have limitations. For instance, the methodology relies on the utilization of existing equipment and a specific product mix. Whenever new products or equipment are brought on-site, the source would have to recalculate PTE based on the changes. SOCMA recognizes that this may be time consuming for those facilities that frequently bring new products on line and, therefore, does not advocate this guidance as the sole methodology for calculating PTE. SOCMA does believe that it provides a useful alternative to the 24 hours a day, seven days a week standard currently mandated by some state permitting authorities.

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SECTION 2 - EMISSION ESTIMATION METHODOLOGIES

In general, SOCMA recommends a five (5) step procedure for calculating potential to emit to determine if a batch processing facility is a major source. Each step is described below.

SECTION 2.1 - CALCULATION OF PRODUCT SPECIFIC ANNUAL EMISSION RATES FOR SPECIFIC EQUIPMENT TRAINS NEEDED TO PRODUCE SPECIFIC PRODUCTS (STEP #1)

The USEPA's 1994 Alternatives Control Technology (ACT) Document contains several equations for calculating emissions for various types of batch operations. In addition, the ACT Document implies that the following methodology should be used for converting these emission calculations to Annual Emission Rates (AER):

Equation 2.1:

$$\begin{array}{l}
 \text{(AER) Product M} \\
 \text{Pollutant X}
 \end{array}
 =
 \frac{\text{ACT Derived Total} \\
 \text{Emissions Per Batch} \times 8760 \text{ Hours}}{\text{Year}}$$

(Time in hours required
for the piece of equipment
in The Batch Train that
is used the most)

Where AER = Annual Emission Rate for Pollutant X for Product M to be produced in a specific batch train. (It should be noted that the above calculation assumes that Product M is the only product produced in the batch train.)

To complete Step 1, calculate the AER values for every pollutant regulated by the Clean Air Act for every batch train needed to produce a specific product.

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SECTION 2.2 - CALCULATION OF EQUIPMENT UTILIZATION PERCENTAGES FOR EACH PIECE OF EQUIPMENT IN THE BATCH TRAIN NEEDED TO PRODUCE A SPECIFIC PRODUCT (STEP #2)

Step 2 of the PTE analysis can be completed by extracting from batch sheets the time needed to run each piece of equipment in every batch train. The following equation should be used to calculate percent utilization (i.e., percentage of time required for every piece of equipment for every product which can be produced in the batch train):

Equation 2.2:

$$\text{Percent Utilization Product M} = 100\% \times \frac{\text{(Time in hours of individual piece of equipment)}}{\text{(Maximum hours for piece of equipment with the largest time)}}$$

A typical batch sheet is provided in Appendix B to illustrate the use of Equation 2.2. Note that the batch train for hypothetical Product H consists of a reactor, a centrifuge, and a dryer. Reaction, centrifugation, and drying times for Product H are 120, 240, and 120 hours, respectively. Therefore, using Equation 2.2, the percent utilization for the reactor is $100\% \times \frac{120}{240}$ or 50%.

Similarly, percent utilizations for the centrifuge and dryer are 100% and 50%, respectively.

SECTION 2.3 - DETERMINATIONS INVOLVING INTERCHANGEABLE EQUIPMENT (STEP #3)

To complete Step 3, identify interchangeable or alternative equipment which can be substituted for equipment normally used to make a particular product by examining batch sheets. Referring to Appendix B, note that reactor R-6B and centrifuge C-4 can be substituted for reactor R-5 and centrifuge C-5.

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SECTION 2.4 - TABULATION OF AER, PERCENT UTILIZATION, AND INTERCHANGEABLE EQUIPMENT DETERMINATIONS (STEP #4)

Step 4 can be completed by recording, in a Batch Percent Utilization/Emission Spreadsheet, the AER values (from Step 1) for each product that emits a regulated pollutant. A blank form is provided in Appendix C. In the same spreadsheet, record percent utilization (Step 2) for each piece of equipment which makes up the batch train for a specific product and also indicate interchangeable equipment (Step 3). It should be noted that separate spreadsheets must be filled out for each hazardous air pollutant (HAP) and for each criteria pollutant. Examples are provided in Section 3 of this manual to help the user complete Step 4 of the procedure.

SECTION 2.5 - SELECTION OF PTE (STEP #5)

SECTION 2.5.1 - PTE FOR A SINGLE PIECE OF BATCH PROCESSING EQUIPMENT

PTE for a batch process which requires only a single piece of equipment (e.g., one reactor) is equal to the worst case Annual Emission Rate (AER) for that piece of equipment. Worst case AER is determined by first computing AER values for every product which can be produced in this piece of equipment and then by selecting the highest AER value. To summarize, PTE for a single piece of equipment is equal to the highest AER value and assumes that the product with the highest AER value will be the only product produced in that piece of equipment.

SECTION 2.5.2 - PTE FOR OTHER BATCH PROCESSING FACILITIES

PTE for batch processing facility with more than one piece of equipment must be determined by completing Step 5 of the SOCMA procedure. To complete Step 5, examine the emissions and percent utilization data for each matrix generated in Step 4 and select maximum emissions for each pollutant by fully utilizing all available equipment which can be used to produce a particular product. Do not exceed 100% utilization for any piece of equipment. The examples in Section 3.0 will teach the user how to fill out a Batch PTE Spreadsheet. Please note that a blank PTE Batch Spreadsheet form is also provided in Appendix D.

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SECTION 3 - MODEL PTE CALCULATIONS

A hypothetical custom chemical batch processing facility has 23 point sources which emit 3 HAPs (toluene, methanol and hexane) and one criteria pollutant (VOCs) during the manufacture of 21 products (identified as letters A through T.) To determine the applicability of Clean Air Act requirements such as Title V permitting, Reasonably Available Control Technology (RACT) standards, and Section 112 (g) for future modifications, this facility must determine its potential to emit and wishes to use the SOCMA recommended calculation procedures.

3.1 Calculation of Toluene PTE

By following the calculation procedures and completing the Batch Percent Utilization Spreadsheet described in Section 2.4 above, we can see that, as indicated in Table 1A, toluene can be emitted from 7 batch reactors, 3 batch dryers, 3 batch centrifuges, and 1 thin film evaporator. Toluene is emitted in the production of 7 different products.

Product G is the largest emitter of toluene and requires batch reactor R-5 for the entire batch time (i.e., 100% utilization). Since reactors R-5 and R-6B are interchangeable, the maximum toluene emissions for process G is two (2) times the toluene emission rate for one train or $2 \times 3.92 = 7.84$ TPY. By making this worst case selection, we have tied up both reactors R-5 and R-6B 100% of the time. Therefore, no other process can be run or considered that requires these reactors. Consequently, only Processes C and F can be run concurrently with Process G since all other products require reactors R-5 or R-6B. By inspection, there is no equipment conflict between C and F, so they can be operated concurrently 100% of the time. Therefore, their toluene emissions are added to twice G's emissions to calculate a total toluene plant-wide potential to emit of 9.1 ton/year (see Batch PTE Spreadsheet Table 1B which also serves as a final equipment conflict check).

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3.2 Calculation of Methanol PTE

As indicated in Table 2A, methanol can be emitted from 7 reactors, 3 centrifuges, 1 thin film evaporator, 4 dryers, and 2 ion exchange units. Methanol is emitted in the production of 9 different products.

By reviewing that Batch Percent Utilization Spreadsheet, we can see that Product H is the largest emitter of methanol and requires 1 batch reactor (R-5) 50% of the time, 1 dryer (D-4) 50% of the time, and 1 centrifuge (C-4) 100% of the entire batch time. However, reactor R-5 and dryer D-4 can be run 100% of the time if both centrifuges C-4 and C-5 are used. The maximum methanol emissions for Product H would then be two (2) times the methanol emission rate for one train ($2 \times 3.2 = 6.4$ TPY).

By making this worst case assumption, we have tied up reactor R-5, centrifuges C-4 and C-5, and dryer D-4 100% of the time. Therefore, no other process can be run or considered that requires this equipment. Consequently, by inspection of Table 2A, Product J can be eliminated because it uses centrifuges C4 and C5. Process J's use of reactor R-5 would not itself eliminate process J because reactor R-6B is interchangeable. Product L can be eliminated because it uses centrifuge C5. Products I and O can be eliminated because they both require centrifuge C-4.

The highest methanol emitter for remaining processes (Products E, K, M and N) is Process K which requires reactor R-1, centrifuge C-2 and dryer D-6. Including Process K in the PTE calculation eliminates Products M and N which, respectively, utilize reactor R-1 and dryer D-6.

The only remaining methanol emitter is Process E which uses reactor R-5. Since reactor R-6B is available, Process E is included in the total methanol PTE calculations. Therefore, the methanol potential to emit can be calculated by summing emissions from Processes E, H, and K and is equal to $1.0 + 6.4 + 1.9$ or 9.3 TPY (Table II-B).

3.3 Calculation of Hexane PTE

As indicated in Table 3A, hexane can be emitted from 8 batch reactors, 2 batch centrifuges, 1 still, 1 thin film evaporator, and 3 dryers. Hexane is emitted in the production of 9 different products.

By reviewing that Batch Percent Utilization Spreadsheet, we can see that Product S is the largest emitter of hexane and requires reactor R-1 and centrifuge C-4 100% of the time. Therefore, no other process can be considered that requires this equipment. Consequently, Products D, I, L, Q, and R can be eliminated because they all use reactor R-1.

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By inspection, we can see that Product T is the next largest emitter of hexane and should be included in the total hexane PTE because it requires reactor R-6B 100% of the time. However, since reactor R-5 can also be used to produce Product T and there is "spare" capacity in both centrifuge C-5 and dryer D-1, an additional 13% of the time T can be run using reactor R-5. This limits out dryer D-1 at 100% of capacity. Therefore, dryer D-1 is at 94% utilization for Product T and centrifuge C-5 is at 33% utilization total (i.e., basic yearly batch x 1.13).

Product P is eliminated because there is 100 % utilization of dryer D-1 in making Products S and T. Since there is capacity in centrifuge C-5 to produce Product U concurrently with Products S and T, its emissions should be counted in the final hexane plant-wide PTE along with emissions from products S and T.

3.4 Calculation of Total HAP PTE

The total HAP PTE should be determined by first identifying the product with the largest (HAP) emission rate. In this case, Product S has the largest (HAP) emission rate (4.05 TPY of hexane) and fully utilizes reactors R-1 and centrifuge C-4. However, the third largest emitter of HAP is Product H which emits 3.2 TPY of methanol and which uses 50% of reactor R-5's, 100% of centrifuge C-4's, and 50% of dryer D-4's capacity. Product H's methanol emissions would be 6.4 TPY if reactor R-5, centrifuges C-4 and C-5, and dryer D-4 are run at 100% capacity. Since Product S's emissions are less than Product H's at full equipment utilization, Product H should be selected and Product S emissions should be eliminated from the worst case PTE calculation. Therefore, reactor R-5 and centrifuges C-4 and C-5, and dryer D-4 are fully utilized. Any product using any one of these pieces of equipment other than reactor R-5 can be eliminated from the total HAP PTE calculation (Products A, C, D, I, J, L, O, P, Q, S, T and U).

The second largest emitter of a HAP is Product G which can utilize reactor R-6B and which emits 3.92 TPY of toluene. Since there are no equipment conflicts, its HAP emissions will be included in the total plant-wide HAP PTE.

Products B (2.44 TPY toluene) and E (1.0 TPY methanol) are eliminated from the total HAP PTE calculation because they use reactors R-5 or R-6B, which are fully utilized to make Products G and H.

The next largest emitter of a HAP is Product K which emits 1.86 TPY of methanol and which fully utilizes reactor R-1 and dryer D-6. Since this equipment is not used to make Products G and H, Product K's emissions should be included in the total worst case HAP PTE calculation.

Products R is eliminated from the total HAP PTE calculation because it uses reactor R-1.

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Product M (10.55 TPY methanol) is eliminated because it uses reactor R-1.

Products F and N are eliminated because they use dryer D-6 which is tied up in the production of Product K.

Therefore, the total HAP PTE is 12.2 TPY and is determined by adding emissions from Products G (3.9 TPY toluene), Product H (6.4 TPY methanol), and Product K (1.86 TPY methanol).

Table IA							
PROCESSES WITH MAXIMUM TOLUENE EMISSIONS							
* R-5 and R-6B interchangeable; C-4 and C-5 interchangeable							
PRODUCT	A	B	C	D	E	F	G
AER (TPY)	0.11	2.44	0.67	1.35	1.84	0.56	3.92
EQUIPMENT	PERCENT UTILIZATION						
R-1		64.00		23.00			
R-3			44.00				
R-4		74.00					
*R-5	50.00			100.00	100.00		100.00
R-6A							
*R-6B	100.00	100.00					
R-7							
R-8		48.00					
R-12					24.00		
C-2							
*C-4	100.00		15.00	39.00			
*C-5	50.00						
S-1							
S-2							
S-4							
L-1		52.00	100.00		36.00		
D-1			44.00	16.00			
D-2	53.00						
D-4							
D-5							
D-6	50.00					100.00	
IE-1							
IE-2							

TABLE IB				
TOLUENE POTENTIAL TO EMIT (PTE)				
PRODUCT	G	C	F	TOTALS
EMISSIONS (TPY)	7.84	0.67	0.56	9.07
EQUIPMENT	PERCENT UTILIZATION			
R-5	100.00			100.00
R-6B	100.00			100.00
D-6			100.00	100.00
R-3		44.00		44.00
C-4		15.00		15.00
L-1		100.00		100.00
D-1		44.00		44.00

TABLE IIA									
PROCESSES WITH MAXIMUM METHANOL EMISSIONS									
* R-5 and R-6B are interchangeable; C-4 and C-5 are interchangeable									
PRODUCT	E	H	I	J	K	L	M	N	O
AER (TPY)	1	3.22	0.24	1.58	1.86	0.21	0.55	0.53	0.6
EQUIPMENT	PERCENT UTILIZATION								
R-1			57.00		100.00	82.00	43.00		65.00
R-3			100.00						
R-4									
*R-5	100.00	50.00		40.00		100.00			30.00
R-6A								20.00	
*R-6B						44.00			
R-7									
R-8							100.00		100.00
R-12	24.00			42.00		41.00			
C-2				83.00	33.00		71.00		15.00
*C-4		100.00	57.00	42.00					10.00
*C-5				42.00		47.00			
S-1									
S-2									
S-4									
L-1	36.00								
D-1				100.00		35.00	43.00		
D-2									
D-4		50.00							
D-5								72.00	
D-6			79.00		100.00			100.00	100.00
IE-1							67.00		90.00
IE-2									90.00

TABLE IIB				
METHANOL POTENTIAL TO EMIT (PTE)				
PRODUCT	H	K	E	TOTALS
EMISSIONS (TPY)	6.44	1.86	1.0	9.3
EQUIPMENT	PERCENT UTILIZATION			
R-1		100.00		100.00
R-5	100.00			100.00
R-6B			100.00	100.00
R-12			24.00	24.00
C-2		33.00		33.00
C-4	100.00			100.00
C-5	100.00			100.00
D-4	100.00			100.00
D-6		100.00		100.00
L-1			36.00	36.00

TABLE IIIA									
PROCESSES WITH MAXIMUM HEXANE EMISSIONS									
* R-5 and R-6B are interchangeable; C-4 and C-5 are interchangeable.									
PRODUCT	D	I	L	P	Q	R	S	T	U
AER (TPY)	2.13	0.73	1.83	0.59	1.2	1.02	4.05	3	0.33
EQUIPMENT	PERCENT UTILIZATION								
R-1	23.00	57.00	82.00		100.00	92.00	100.00		
R-3		100.00			45.00	92.00	70.00		
R-4				38.00	9.00				
*R-5	100.00		100.00				57.00		
R-6A									
*R-6B			44.00					100.00	
R-7									
R-8					9.00				100.00
R-12			41.00			100.00			
C-2									
*C-4	39.00	57.00		100.00	44.00		100.00	29.00	48.00
*C-5			47.00				14.00		
S-1						92.00			
S-2									
S-4									
L-1						92.00			
D-1	16.00		35.00	100.00			6.00	83.00	
D-2									
D-4									91.00
D-5									
D-6		79.00			12.00				
IE-1									
IE-2									

TABLE IIIB				
HEXANE POTENTIAL TO EMIT				
PRODUCT	S	T	U	TOTALS
EMISSIONS (TPY)	4.05	3.4	0.33	7.8
EQUIPMENT	PERCENT UTILIZATION			
R-1	100.00			100.00
R-3	70.00			70.00
R-5	57.00	13.00		70.00
R-6B		100.00		100.00
R-7				
R-8			100.00	100.00
C-4	100.00			100.00
C-5	14.00	33.00	48.00	95.00
D-1	6.00	94.00		100.00
D-4			91.00	91.00

TABLE IV				
TOTAL HAP POTENTIAL TO EMIT				
PRODUCT	H	G	K	TOTALS
EMISSIONS (TPY)	6.44	3.92	1.86	12.22
EQUIPMENT	PERCENT UTILIZATION			
R-1			100.00	100.00
R-3				
R-4				
R-5	100.00			100.00
R-6A				
R-6B		100.00		100.00
R-7				
R-8				
R-12				
C-2			33.00	33.00
C-4	100.00			100.00
C-5	100.00			100.00
S-1				
S-2				
S-4				
L-1				
D-1				
D-2				
D-4	100.00			100.00
D-5				
D-6			100.00	100.00
IE-1				
IE-2				

APPENDIX B

TYPICAL SOCMA BATCH SHEET

Product: Product H dried Part No: 4008001
 From: Material 1 Part No: 1058500
 MW Product: 300.00 Basis: 1470.0 Kg
 MW RAW: 100 Yield: 70.00 % Packet Revision Date: 9/19/91

Part No.	Compound	FW	Sp. Gr.	Moles	kg.	kg./ba	Gal/ba	Price \$/kg	Unit Cost \$/kg	Recovery %	Credit \$/kg
1058500	Material 1	100.00	1.835	1.00	1.0000	700.0	113.1	1.858	0.832		
1088400	Acid 2	50.00	1.500		0.4836	338.5	59.8	0.650	0.150		
1025250	Material 3	150.00	3.118		1.3907	873.5	82.5	3.250	2.152		
1133100	Methanol (tank)	32.07	0.791		6.0393	4227.5	1412.0	0.225	0.647		
1023250	Material 4	100.00	0.981		4.8008	3380.5	905.1	5.100	11.859		
1234000	Water	18.02	1.000		2.7844	1849.1	514.9	0.000	0.000		
1088500	Acid 5	50.00	1.158		1.5031	1052.2	238.8	0.163	0.117		
1136800	Base 6	50.00	1.530		0.1021	71.5	12.3	0.340	0.017		
1133100	Methanol (tank)	32.07	0.791		1.8742	1311.9	438.2	0.225	0.201		
1011750	Acetone (tank)	58.06	0.787		1.8742	1311.9	440.4	0.750	0.705		
4008001	Product H dried	300.00		0.70	2.1000	1470.0	3,889.4		18.580		

Container Charge	
Part No:	1900000
Cost/Container:	No Package \$0.00
Capacity (kg):	1
Unit Cost/ Kg:	0.000

Part # Value

BATCH RAWs = \$24,972

Manufacturing Cost Consolidation:

GHR Rate = 54.00 \$/GHR

Step	Intermediates	Equip	Alternate Equip	Cycle Hr.	Equip Factor	GHR GHR/Ba	Unit Cycle Hr/Kg	Unit Cost \$/Kg	Stream	Quant. Lit./Ba	Unit Quant. Lit./Kg	Hazard. Cost \$/Liter	Unit Cost \$/Kg
A	Reaction	R-5	R-6b	120	1.400	158.00	0.082	6.171					
	Centrifugation	C-5	C-4	240	0.300	72.00	0.153	2.845					
	Drying	D-4		120	0.400	48.00	0.082	1.753					
						GHR = 288.00 GHR/Ba							

Overhead (\$/Kg) 10.580
 Raw (\$/Kg) 18.580
 Raw recovery credit
 Containers (\$/Kg) 0.000
 GMC (\$/Kg) 27.159

Batch LOH = 618.552

Key Raw = 100.000 %RM's
 Real Raw = 18.580 / kg.

APPROVED FOR USE	
Date: _____	
Accounting	Process Devel.
Production	Gr. Mgr.

Prepared by: _____
 Date: _____

FEB-23-95 10:24 FROM: ISP RESPONSIBLE CARE ID: 016283583 PAGE 18

Product: Product H Part No: 5008001
 From: Product H dried Part No: 4008001
 MW Product: 300.00 Basis: 1482.7 Kg Packet Revision Date: 9/18/81
 MW RAW: 300.00 Yield: 89.50 %

Part No.	Compound	FW	Sp. Gr.	Moles	kg.	kg./ba	Gal/ba	Price \$/kg	Unit Cost \$/kg	Recovery %	Credit \$/kg
4008001	Product H dried	300.00	1.000	1.00	1.0000	1470.0	388.4	27.159	27.288		
5008001	Product H	300.00		1.00	0.8950	1482.7	388.4		27.288		
BATCH RAWS =									\$38,924		

Container Charge	
Type:	1906RTF
30 gallon Plastic Drum	
Cost/Container:	\$11.64
Capacity (kg):	50
Unit Cost/ Kg:	0.233

Manufacturing Cost Consolidation:

GHR Rate = 54.00 \$/GHR

Step	Intermediate	Equip	Cycle Hr.	Equip Factor	GHR GHR/Ba	Unit Cycle Hr/Kg	Unit Cost \$/Kg	Stream	Quant. Lit./Ba	Unit Quant. Lit./Kg	Hazard. Cost \$/Liter	Unit Cost \$/Kg
B	Grinding	FG	4	0.200	0.80	0.003	0.030					
	Blending	FS	24	0.200	4.80	0.015	0.177					
GHR =					5.60 GHR/Ba							

Overhead (\$/Kg) 0.207
 Raws (\$/Kg) 27.288
 Raws recovery credit
 Containers (\$/Kg) 0.233
GMC (\$/Kg) 27.735

Batch LOH = \$302
 Key Raws = 81.048 %RM's
 Real Raws = 18.663 / kg.

Prepared by: _____
 Date: _____

APPROVED FOR USE	
Date: _____	
Accounting	Process Devel.
Production	Qn. Mgr.

Table IA							
PROCESSES WITH MAXIMUM TOLUENE EMISSIONS							
* R-5 and R-6B interchangeable; C-4 and C-5 interchangeable							
PRODUCT	A	B	C	D	E	F	G
AER (TPY)	0.11	2.44	0.67	1.35	1.84	0.56	3.92
EQUIPMENT	PERCENT UTILIZATION						
R-1		64.00		23.00			
R-3			44.00				
R-4		74.00					
*R-5	50.00			100.00	100.00		100.00
R-6A							
*R-6B	100.00	100.00					
R-7							
R-8		48.00					
R-12					24.00		
C-2							
*C-4	100.00		15.00	39.00			
*C-5	50.00						
S-1							
S-2							
S-4							
L-1		52.00	100.00		36.00		
D-1			44.00	16.00			
D-2	53.00						
D-4							
D-5							
D-6	50.00					100.00	
IE-1							
IE-2							

TABLE IB				
TOLUENE POTENTIAL TO EMIT (PTE)				
PRODUCT	G	C	F	TOTALS
EMISSIONS (TPY)	7.84	0.67	0.56	9.07
EQUIPMENT	PERCENT UTILIZATION			
R-5	100.00			100.00
R-6B	100.00			100.00
D-6			100.00	100.00
R-3		44.00		44.00
C-4		15.00		15.00
L-1		100.00		100.00
D-1		44.00		44.00

TABLE IIA									
PROCESSES WITH MAXIMUM METHANOL EMISSIONS									
* R-5 and R-6B are interchangeable; C-4 and C-5 are interchangeable									
PRODUCT	E	H	I	J	K	L	M	N	O
AER (TPY)	1	3.22	0.24	1.58	1.86	0.21	0.55	0.53	0.6
EQUIPMENT	PERCENT UTILIZATION								
R-1			57.00		100.00	82.00	43.00		65.00
R-3			100.00						
R-4									
*R-5	100.00	50.00		40.00		100.00			30.00
R-6A								20.00	
*R-6B						44.00			
R-7									
R-8							100.00		100.00
R-12	24.00			42.00		41.00			
C-2				83.00	33.00		71.00		15.00
*C-4		100.00	57.00	42.00					10.00
*C-5				42.00		47.00			
S-1									
S-2									
S-4									
L-1	36.00								
D-1				100.00		35.00	43.00		
D-2									
D-4		50.00							
D-5								72.00	
D-6			79.00		100.00			100.00	100.00
IE-1							67.00		90.00
IE-2									90.00

TABLE IIB				
METHANOL POTENTIAL TO EMIT (PTE)				
PRODUCT	H	K	E	TOTALS
EMISSIONS (TPY)	6.44	1.86	1.0	9.3
EQUIPMENT	PERCENT UTILIZATION			
R-1		100.00		100.00
R-5	100.00			100.00
R-6B			100.00	100.00
R-12			24.00	24.00
C-2		33.00		33.00
C-4	100.00			100.00
C-5	100.00			100.00
D-4	100.00			100.00
D-6		100.00		100.00
L-1			36.00	36.00

TABLE IIIA									
PROCESSES WITH MAXIMUM HEXANE EMISSIONS									
* R-5 and R-6B are interchangeable; C-4 and C-5 are interchangeable.									
PRODUCT	D	I	L	P	Q	R	S	T	U
AER (TPY)	2.13	0.73	1.83	0.59	1.2	1.02	4.05	3	0.33
EQUIPMENT	PERCENT UTILIZATION								
R-1	23.00	57.00	82.00		100.00	92.00	100.00		
R-3		100.00			45.00	92.00	70.00		
R-4				38.00	9.00				
*R-5	100.00		100.00				57.00		
R-6A									
*R-6B			44.00					100.00	
R-7									
R-8					9.00				100.00
R-12			41.00			100.00			
C-2									
*C-4	39.00	57.00		100.00	44.00		100.00	29.00	48.00
*C-5			47.00				14.00		
S-1						92.00			
S-2									
S-4									
L-1						92.00			
D-1	16.00		35.00	100.00			6.00	83.00	
D-2									
D-4									91.00
D-5									
D-6		79.00			12.00				
IE-1									
IE-2									

TABLE IIIB				
HEXANE POTENTIAL TO EMIT				
PRODUCT	S	T	U	TOTALS
EMISSIONS (TPY)	4.05	3.4	0.33	7.8
EQUIPMENT	PERCENT UTILIZATION			
R-1	100.00			100.00
R-3	70.00			70.00
R-5	57.00	13.00		70.00
R-6B		100.00		100.00
R-7				
R-8			100.00	100.00
C-4	100.00			100.00
C-5	14.00	33.00	48.00	95.00
D-1	6.00	94.00		100.00
D-4			91.00	91.00

TABLE IV				
TOTAL HAP POTENTIAL TO EMIT				
PRODUCT	H	G	K	TOTALS
EMISSIONS (TPY)	6.44	3.92	1.86	12.22
EQUIPMENT	PERCENT UTILIZATION			
R-1			100.00	100.00
R-3				
R-4				
R-5	100.00			100.00
R-6A				
R-6B		100.00		100.00
R-7				
R-8				
R-12				
C-2			33.00	33.00
C-4	100.00			100.00
C-5	100.00			100.00
S-1				
S-2				
S-4				
L-1				
D-1				
D-2				
D-4	100.00			100.00
D-5				
D-6			100.00	100.00
IE-1				
IE-2				



State of Ohio Environmental Protection Agency

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FAX (614) 644-2329

Post-It™ brand fax transmittal memo 7671		# of pages	4
To	R. Hodanbosi	From	B. Bonds
Co.	DAPC	Co.	DSIWM
Dept.		Phone #	
Fax #		Fax #	

INTEROFFICE COMMUNICATION

TO: Robert Hodanbosi, Chief, DAPC
 FROM: Barbara Bonds, Chief, DSIWM
 DATE: January 13, 1993
 SUBJECT: January 15 Meeting

Thanks for agreeing to meet with Alison and I on January 15 at 9:00 in your office. The two issues of primary concern to us are (1) requiring air permits for all autoclaves (steam emissions) and (2) communicating air permit submittal/decisions to DSIWM in a timely manner. Further background is provided below.

AIR PERMIT REQUIREMENTS FOR AUTOCLAVES

An interoffice communication dated December 10, 1992 and sent to Alison Shockley of my staff by Dana Thompson of your staff has been brought to my attention. The subject of the memorandum is consistency in the permit conditions for autoclaves. Based upon the contents of the memo versus past practice, the memo does not reflect past practices. It requires permits for all autoclaves, large and small. It was my understanding from our conversation of October 26, 1992 at the chiefs meeting that the subject of air permit requirements for autoclaves (large and small) was before you for your consideration. DSIWM would like to discuss the November 9, 1992 memorandum with you regarding the permitting of autoclaves to help us understand why you want every autoclave within the State of Ohio to be an air source.

COMMUNICATION BETWEEN DAPC AND DSIWM

I am also aware that several infectious waste incinerator, alternative solid waste treatment (e.g. soil burners, waste distillation units), and construction and demolition debris facility PTIs have been issued since my IOC of April 30, 1992 to you regarding the need to share information about permit applications. Unfortunately, DSIWM did not learn about the majority of these air permits from DAPC. DAPC has not resolved the communication issues outlined in my memorandum. As a result, DSIWM often remains in the dark regarding submitted and/or newly issued permits for these types of facilities. This puts us at a great disadvantage since we get lots of calls regarding permit requirements and general regulatory questions for solid and infectious waste facilities. We need to work together and coordinate on air/infectious waste permits, especially since we do a large portion of answering the public's questions at your

R. Hodanbosi
Page Two

air infectious/solid waste permit public meetings. If we do not know about the submittal of the air PTI and the basic information about the application is not shared with us in a timely manner, we are caught by surprise and sent scrambling in order to be any help at your public meetings or with telephone inquires. This is not an efficient use of our time and scarce resources.

Additionally, our inspectors are required to inspect infectious waste incinerators and autoclaves and licensed solid waste facilities a minimum of quarterly, regardless of whether the site is required to have a solid waste or infectious waste PTI. Information gathered from our inspections could be of great use to DAPC in monitoring the compliance of a facility. For example, DSIWM facility records and staff time are currently being utilized to assist the Attorney General's Office in the appeal of one of your PTO's, which dramatizes even further the need and benefits of effective communication.

I trust we can resolve the communication gap immediately, but, if I don't see noticeable improvement, please note that my DSIWM staff statewide will no longer be available to participate in public meetings regarding infectious waste or solid waste air permits until effective communication between the divisions is established. Please refer to my suggested approaches to resolve the communication issue outlined in my memo to you dated 4/30/92 for Friday's discussion.

I trust that our meeting on January 15, 1993 will result in a game plan to resolve our two issues.

AMS/BB/clk

cc: Jenny Tiell, Acting Deputy Director
Pat Madigan, PIC



State of Ohio Environmental Protection Agency

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George V. Volonovich
Governor

Donald R. Schregardus
Director

INTEROFFICE COMMUNICATION

TO: Bob Hodanbosi, Chief, DAPC
FROM: Barbara Bonds, Chief, DSIWM
DATE: November 10, 1992
SUBJECT: Permit Requirements for Autoclaves

It has been brought to my attention by my staff that the Division of Air Pollution Control has revised its current position that no permits are needed for autoclaves. It is my staff's understanding from speaking with your staff that DAPC's new position is that autoclaves are an air emissions source and therefore are included in the permitting process. Specifically, autoclaves such as the San-I-Pak unit at St Vincent Medical Center in Toledo need a permit-to-install and a permit-to-operate to be in compliance. Note that Lake Hospital Systems East and West already have operational San-I-Pak units and were not required to complete DAPC's permitting process.

Given DAPC's new position on autoclaves, are all autoclaves required to complete the permitting process? Before you answer, consider the following: 1) all of the following types of facilities would need to complete the DAPC permitting process for autoclaves: all universities, all hospitals, dental offices, veterinary offices, physician offices, urgent care facilities, zoos, reference laboratories, skilled care facilities, prisons, coroner's offices, and health departments. 2) It is also my understanding that when my staff questioned your staff regarding the scientific basis for such a change in position and no evidence was offered. Is there new scientific literature that we should be aware of regarding emissions, other than steam, from an autoclave?

Before you finalize such a change in position for autoclaves, please call so we can discuss this issue further. This meeting would be a good time to talk about my communication of April 30, 1992 to you regarding the coordination and notification of infectious waste permitting efforts (copy attached).

BB/AMS/clk

Attachment

cc: Jenny Tiell, Acting Deputy Director
Alison Shockley, DSIWM

JAN 13 '93 11:19



State of Ohio Environmental Protection Agency

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 Columbus, Ohio 43268-0149
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George V. Volinovic
 Governor

Donald R. Schregardt
 Director

INTEROFFICE COMMUNICATION

TO: Bob Hodanbosi, Assistant Chief, DAPC
 FROM: Barbara Bonds, Acting Chief, DSIWM
 DATE: April 30, 1992
 SUBJECT: Permit Tracking and Notification

In an effort to coordinate joint solid waste-infectious waste/air permitting activities and notification of infectious waste air permitting activities between the two divisions, as agreed to at our April 6, 1992 meeting, I suggest the following:

- all solid waste facility and infectious waste treatment facility permits are classified as controversial
- tracking logs (like the one attached) of all controversial air permits be sent to me monthly beginning in June
- tracking logs of all solid waste and infectious waste permits be sent to you monthly beginning in June

With this information DSIWM can coordinate with you on which air permits need to be issued jointly with DSIWM and which can be issued solely by DAPC. Please contact me to discuss further. Thanks.

BB/jm

cc: Jenny Tiell, Acting Deputy Director
 Pat Walling, DAPC
 Ed Brdicka, DSIWM
 Alison Shockley, DSIWM

attachments

OEPA inter-office communication

to: DISTRIBUTION date: September 18, 1998
from: Misty Parsons^{mP} through Mike Hopkins, AOM&P
subject: Permitting Landfills with gas control systems (flares)

Several staff have asked questions about permitting landfills and their gas control systems, most often flares. Our NSR group has considered this topic, and we have created this guidance in response. We are proposing this as a Draft for your comments. Please submit any comments by October 9, 1998. If after reading this, any of you have further questions, please contact us.

PTIs for the control system/flare

Remember that the landfill is the source, not the flare. For new landfills, a PTI is required for fugitive PM and for OC emissions that will be generated. The PTI should include requirements and limits for both.

When an old landfill adds a flare, this results in new pollutants, and it could be a modification under the PTI rule (unless determined to be environmentally beneficial or OAC 3745-76-02 exempt - see below). When a modified PTI is needed, you would repeat everything from the current PTI (such as fugitive PM allowables, asbestos restrictions, etc.), plus add the flare system and its requirements.

When is a PTI needed related to addition of a flare?

There are several situations that require us to evaluate whether a PTI is needed for the flare. The attached flow chart explains this further. First, all landfills installed after January 1974 should have obtained a PTI for the disposal activities (fugitive dust), asbestos, roads and parking areas and any storage piles (with exceptions - see flow chart). If a landfill has not obtained a PTI for the above activities and one is required, we would include the flare in that PTI. Below are the common situations involving flares:

- A landfill installed post-1974 has a PTI for disposal activities (dust), but we did not include any evaluation of OC/NMOC emissions or any allowable for this. However, either NSPS WWW or OAC 3745-76 require the installation of the flare at some point.

NSPS WWW: After reviewing the PTI modify definition (MM), we believe that adding a flare to an OC source is a physical change or change in the method of operation, which results in the emission of new air pollutants not emitted before. If these emissions (NOx, CO, etc.) exceed the De Minimis level, then a PTI is required (see rule). However, under the rule there is a Director's exemption for environmentally beneficial projects. So the landfill can submit a letter requesting an environmentally beneficial determination.

We will normally consider flares to be environmentally beneficial projects, however, these requests will be evaluated on a case-by-case basis. This is the process. The landfill submits a request to the FO with information about the flare and its emissions, including any

needed modeling, the FO reviews this, and then drafts a letter for the Director's signature. This package is submitted to AQM&P for review, and we will get the Director's signature on the reply letter.

Chapter 76: Rule 76-02 automatically exempts sources that are making changes to comply with that rule, from the PTI requirement. So it's automatically exempt from the PTI, so no environmentally beneficial exemption letter is needed.

- A landfill installed post-1974 has a PTI for disposal activities (dust), but we did not include any evaluation of OC/NMOC emissions or any allowable for this. If there is no rule requirement for the landfill to install a flare, and they do not wish to, nothing is triggering the PTI requirement.

Which Pollutants get Allowables

You should set allowables for the criteria/NAAQS pollutants, and include both NMOC and Methane allowable limits. A lbs/hr and TPY is needed for all these pollutants, except that we will have just a TPY number for NMOC and methane. Do not routinely set allowables for any air toxics.

Emission Factors

To develop PTI calculations and limits, you would normally use the Landfill Air Emissions Estimation Model to do this, however this gives you several choices. We believe the AP-42 factors provide the most representative numbers, so use AP-42 for all pollutants.

However, you may also rely on manufacturers numbers for pollutants other than NMOC and methane, as long as you believe they are accurate. You would probably use the program for NMOCs, unless the company wants to discuss using a different way to calculate emissions. The computer program allows you to enter other numbers. And the applicant may submit their calculations based upon sampling they have done or other methods. You need to determine if they are valid.

The program calculates the uncontrolled tons/year emissions expected year-by-year as refuse is added. Decomposition begins to generate OC, and emissions increase as the years go by. For allowables, you would have both NMOC and methane. The flare reduces NMOC by 98%. We expect methane would also be reduced by 98%, so you can use that factor, but this may also be something for further research. You can calculate the controlled emissions: uncontrolled x 0.02 (the 98% efficient flare).

Max Emissions, Allowables and PSD/NSR

For a new landfill, you need to consider the projected uncontrolled emissions, in TPY, that will occur before they put on the flare or control system. These uncontrolled emissions are often higher than the highest year with the flare operating. You need to know when the flare will be installed/operated, to know what the highest uncontrolled rate will be prior to that time. Set the NMOC TPY allowable at the worst-case or highest emissions point (which could either be the highest uncontrolled emissions, or max emissions years later with the flare).

When you have the max TPY emissions, you can determine if they trigger PSD review. If so, they may be able to avoid PSD by putting on the flare sooner, unless max controlled emissions exceed PSD levels. Any that need the flare sooner than the rules require (in order to avoid PSD) would need

a federally enforceable term that says something like, when X amount of refuse is in place, the flare must be in operation.

Air Toxics

Any air toxics which are NMOCs are regulated by NSPS, and we will consider NSPS control to be current BAT. So any NMOCs that are listed toxics do not require modeling. Any other listed toxics that are not NMOCs, such as HCL or Vinyl Chloride, should get toxics modeling if over 1 TPY in amount, per the Toxics policy. We have decided that, since there is no TLV listed for methane in the ACGIH booklet, it should not be modeled for air toxics.

It seems most landfills will have HCL emissions. So you need to estimate the amount, and see if modeling is needed. If the source does not know what type of control they will use, and therefore doesn't have the stack data, they can still receive the PTI, and model at a later time as soon as they have the stack data. Place a term in the PTI requiring compliant modeling when the parameters are known. As always when toxics is required in a PTI, you would state "Compliance with the Air Toxics Policy" under BAT.

Testing

Test for NMOC and any others that the FO permit writer feels are necessary.

Emissions Unit Number

The types of sources needing permits and the unit numbers are as follows:

P901*	Landfill Operations (disposal activities, asbestos and possible flair)
F001	Material Storage Piles (for any earth placed in a pile from the landfill)
F002	Roadways and Parking Areas
G001	Gasoline/Diesel Dispensing (if applicable)

* This reflects the fact that it has fugitive emissions from the disposal operations, as well as the flare emissions.

Landfill Rules

Be sure to check the NSPS WWW and new state rules to determine which apply, and cite the appropriate one. WWW is for new or modified landfills after May 30, 1991, and 3745-76 is for landfills existing before that date. Harry Judson works with the landfill regulations, and you can contact him for assistance when needed.

Chapter 17 and a VE limit

Tom Kalman is currently determining whether any rules apply, so we will know whether to cite and check compliance with them during review. However, we believe that BAT should be 20% opacity, just as it is stated in the rule.

Compliance Methods

The compliance methods for the emissions limits would probably be emission factor calculation, using the model, unless testing is being required.

Controls other than Flares

Some landfills will propose other types of controls allowed by NSPS and Ch. 76, like engines. And a new landfill not expecting to install control for some time may not know what they will want to do in the future. But you

need to somehow write it into the PTI. In that case, use the worst case of the options they are planning on, and write an explanation into the terms. For emissions limits, as an example, for CO and NOx, you would run the calculation of emissions from an engine and a flare, and take whichever is worst as your allowable (explain the basis in the PTI).

Controls owned/operated by a second party

We have also seen cases where someone other than the landfill will own and operate the control system, perhaps to generate power. In that case, the air contaminant source owner (the second party) must obtain a PTI for this equipment. [The gas collection system would still be the landfills.] We would not cite the NSPS or Ch. 76 rule in their PTI (since we believe it pertains to the landfill owner), but we would require them to meet the 98% efficiency requirement, or whatever rule requirements there are for that system. They must comply so the landfill will comply.

If you have any questions or comments, please contact your CO NSR contact here in AQM&P or Mike Hopkins at (614) 644-2270. Thank you.

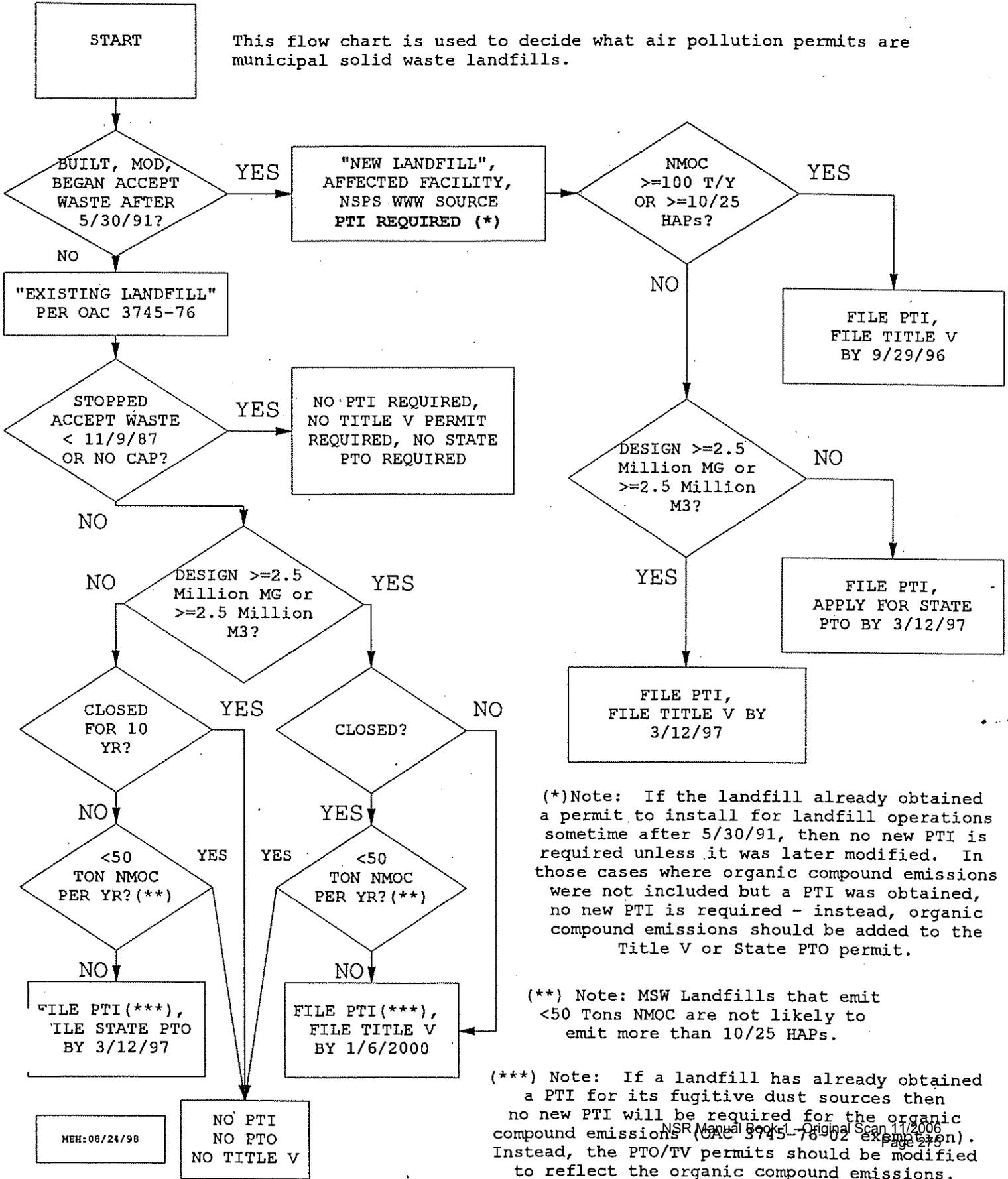
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MH/MP

MUNICIPAL SOLID WASTE LANDFILL AIR POLLUTION PERMIT TO INSTALL/OPERATE/TITLE V REQUIREMENTS

This flow chart is used to decide what air pollution permits are municipal solid waste landfills.



(*)Note: If the landfill already obtained a permit to install for landfill operations sometime after 5/30/91, then no new PTI is required unless it was later modified. In those cases where organic compound emissions were not included but a PTI was obtained, no new PTI is required - instead, organic compound emissions should be added to the Title V or State PTO permit.

(**) Note: MSW Landfills that emit <50 Tons NMOC are not likely to emit more than 10/25 HAPs.

(***) Note: If a landfill has already obtained a PTI for its fugitive dust sources then no new PTI will be required for the organic compound emissions (OAC 3745-76-02 expansion). Instead, the PTO/TV permits should be modified to reflect the organic compound emissions.

OHIO EPA INTER-OFFICE COMMUNICATION

June 20, 1996

To: Locals and District

From: Harry Judson, DAPC/CO

Subject: **Air requirements for municipal waste landfills**

New federal rules (FR March 12, 1996), soon to be State rules, affecting both new municipal solid waste landfills (NSPS) and existing landfills, require the control of NMOC from the following:

- ◆ New landfills built after May 30, 1991 and having a design capacity greater than 2.5 million Mg or 2.5 million cubic meters and calculated NMOC emissions greater than 50 Mg/year have five years to install a gas collection system to reduce NMOC emissions by 98%.
- ◆ Existing landfills which have accepted waste since November 8, 1987 and have a design capacity greater than 2.5 million Mg or 2.5 million cubic meters and calculated NMOC emissions greater than 50 Mg/year also are required to reduce NMOC emissions by 98%.

Under the new rules, all landfills are required by June 10, 1996 to provide Ohio EPA with their design capacity and an estimate of their NMOC emissions. If their emissions are greater than 50 Mg/year, the following implementation schedules must be met:

- ◆ For new landfills, a collection and control system design plan must be submitted within 12 months (6/10/97). Installation of the system must be completed by 12/10/98.
- ◆ For existing landfills, installation of a collection and control system must be accomplished 30 months after an approved State rule.

Within the next several weeks, Ohio EPA will be providing the Locals and Districts with a policy on whether landfills can obtain a Federally Enforceable State Operating Permit (FESOP).

Affected landfills are being identified by the District's Solid and Infectious Waste Divisions so that notification and compliance can be assured.

A copy of the new rule is enclosed.

If you have any questions regarding this rule please contact Harry Judson at (614) 644-3612.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

October 21, 1994

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

RECEIVED

OCT 27 1994

REGULATION DEVELOPMENT BRANCH
U.S. EPA. REGION V

MEMORANDUM

SUBJECT: Classification of Emissions from Landfills for
NSR Applicability Purposes

FROM: John S. Seitz, Director *John Seitz*
Office of Air Quality Planning and Standards (MD-10)

TO: Director, Air, Pesticides and Toxics
Management Division, Regions I and IV
Director, Air and Waste Management Division,
Region II
Director, Air, Radiation and Toxics Division,
Region III
Director, Air and Radiation Division,
Region V
Director, Air, Pesticides and Toxics Division,
Region VI
Director, Air and Toxics Division,
Regions VII, VIII, IX and X

The EPA has recently received several inquiries regarding the treatment of emissions from landfills for purposes of major NSR applicability. The specific issue raised is whether the Agency still considers landfill gas emissions which are not collected to be fugitive for NSR applicability purposes.

The EPA's NSR regulations define "fugitive emissions" to mean "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening" (40 CFR 51.165(a)(1)(x)). In general, where a facility is not subject to national standards requiring collection, the technical question of whether the emissions at a particular site could "reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening" is a factual determination to be

made by the permitting authority, on a case-by-case basis. In determining whether emissions could reasonably be collected (or if any emissions source could reasonably pass through a stack, etc.), "reasonableness" should be construed broadly. The existence of collection technology in use by other sources in the source category creates a presumption that collection is reasonable. Furthermore, in certain circumstances, the collection of emissions from a specific pollutant emitting activity can create a presumption that collection is reasonable for a similar pollutant-emitting activity, even if that activity is located within a different source category.

In 1987, EPA addressed whether landfill gas emissions should be considered as fugitive.¹ The Agency explained that for landfills constructed or proposed to be constructed with gas collection systems, the collected landfill gas would not qualify as fugitive. Also, the Agency understood at the time that, with some exceptions, landfills were not constructed with such gas collection systems. The EPA explained that "[t]he preamble to the 1980 NSR regulations characterizes nonfugitive emissions as '... emissions which would ordinarily be collected and discharged through stacks or other functionally equivalent openings'" (see 45 FR 52693, Aug. 7, 1980).² Based on the "understanding that landfills are not ordinarily constructed with gas collection systems," the Agency concluded that "emissions from existing or proposed landfills without gas collection systems are to be considered fugitive emissions." (The Agency also made clear, however, that the applicant's decision on whether to collect emissions is not the deciding factor. Rather, it is the reviewing authority that makes the decision regarding

¹See memorandum entitled "Emissions from Landfills," from Gerald A. Emison, Director, Office of Air Quality Planning and Standards, to David P. Howekamp, Director, Air Management Division, Region IX, dated October 6, 1987 (attached). It is important to note that the interpretation contained in this memorandum was only applicable to landfills.

²In fact, the 1980 preamble language recognized the concern that sources could avoid NSR by calling emissions fugitives, even if the source could capture those emissions. The EPA's originally-proposed definition of fugitive emissions was changed in the final 1980 regulations to "ensure that sources will not discharge as fugitive emissions those emissions which would ordinarily be collected and discharged through stacks or other functionally equivalent openings, and will eliminate disincentives for the construction of ductwork and stacks for the collection of emissions." *Id.*

which emissions can reasonably be collected and therefore not considered fugitive.

The EPA believes its 1987 interpretation of the 1980 preamble may have been misunderstood, and in any case that its factual conclusions at that time are now outdated. Continued misunderstanding or application of this outdated view could discourage those constructing new landfills from utilizing otherwise environmentally- or economically-desirable gas collection and mitigation measures in order to avoid major NSR applicability.

Specifically with regard to landfill gas emissions, gas collection and mitigation technologies have evolved significantly since 1987, and use of these systems has become much more common. Increasingly, landfills are constructed or retrofitted with gas collection systems for purposes of energy recovery and in order to comply with State and Federal regulatory requirements designed to address public health and welfare concerns. In addition, EPA has proposed performance standards for new landfills under section 111(b) of the Clean Air Act and has proposed guidelines for existing landfills under section 111(d) that, when promulgated, will require gas collection systems for existing and new landfills that are above a certain size and gas production level (see 56 FR 24468, May 30, 1991). Under these requirements, EPA estimates that between 500 and 700 medium and large landfills will have to collect and control landfill gas. The EPA believes this proposal created a presumption at that time that the proposed gas collection systems, at a minimum, are reasonable for landfills that would be subject to such control under the proposal.

Thus, EPA believes it is no longer appropriate to conclude generally that landfill gas could not reasonably be collected at a proposed landfill project that does not include a gas collection system. The fact that a proposed landfill project does not include a collection system in its proposed design is not determinative of whether emissions from a landfill are fugitive. To quantify the amount of landfill gas which could otherwise be collected at a proposed landfill for NSR applicability purposes, the air pollution control authority should assume the use of a collection system which has been designed to maximize, to the greatest extent possible, the capture of air pollutants from the landfill.

In summary, the use of collection technology by other landfill sources, whether or not subject to EPA's proposed requirements or to State implementation plan or permit requirements, creates a presumption that collection of the emissions is reasonable at other similar sources. If such a system can reasonably be designed to collect the landfill's gas

emissions, then the emissions are not fugitive and should be considered in determining whether a major NSR permit is required.

Today's guidance is applicable to the construction of a new landfill or the expansion of an existing landfill beyond its currently-permitted capacity. To avoid any confusion regarding the applicability of major NSR to existing landfills, EPA does not plan to reconsider or recommend that States reconsider the major NSR status of any existing landfill based on the issues discussed in this memorandum. Also, nothing in this guidance voids or creates an exclusion from any otherwise applicable requirement under the Clean Air Act and the State implementation plan, including minor source review.

The Regional Offices should send this memorandum, including the attachment, to States within their jurisdiction. Questions concerning specific issues and cases should be directed to the appropriate Regional Office. Regional Office staff may contact Mr. David Solomon, Chief, New Source Review Section, at (919) 541-5375, if they have any questions.

Attachment

cc: Air Branch Chief, Regions I-X
NSR Contacts, Regions I-X and Headquarters

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

OCT 6 1987

MEMORANDUM

SUBJECT: Emissions from Landfills

FROM: Gerald A. Emison, Director
Office of Air Quality Planning and Standards (MD-10)

TO: David P. Howekamp, Director
Air Management Division, Region IX

This is in response to your September 1, 1987, memorandum requesting clarification regarding how landfill emissions should be considered for the purpose of determining nonattainment new source review (NSR) applicability under 40 CFR 51.18.

As you are aware, a landfill is subject to NSR if its potential to emit, excluding fugitive emissions, exceeds the 100 tons per year applicable major source cutoff for the pollutant for which the area is nonattainment. Fugitive emissions are defined in 40 CFR (j)(1)(ix) as ". . . those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening." Landfill emissions that could reasonably be collected and vented are therefore not considered fugitive emissions and must be included in calculating a source's potential to emit.

For various reasons (e.g., odor and public health concerns, local regulatory requirements, economic incentives), many landfills are constructed with gas collection systems. Collected landfill gas may be flared, vented to the atmosphere, or processed into useful energy end products such as high-Btu gas, steam, or electricity. In these cases, for either an existing or proposed landfill, it is clear that the collected landfill gas does not qualify as fugitive emissions and must be included in the source's potential to emit when calculating NSR applicability.

The preamble to the 1980 NSR regulations characterizes nonfugitive emissions as ". . . those emissions which would ordinarily be collected and discharged through stacks or other functionally equivalent openings." Although there are some exceptions, it is our understanding that landfills are not ordinarily constructed with gas collection systems. Therefore, emissions from existing or proposed landfills without gas collection systems are to be considered fugitive emissions and are not included in the NSR applicability determination. This does not mean that the applicant's decision on whether to collect emissions is the deciding factor; in fact, the reviewing authority makes the decision on which emissions would ordinarily be collected and which therefore are not considered fugitive emissions.

2

It should be noted that NSR applicability is pollutant specific. Therefore, where the landfill gas is flared or otherwise combusted or processed before release to the atmosphere, it is the pollutant released which counts toward NSR applicability. As an example, landfill gas is composed mostly of volatile organic compounds, but when this gas is burned in a flare, it is the type and quantity of pollutants in the exhaust gas (e.g., nitrogen oxides and carbon monoxide) that are used in the NSR applicability determination.

If you have any questions regarding this matter, please contact Gary McCutchen, Chief, New Source Review Section, at FTS 629-5592.

cc: Chief, Air Branch
Regions I-X



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

17 DEC 1987

Mr. Robert Hodanbosi
Division of Air Pollution Control
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43266-0149

Dear Mr. Hodanbosi:

Pursuant to my May 15, 1987, letter to you concerning new source review (NSR) guidance, this letter provides further guidance materials and will be designated letter No. 3-NSR.

I am enclosing for your information the following policy and guidance documents:

1. An October 6, 1987, memorandum from Gerald A. Emison entitled "Emissions from Landfills."
2. A December 1, 1987, memorandum from J. Craig Potter entitled "Improving New Source Review (NSR) Implementation."

I would like to point out that the second memorandum contains very significant new guidance for the new source review program.

If you have any questions or comments please feel free to contact me.

Sincerely yours,

A handwritten signature in cursive script that reads "Joseph W. Paisie".

Joseph Paisie, Chief
Technical Analysis Section
Air and Radiation Branch (5AR-26)

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION IX
 215 Fremont Street
 San Francisco, Ca. 94105

*Copy for Jerry, Ren,
 Jack F.*

Good question!

MEMORANDUM

DATE:

SUBJECT: Control of Emissions from Landfills

FROM: David P. Howekamp, Director
 Air Division

TO: Gerald Emison, Director
 Office of Air Quality Planning and Standards (MD-10)

On May 28, 1987, Region IX received an inquiry from Mr. Russ Baggerly regarding a proposed landfill in Ventura County, California (copy enclosed). Mr Baggerly's concern, from an air quality point of view, is over significant fugitive emissions of reactive organic compounds from the site itself, and ROC and NO_x from associated mobile sources and possible IC engines.

Our proposed response (enclosed) delineates the exclusion of fugitive emissions from NSR regulations. The critical question then becomes, what is the meaning of the definition of fugitive emissions stated in 40 CFR 51.18? As defined they are: "those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening." If emissions from a landfill could feasibly be collected and passed through a gas recovery system, what criteria would be needed to then call it a reasonable option? Is it possible that such a landfill could be required to collect these emissions? This has not been done in the past. Please send us a written response providing guidance on this issue.

Enclosures

cc: G. McCutchen, RTP

*Type for response -
 Target 2 weeks*

*Pls coordinate w/
 Farnum*

~~Policy?~~
~~ARCO comparison?~~
~~Can we discuss?~~
W 6/3/87
Wayne
~~PARLICK blocked~~
22 May 1987

Mr. David P. Howekamp
Director - Air Management Division
United States Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, CA 94105

AIR DIVISION
U.S. EPA, REGION 9

MAY 28 1987

RECEIVED

Dear Mr. Howekamp:

An interesting problem is about to surface here in Ventura County in regards to a possible major source. That source is a canyon landfill site currently in the process for environmental review through the Resource Management Agency of Ventura County.

Previous environmental review concerning this site was documented in the County Solid Waste Management Plan (CoSWMP). It was this document that originally divulged the fact that the Weldon Canyon landfill site, based upon the projected wastestream, would have the potential of emitting more than 100 TPY of ROC. Further study reveals that even after gas recovery mitigation the site will produce more than 100 TPY. This would of course make the project a Major Stationary Source according to 40 CFR Ch.1 §51.18 et seq..

The specific problems are these; 1. the district has never issued a permit for a landfill site as an area source. They have issued permits for the IC engines used for electrical generation on other sites for NOx, but landfill site fugitive emissions have never been permitted. 2. The incremental indirect emissions from mobile sources associated with this project may or may not be included in the total number of emissions attributed to this project. 3. The total emissions from the landfill site should be the NOx and ROC emissions from mobile, IC engine and all other sources added to the primary source that are the fugitive emissions from the site itself.

What I would like to know is how EPA views landfill sites, and the procedure for permitting such a source. Are all the emissions associated with the site accumulated into one figure for calculating the offsets required; e.g. incremental indirect (mobile) emissions, sludge drying ponds, leachate retention ponds, gas recovery wells, electrical generating engines, and the fugitive emissions from the landfill site itself. The possibility of emissions from all mitigation measures employed at the site should be included.

DRAFT-EPA Region IX

IN REPLY A-3-1
REFER TO: NSA 2-5

Mr. Russ Baggerly
119 S. Poli Ave.
Meiners Oaks, Ca. 93023

Dear Mr. Baggerly,

Thank you for your May 28, 1984 inquiry to David P. Howekamp regarding environmental review of air emissions from a landfill site in Ventura County. The question you raised in your letter regarding landfill emissions is not unique to Ventura Co. A landfill can be a significant source of emissions, and would be considered to be a stationary source.

A landfill would be subject to New Source Review (NSR), if its potential to emit, excluding fugitive emissions, exceeds the applicable major source cut-off. Fugitive emissions as defined in 40 CFR 51.18 (j)(1)(ix) are "those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening." Landfill emissions that can be collected would not qualify as fugitive and could cause the landfill to be subject to NSR. VOC's emitted outside a gas recovery system would be fugitive, and not subject to federal NSR review according to 40 CFR 51.18 (j)(1)(iv)(c). District regulations may be more, but not less stringent than federal.

As a point of clarification, 40 CFR 51.18 sets forth federal requirements for the State or District to develop a State Implementation Plan for stationary sources. Please note that in the case of this landfill, the applicable NSR regulations of the Ventura County Air Pollution Control District (APCD) would apply, (not 40 CFR 51.18). Therefore, they should be contacted to make this determination.

As you probably know, the emissions from this site should be included in the 1987 Air Quality Management Plan for Ventura County. The Plan is being drafted partly in response to the fact that Ventura County has been named as one of the four post 1987 non-attainment areas in California for ozone. It is the responsibility of the Ventura County APCD to consider all measures that would reduce emissions of pollutants that contribute to the post 87 non-attainment status. Certainly the ROC emissions from this facility, if they are of the magnitude stated in your letter, would exacerbate the ozone problem in Ventura. The District has at its discretion, the power to propose control, offset, or other requirements beyond those required by current regulations, as

part of its plan to achieve attainment of the National Ambient Air Quality Standards.

If you have further questions regarding this matter, please contact Janet Stromberg of the New Source Section at (415) 974-8218

Sincerely,

Wayne A. Blackard, Chief
New Source Section

part of its plan to achieve attainment of the National Ambient Air Quality Standards.

If you have further questions regarding this matter, please contact Janet Stromberg of the New Source Section at (415) 974-8218.

Sincerely,

Wayne A. Blackard, Chief
New Source Section



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 South Front St.
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

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P. O. Box 1049
Columbus, OH 43216-1049

William Hayes
Vorys, Sater, Seymour and Pease LLP
Suite 2100, Atrium Two
221 E. Fourth Street,
P O Box 0236
Cincinnati, OH - 45201-0236

April 6, 2000

Re: Clean Air Act Section 112(g)

Dear Mr. Hayes:

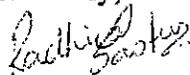
This is in response to your letter dated February 22, 2000, requesting a confirmation of the 112(g) issues we had discussed over the phone. As I mentioned to you, I discussed these issues with Ms Kathy Kaufman and Ms Genevieve Damico of the U.S. EPA, and we are in concurrence with the following conclusions.

You wanted to confirm Ohio EPA's conclusion that if a reconstructed project begins prior to the proposal of the 112(d) standard, the reconstructed source will ultimately be subject to the 112(d) existing source MACT standard, and not the 112(d) new source MACT standard. In concurrence with the U.S. EPA, I confirm the conclusion that if the reconstruction of a source begins prior to the proposal of a 112(d) standard, the source will be subject to the 112(d) existing source MACT standard. As you mentioned, the reconstructed source will have to comply with the 112(g) case-by-case MACT until such time as the 112(d) MACT standard for existing sources becomes applicable to the source. However, please note that if the 112(g) determination happens to be more stringent than the existing source 112(d) requirement, then the Ohio EPA has the option of requiring the source to keep the more stringent controls forever.

You asked for confirmation on the 112(d) compliance deadlines for reconstruction projects. If the reconstruction projects begin prior to the proposal of the relevant 112(d) standard, the deadline for compliance with the final 112(d) standard will be the period set out in the final standard for existing sources (which will be no longer than 3 years pursuant to 40 CFR Section 63.6 (c)). However, the owner will be eligible to apply for an extension of the deadline if the 112(g) determination has been obtained and is submitted before the close of the comment period for the relevant 112(d) standard. In this case, an extension can be granted pursuant to the 112(g) provisions at 40 CFR Section 63.44(b)(1) or (2).

I hope this letter of confirmation will be helpful to your client in their planning stages. If you have any more questions, please feel free to contact me at (614) 728-1354

Sincerely,



Radhica Sastry

MACT Standard Engineer
Division of Air Pollution Control
Ohio EPA

cc: Paul Koval, ATU
Mike Hopkins, AQM&P
Kathy Kaufman, U.S. EPA
Genevieve Damico, U.S. EPA

Ohio EPA
Division of Air Pollution Control

inter-office communication

to: Distribution

from: ^{SC} Stacey Coburn and ^{Kay} Kay Gilmer, CO MACT Coordinators

subject: 112(g) training

date: January 20, 1999

The purpose of this IOC is to serve as a training tool for all Ohio New Source Review permit writers and their supervisors. Ohio has recently adopted changes to OAC 3745-31 which incorporate federal requirements for new or reconstructed major sources of hazardous air pollutants (HAPs). This program is commonly known as 112(g). 112(g) is a gap-filling measure designed to address the concern that although almost all major sources of HAPs will be regulated by a MACT (Maximum Achievable Control Technology) standard eventually, some of these standards won't be effective until the year 2003 or later. If construction or reconstruction of a major source of HAP occurs before the applicable MACT standard is written, then 112(g) requires that the MACT level of control be achieved at the time of construction or reconstruction, when controls can be installed most cost-effectively.

Often, the trickiest part of a 112(g) determination will be the applicability determination. The 112(g) applicability threshold is different from that of a typical MACT standard because it is based on the potential to emit of a *process or production unit* rather than the entire facility. 112(g) only affects a new or reconstructed *process or production unit* (as defined in the 112(g) rule) that is, in itself, a major source of HAP. A process or production unit is defined as "any collection of structures and/or equipment that processes, assembles, applies, or otherwise uses material inputs to produce or store a final or intermediate product." The determination of exactly which equipment at a facility constitutes a *process or production unit* is fairly involved; examples are listed in the preamble of the federal 112(g) rule, found in the Federal Register December 27, 1996. We have attached these examples to the hard copy of this IOC that will be sent to each office; please take a few minutes to review them as they are very helpful in explaining the concept of a *process or production unit*.

If it is determined that a *process or production unit* is being constructed or reconstructed, and is a major source of HAPs in itself, then a 112(g) determination must be done. A 112(g) determination is similar to a LAER (Lowest Achievable Emissions Rate) determination. A 112(g) source must meet the new source MACT floor level of emission control for HAPs; this is equivalent to the level of control achieved by the best-controlled *similar source* (as defined by the 112(g) rule) in the United States. A 112(g) determination may be more stringent than the MACT floor, but to go beyond the floor cost-effectiveness must be considered. This level of control may already be defined for some MACT categories, and in those cases information is found in the following sources, described as *available information*:

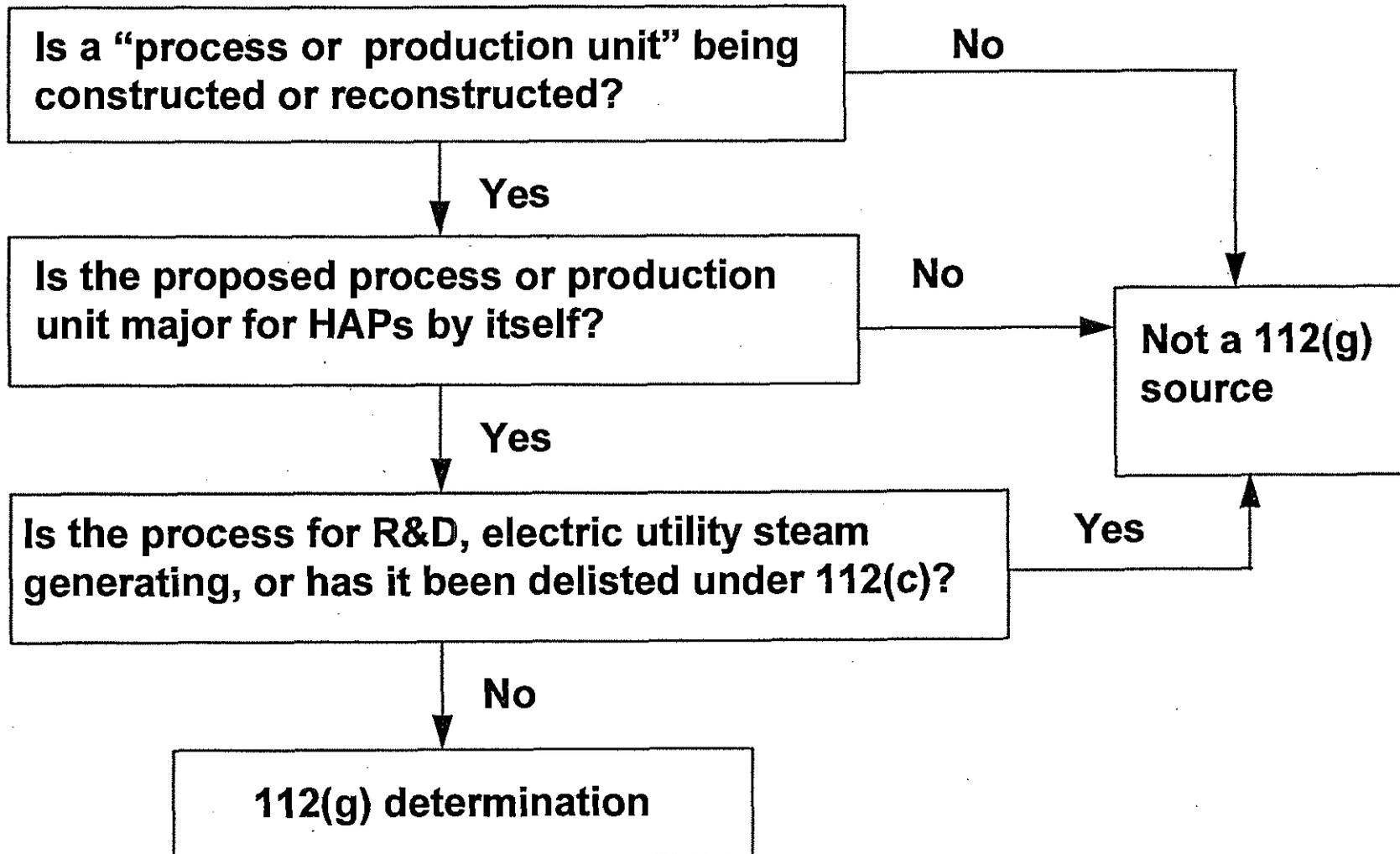
1. Proposed or presumptive MACT standards
2. Background Information Documents for any MACT standards
3. Any information or guidance from the Administrator establishing a MACT floor finding and/or MACT determination
4. Data from the Clean Air Technology Center
5. Other states' 112(g) determinations in the Aeromatic Information Retrieval System (AIRS) MACT database
6. Any additional information expeditiously provided by the Administrator

If no *available information* is found that is applicable to the proposed source, the permit writer should look for similar sources in a manner similar to that of a BAT determination. However, for 112(g), the search for similar sources should not be limited to sources in Ohio. In order to be similar, the sources must be similar in design and capacity, and must have similar emissions (able to be controlled by the same control technology.) The proposed source must meet the level of control achieved by the best-controlled similar source. It is a possibility that BAT would be more stringent than 112(g), but these cases would be very rare. Cost effectiveness is not a factor in determining the level of control required by 112(g) unless controls more stringent than the control achieved by the best-controlled similar source is being considered.

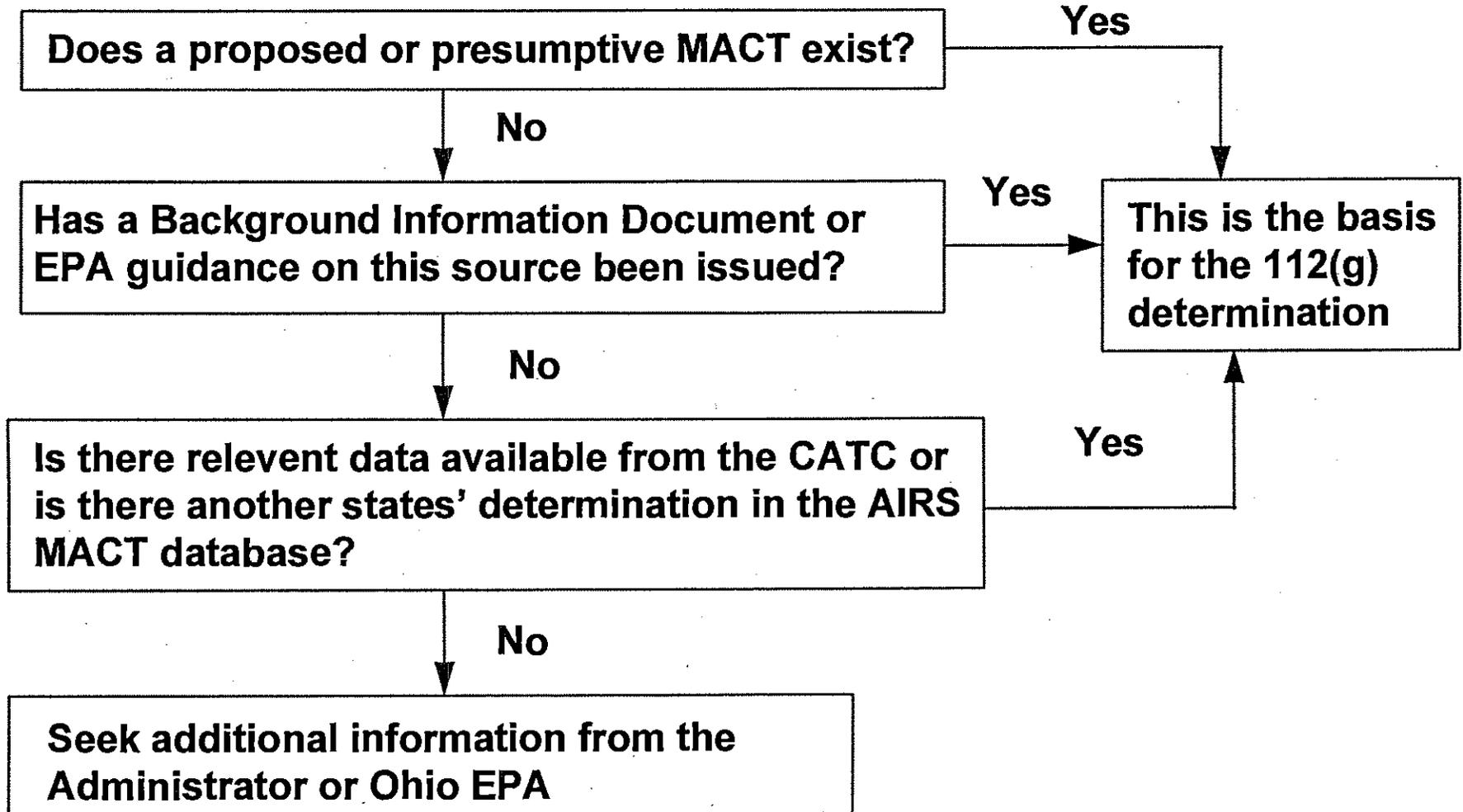
According to the rule, the facility is supposed to determine the appropriate level of control to meet 112(g) requirements and submit a proposed 112(g) determination with the PTI application. Because of the newness and complexity of this rule, it is expected that most facilities will need assistance from the field office permit writer to complete a 112(g) determination. If the permit writer needs assistance, the Central Office MACT contacts Kay Gilmer (614) 644-3698 and Stacey Coburn (614) 728-1354 are available and happy to offer assistance.

It is important that each permit writer review all PTI applications carefully that propose emissions of more than 10 tons per year of any single HAP or 25 tons per year of combined HAPs. The responsibility of identifying sources that are subject to 112(g) is an important one that is most effectively performed by a field office permit contact. If you have any questions about this rule at any time, feel free to contact us. We look forward to working with you to implement this new Air Toxics / New Source Review program.

112(g) Applicability Flowchart



112(g) Determination Flowchart



unless the structures and/or equipment being constructed at an existing plant site have the potential to emit major amounts of HAP.

The following sample applicability determinations provide further guidance in judging when a source is subject to section 112(g) requirements:

Example 1. At a plant which 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 of a HAP.

In this example, EPA views the fiberglass hull of a boat as an intermediate product in the manufacture of the final product (i.e., the boat with deck, trim, paint, engine, etc.) The collection of structures and/or equipment needed to manufacture the intermediate product, in this case, includes the existing spray guns and other operations in the building (e.g., the lamination operation and other

equipment) that typically are found in the production of boats.

Because the newly added spray guns in and of themselves do not produce the intermediate product, the EPA does not view the additional spray guns for lamination as a process or production unit that is subject to review under section 112(g).

Example 2. Using Example 1, 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 processes at the same time. The new spray guns have a PTE greater than 10 TPY.

The same rationale used in Example 1 applies here. The collection of equipment needed to produce the boat hull includes the lamination process as well as the gel coat process. Because the addition of the second lamination process does not produce an intermediate product, if no additional laminating or other essential equipment were added, it would not be subject to review under section 112(g).

Example 3. Using Example 2, a gel coat spray booth and supporting equipment needed to manufacture the boat hulls are added in addition to the spray guns.

The process or production unit in this example is the set of equipment that consists of the gel coat spray booths, the spray gun, and the supporting equipment. This new set of equipment can reasonably operate alone and produce an intermediate product. Consequently, all sources of HAP in this set of equipment, which includes the gel coat spray booth and the spray guns in the laminating room, are subject to review under section 112(g).

4. An aluminum reduction plant has several potlines which manufacture aluminum. Each potline consists of between 100 and 200 electrolytic reduction cells or "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 to be discrete process or production units in that they cannot operate independently. In addition, it does not make sense from an engineering standpoint to apply new source MACT only to the additional pots. The best time to apply new source MACT is when constructing an entirely new potline. The EPA does not view each separate pot as a process or production unit and thus the individual pots are not subject to review under section 112(g). The EPA sees the pots within the potline as being both functionally and physically interconnected and unable to function alone. Thus, EPA does not consider the pots as discrete process or production units.

Example 5. Using Example 4, assume the aluminum production facility adds a new potline which is a major source of HAP.

The EPA considers the entire potline as the collection of structures and equipment that produces an intermediate product (i.e., molten aluminum). Since it fits within the definition of a process or production unit, the potline is subject to review under 112(g). Also, note that the potline is an example of a process or production unit that is part of a larger production unit, the aluminum production plant.

Example 6. At an automobile assembly paint shop, three coating steps, primer, surfacer, and top coat, are used to paint the automobile body. Another parallel topcoat step is added to the existing topcoat step. Both top coat steps then feed back into a bake oven. The new top coat step will be a major source of HAP.

The new parallel topcoat step is not subject to review under section 112(g). 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. Additionally, the intermediate product cannot be completed without the bake oven step. Consequently, the topcoat by itself is not a discrete process as it is only one step in a series of steps necessary to produce an intermediate or final product. (Although unlikely, if an existing automobile assembly plant were to build a second paint shop, this should be reviewed under section 112(g).)

3. Reconstruction. Section 112(g) continues the concept of "reconstruction" contained in past

regulatory programs. The concept of reconstruction is intended to prevent the circumvention of "new source" requirements by completely overhauling existing equipment. Current air pollutant emission standards under previous requirements of the Act treat replacement of components as a reconstruction if the replacement represents more than 50 percent of the capital cost of the new unit.

For section 112(g), the requirements apply to the reconstruction of a "major source," and this rule defines "reconstruct a major source" as the replacement of components at a major source such that the replacement exceeds 50 percent of the capital cost of either an entirely new major source, or of a comparable process or production unit where the process or production unit, if newly constructed, would have been considered a constructed major source under this rule. (For the sake of clarity, the EPA has deleted that portion of the reconstruction definition in the draft rule that referred to a "group of process or production units" being reconstructed, so that the definitions of both construction and reconstruction would refer to the same units).

MACT Determinations

Section 63.43 reflects the statutory requirement that an owner or operator who proposes to "construct or reconstruct" a major source must obtain a determination from the "permitting authority" that the "MACT emission limitation for new sources" will be met. The "permitting authority" is defined as the agency responsible for the title V permit program. Further discussion of this issue, and of other issues related to implementation of section 112(g), is contained in section IV of this preamble.

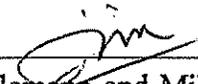
This section of the preamble discusses the procedures for making these MACT determinations. These procedures include technical review procedures needed to establish a MACT emission limitation and a corresponding MACT control technology, and, (where appropriate), administrative procedures for submitting and reviewing applications for MACT determinations. In this rule, the overall process for MACT determinations is outlined in § 63.43.

1. Overall Process for MACT Determinations. Where no MACT standard under section 112(d) has been promulgated, section 112(g) requires a case-by-case determination of the MACT standard. A determination of the MACT "determination" can take any of three

Ohio EPA
Division of Air Pollution Control

inter-office communication

to: Distribution

from:  Stacey Coburn through  Jim Orlemann and  Mike Hopkins

subject: Incorporating Proposed MACTs Into Permits

date: September 25, 1998

We have received questions about whether or not to incorporate proposed MACT (Maximum Achievable Control Technology) requirements into permits. Proposed MACT standards should be included in a PTI or a Title V permit. The MACT standard should be listed as an applicable requirement, and the terms and conditions should include two reporting requirements. These reporting requirements may consist of the initial notification report and the notification of compliance status report that are required by the MACT general provisions. Some sample permit language is provided below:

1. Within 120 days after promulgation of 40 CFR 63 Subpart _____, the permittee shall submit an Initial Notification Report which certifies whether or not the permittee is subject to the promulgated standard. If the permittee is subject to the final standard, the following information shall also be included in the Initial Notification Report:
 - a. The name and mailing address of the permittee;
 - b. The physical location of the source if it is different from the mailing address;
 - c. Identification of the relevant MACT standard and the permittee's compliance date;
 - d. A brief description of the nature, design, size, and method of operation of the source, including the operating design capacity and an identification of each emission point of each hazardous air pollutant;
 - e. A statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.

2. Within 60 days following completion of the required compliance demonstration activity specified in the 40 CFR 63 Subpart _____, the permittee shall submit a notification of compliance status that contains the following information:

- a. The methods used to determine compliance;
- b. The results of any performance tests, opacity or visible emission observations, continuous monitoring systems (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
- c. The methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
- d. The type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times in accordance with the test methods specified in 40 CFR 63 Subpart _____;
- e. An analysis demonstrating whether the affected source is a major source or an area source;
- f. A description of the air pollution control equipment or method for each emission point, including each control device or method for each hazardous air pollutant and the control efficiency (percent) for each control device or method; and
- g. A statement of whether or not the permittee has complied with the requirements of 40 CFR 63 Subpart _____.

This language should be included in the reporting requirements section of the permit. If you have any questions about this language, please contact Stacey Coburn at (614) 728-1354.

Ohio EPA
Division of Air Pollution Control

inter-office communication

to: distribution

from: Stacey Coburn MACT Engineer

subject: Correction to 12/26/96 memo on MACT FESOPs

date: January 10, 1997

On December 26, 1996, you were sent a memo from the Field Operations Section which stated that all MACT sources that wish to avoid major source status under the MACT by limiting their potential to emit must have a FESOP issued before their initial MACT compliance date. After further consideration of this issue by our office and the Region 5 U.S. EPA office, there are two cases in which this would not be true. The two cases are:

1. Sources that maintain adequate records to demonstrate that actual emissions are less than 50% of the major source threshold.
2. Sources emitting between 50-100% of the major source threshold that hold state-enforceable limits that are enforceable as a practical matter.

A source that meets either one of these conditions, and wishes to limit its potential to emit, does not need a FESOP until July 31, 1998, or until the initial compliance deadline of the applicable MACT regulation, whichever is later. Attached, you will find the policy memo on which this information is based. If you have questions about this issue, feel free to call me at (614)728-1354 to discuss it further.

The Field Operations Section would still like to see an assessment from each office of how many facilities will be affected by this policy. This information can be brought to the next MACT team meeting, which is scheduled for February 12 at Central Office. If you are not attending that meeting, or wish to submit the information earlier, please send it to Tom Rigo at Central Office. We appreciate your efforts so far and apologize for any inconvenience caused by the December 26 memo.

Distribution:

Laura Miracle, Akron
Lynn Malcolm, Akron
Brad Miller, Cincinnati
Harry Swietering, Cincinnati
Andy Roth, RAPCA
Curt Marshall, RAPCA
Harold Strohmeyer, NOVAA
Richard Ramhoff, Mahoning-Trumbull
John Scrip, Mahoning-Trumbull
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Gerry Rich, NWDO
Shara Soltis, NWDO
Paul Hinrichs, SWDO
Craig Osbourne, SWDO
Fred Klingelhafer, SEDO

Paul Koval, DAPC ATU
Mike Hopkins, DAPC AQM&P
Sherri Swihart, DAPC AQM&P

AQM&P permitting staff
Engineering permitting staff

August 27, 1996

MEMORANDUM

SUBJECT: Extension of January 25, 1995 Potential to Emit Transition Policy

FROM: John S. Seitz, Director
Office of Air Quality Planning and Standards (MD-10)

Robert I. Van Heuvelen, Director
Office of Regulatory Enforcement (2241A)

TO: See Addressees

This memorandum extends the Environmental Protection Agency's (EPA) January 25, 1995, transition policy for potential to emit (PTE) limits relative to maximum achievable control technology (MACT) standards issued under section 112 of the Clean Air Act. In addition, this memorandum discusses the implications of a recent court decision relative to the title V operating permits program.

Background

Many MACT standards apply only to major sources, that is, those with a PTE greater than a given level. A source's PTE, that is, the amount the source could possibly emit, is affected by its maximum physical capacity to operate and emit and by enforceable limits. The current definition of PTE for the MACT program, which is contained in 40 CFR part 63, subpart A, requires that limits affecting a source's PTE must be enforceable by the EPA and citizens in order to be taken into account in the PTE calculation. These regulations are currently under review, and the EPA is engaged in a rulemaking process to amend the current requirements. The EPA is currently reviewing information resulting from a stakeholder process that was designed to explore options related to this rulemaking. Further information on options being considered is contained in Attachment 1, which is a stakeholder discussion paper of January 31, 1996.

The Current Transition Policy

In a policy memorandum of January 25, 1995, the EPA announced a transition policy. This transition policy was to alleviate concerns that sources may face gaps in the ability to acquire federally-enforceable PTE limits because of delays in State adoption or EPA approval of programs or in their implementation. In order to ensure that such gaps would not create adverse consequences for States or for sources, the EPA provided that for a 2-year period extending from January 1995 to January 1997 (for sources lacking federally-enforceable limitations), State and local air regulators have the option of treating the following types of sources as non-major:

(1) sources who maintain adequate records to demonstrate that actual emissions are less than 50 percent of the major source threshold, and

(2) sources emitting between 50-100 percent of the threshold, but holding State-enforceable limits that are enforceable as a practical matter.

The National Mining Decision

In the National Mining court decision (National Mining Association v. EPA, 59 F.3d 1351 (D.C. Cir. 1995), the court addressed hazardous air pollutant programs under section 112. The court found that EPA had not adequately explained why only federally-enforceable measures should be considered as limits on a source's PTE. Accordingly, the court remanded the section 112 General Provisions regulation (40 CFR part 63, subpart A) to EPA for further proceedings. Notably, in National Mining the court required the EPA to reconsider the Federal enforceability requirement, but did not vacate the requirement. As a result, the requirement for Federal enforceability is still in effect.

Extension of Transition Policy

It is unlikely at this time that on-going efforts to amend the PTE requirements in the MACT standard General Provisions, to address the National Mining decision, will be completed before January 1997. These rule amendments will affect any Federal enforceability requirements that may apply in the future for PTE limits under the MACT program. As a result, it is likely that after January 25, 1997, there will continue to be uncertainty with respect to the Federal enforceability of limits, and thus the basis for the January 25, 1995, transition policy will

continue to be valid. The EPA is, therefore, extending the transition period for the MACT program for an additional 18-month period (January 25, 1997 to July 31, 1998).

Implications of Recent Court Decision for the Title V Program

In Clean Air Implementation Project vs. EPA, No. 96-1224 (D.C. Cir. June 28, 1996), the court remanded and vacated the requirement for Federal enforceability for PTE limits under part 70. Because the court vacated this requirement, the term "federally enforceable" in section 70.2 should now be read to mean "federally enforceable or legally and practicably enforceable by a State or local air pollution control agency" pending any additional rulemaking by the EPA.

The EPA interprets the court order vacating the part 70 definition as not affecting any requirement for Federal enforceability in existing State rules and programs, that is, whether Federal enforceability is required as a matter of State law. Pending the outcome of the current rulemaking effort, the EPA believes that States are not likely to pursue submittals for program revisions. There may, therefore, be States wishing to continue to observe the transition policy. Accordingly, the EPA is extending the transition policy as it relates to title V permitting for an additional 18 months (January 25, 1997 through July 31, 1998).

Implications for New Source Review

Neither the January 25, 1995, transition policy, the National Mining Association court decision, nor the Clean Air Implementation Project court decision impact the New Source Review (NSR) and prevention of significant deterioration (PSD) programs. The EPA's current policy with respect to PTE issues related to the NSR and PSD programs remains as described in the January 22, 1996, policy memorandum, "Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit," which is included as Attachment 2.

Distribution/Further Information

We are asking Regional Offices to send this memorandum to States within their jurisdiction. Questions concerning specific issues and cases should be directed to the appropriate Regional Office. The Regional Office staff may contact Timothy Smith of the Integrated Implementation Group at 919-541-4718; Adan Schwartz of the Office of General Counsel at 202-260-7632; or Charlie Garlow of the Office of Regulatory Enforcement at

202-564-1088. The document is also available on the technology transfer network (TTN) bulletin board, under "Clean Air Act, Title V, Policy Guidance Memos." (Readers unfamiliar with this bulletin board may obtain access by calling the TTN help line at 919-541-5384).

Attachments

Addressees:

Director, Office of Ecosystem Protection, Region I
 Director, Division of Environmental Planning and Protection,
 Region II
 Director, Air, Radiation, and Toxics Division, Region III
 Director, Air, Pesticides, and Toxics Management Division, Region IV
 Director, Air and Radiation Division, Region V
 Director, Multimedia Planning and Permitting Division, Region VI
 Director, Air, RCRA, and TSCA Division, Region VII
 Assistant Regional Administrator, Office of Pollution Prevention,
 State, and Tribal Assistance, Region VIII
 Director, Air and Toxics Division, Region IX
 Director, Office of Air, Region X
 Regional Counsels, Regions I-X
 Director, Office of Environmental Stewardship, Region I
 Director, Division of Enforcement and Compliance Assurance,
 Region II
 Director, Enforcement Coordination Office, Region III
 Director, Compliance Assurance and Enforcement Division, Region VI
 Director, Enforcement Coordination Office, Region VII
 Assistant Regional Administrator, Office of Enforcement, Compliance
 and Environmental Justice, Region VIII
 Enforcement Coordinator, Office of Regional Enforcement
 Coordination, Region IX

cc: C. Garlow, 2242A
 J. Ketcham-Colwill, 6103
 A. Schwartz, 2344
 T. Smith, MD-12

CC: MISTY, ALAN, STACY, SARAA,
SHERRI
RETURN ORIGINAL: 140PICINE

OhioEPA *Division of Air Pollution Control*

DEC 26 1996

inter-office communication

to: Distribution
from: Tom Rigo
subject: Potential MACT major facilities requesting a FESOP
date: December 26, 1996

IMPORTANT !!!

The purpose of this note is to clarify to all district and local air agency permit review staff that U.S. EPA currently employs a very rigid policy for all MACT major facilities. A copy of the May 16, 1995 John Seitz, U.S. EPA policy is enclosed. It is very important to understand that a potential MACT major facility that wants an opportunity to restrict its potential to emit must be **issued** a **final** FESOP permit before the "first compliance date" of the new MACT standard has occurred. If a company fails to obtain the **final** FESOP prior to the "first compliance date," USEPA has taken the position that once a major always a major. Therefore a FESOP (synthetic minor facility) is not possible beyond this deadline.

It should be obvious that Ohio EPA does not want to be responsible for any Ohio company failing to receive the opportunity to be considered a minor MACT facility due to the Ohio EPA or their delegated agents failing to timely process a FESOP application. This could have significant consequences to staff who personally fail to timely process these permits. In an effort to ensure that we do not encounter any problems reviewing and processing these potential MACT major facility FESOP application requests, I request that all the DO and LAA permit review staff supervisors fax or E-mail me a list of this type of FESOP applications that you have received. Please provide the name of the facility, facility I.D., the MACT pollutant in question and the "first compliance date" deadline for which a final FESOP permit is required. Please fax or E-mail these lists to me by 1/7/97. If you find that your office did not receive any potential MACT major

MACT Major Facility FESOP
Page 2

facility FESOP applications, please send me a note to that effect. As you may know, we have several new MACT's with early-March 1997 deadlines for which FESOP applications have been received. If you have not begun your review of these applications, you should immediately begin to review them.

Should you have any questions, please feel free to contact me or Jim Orlemann. Thank you.

Hardcopy Distribution:

DO/LAA Permit Review Supervisors
Jim Orlemann, DAPC
~~Mike Hopkins, DAPC~~
Bob Hodanbosi, DAPC
Cheryl Newton, U.S. EPA, Region 5

E-mail Distribution:

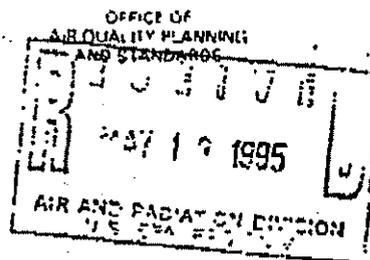
All DO staff
All LAA staff with E-mail capability
All Central Office permit review staff

S/L Director BC
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

MAY 16 1995



MEMORANDUM

SUBJECT: Potential to Emit for MACT Standards -- Guidance on Timing Issues

FROM: John S. Seitz, Director *[Signature]*
Office of Air Quality Planning and Standards (MD-10)

TO: Linda Murphy, Region I
Conrad Simon, Region II
Thomas Maslany, Region III
Winston Smith, Region IV
David Kee, Region V
Stanley Meiberg, Region VI
William Spratlin, Region VII
Patricia Hull, Region VIII
David Howekamp, Region IX
Jim McCormick, Region X

Section 112 of the Clean Air Act distinguishes between major sources and area sources of hazardous air pollutants. Although maximum achievable control technology (MACT) is required for all major sources of hazardous air pollutants, lesser controls or no controls may be required of area sources in a particular industry. In addition, whether a facility is a major or area source of hazardous air pollutants may affect the applicability of other CAA requirements -- such as when or whether the facility is required to obtain a Title V operating permit.

The purpose of this memo is to clarify when a major source of hazardous air pollutants can become an area source -- by obtaining federally enforceable limits on its potential to emit -- rather than comply with major source requirements. Timing questions are important to address now because several MACT standards have been promulgated and because an increasing number of sources are nearing deadlines for submitting Title V operating permit applications. The EPA recently provided guidance on how facilities can obtain federally enforceable limits on their potential to emit hazardous and criteria air pollutants in a January 25, 1995, memo from me to you.

STATUTORY AND REGULATORY BACKGROUND

Section 112 of the Act defines a "major source" as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants..." The term "potential to emit" is defined in the section 112 general provisions (40 CFR Part 63.2) as "the maximum capacity of a stationary source to emit a pollutant under its physical or operational design," considering controls and limitations that are federally enforceable. This definition is consistent with definitions in regulations for the new source review and Title V permit programs.

SCOPE OF TODAY'S GUIDANCE

EPA has received a number of requests for clarification concerning when facilities may limit their potential to emit to avoid applicability of major source requirements of promulgated MACT standards. Most of these issues are not explicitly addressed by the section 112 general provisions nor by MACT standards themselves. Therefore, EPA is providing this guidance for MACT standards based on the Agency's interpretation of the relevant statutory language.

Today's guidance addresses three issues:

- By what date must a facility limit its potential to emit if it wishes to avoid major source requirements of a MACT standard?
- Is a facility that is required to comply with a MACT standard permanently subject to that standard?
- In the case of facilities with two or more sources in different source categories: If such a facility is a major source for purposes of one MACT standard, is the facility necessarily a major source for purposes of subsequently promulgated MACT standards?

EPA plans to follow this guidance memorandum with rulemaking actions to address these issues. The Agency intends to include provisions on potential to emit timing in future MACT rules and amendments to the section 112 general provisions. The EPA believes that the structure of section 112 strongly suggests certain outer limits for when a source may avoid a standard through a limit on its potential to emit. However, EPA also believes the statute may be flexible enough to allow the Agency

to reach different results through rulemaking. In forthcoming rulemaking, EPA will be considering alternative approaches that could garner additional environmental benefits and provide additional flexibility to small sources.

**TIMING FOR OBTAINING POTENTIAL TO EMIT RESTRICTIONS:
GUIDANCE FOR PROMULGATED STANDARDS**

Existing sources

Today's guidance clarifies that facilities may switch to area source status at any time until the "first compliance date" of the standard. The "first compliance date" is defined as the first date a source must comply with an emission limitation or other substantive regulatory requirement (i.e., leak detection and repair programs, work practice measures, housekeeping measures, etc.), but not a notice requirement) in the applicable MACT standard. By that date, to avoid being in violation, a major source must either comply with the standard, or obtain and comply with federally enforceable limits ensuring that actual and potential emissions are below major source thresholds.

The Act does not directly address a deadline for a source to avoid requirements applicable to major sources through a reduction of potential to emit. However, a result that is consistent with the language and structure of the Act is that sources should not be allowed to avoid compliance with a standard after the compliance date, even through a reduction in potential to emit. In the absence of a rulemaking record supporting a different result, EPA believes that once a source is required to install controls or take other measures to comply with a MACT standard, it should not be able to substitute different controls or measures that happen to bring the source below major source levels.

Moreover, while some standards have multiple, staggered compliance dates, these requirements are intended to function in an integrated manner to meet the statutory goals for that source category. For such a standard, the relevant date for purposes of this policy is the first substantive compliance date. While the Act may permit exceptions to these general rules, any such exceptions will need to be developed through rulemaking.

Some have read the Act to require an even earlier deadline, namely, the date of standard promulgation. EPA believes this result is not as strongly compelled by the statute. It is reasonable to presume that Congress intended a source to have some opportunity to avoid a standard by becoming an area source once it has been identified as subject in a promulgated standard.

The compliance date deadline approach would give small emitters (i.e. facilities with actual emissions below the major threshold) time to limit their potential emissions rather than comply with major source requirements. Under this approach, a facility will have the same amount of time to comply whether it chooses to meet the standard or limit its potential to emit.

This compliance date approach for existing sources is also reasonable because it recognizes the circumstances that exist regarding MACT standards issued to date. States are in the process of developing additional mechanisms that can provide federally enforceable limits to sources. In addition, EPA rules have not previously specified when facilities may switch from major to area-source status to avoid MACT applicability. It would be inequitable to hold sources to a promulgation date deadline absent clear advance notice to sources of the full significance of that date. Although the Act gives EPA discretion to designate a deadline earlier than the first compliance date, this is most appropriately done through rulemaking in a manner that gives adequate notice to the regulated community. By contrast, any source should presume that the compliance date is the final date to establish its status as an area source, at least for purposes of that standard.

For clarity, the Agency wishes to note that as long as a facility does not qualify for treatment as an area source, the facility must comply with any applicable major source requirement under the Clean Air Act. Facilities in need to comply with additional limits to qualify as area sources will need to plan ahead to obtain the limits before compliance deadlines for major source requirements. Facilities should consult with State and local air agencies concerning the timing of any necessary submittal.

New sources

Section 112 requires new sources to comply with a MACT standard upon startup or no later than the promulgation date of the standard, whichever is later. As a legal matter, to avoid being in violation, a "potential" major source must either comply with MACT or obtain and comply with federally enforceable limits by this statutory deadline.

Therefore, the Agency advises that any new facility that would be a major source in the absence of federally enforceable limits must obtain and comply with such limits no later than the promulgation date of the standard or the date of startup of the source, whichever is later. For the same reasons articulated below with regard to existing sources, a new source that is major at the time of promulgation or startup will remain major for purposes of that standard.

Once In, Always In Interpretation

EPA is today clarifying that facilities that are major sources for HAPs on the "first compliance date" are required to comply permanently with the MACT standard to ensure that maximum achievable reductions in toxic emissions are achieved and maintained.

EPA believes that this once in, always in policy follows most naturally from the language and structure of the statute. In many cases, application of MACT will reduce a major emitter's emissions to levels substantially below the major thresholds. Without a once in, always in policy, these facilities could "backslide" from MACT control levels by obtaining potential-to-emit limits, escaping applicability of the MACT standard, and increasing emissions to the major-source threshold (10/25 tons per year). Thus, the maximum achievable emissions reductions that Congress mandated for major sources would not be achieved. A once in, always in policy ensures that MACT emissions reductions are permanent, and that the health and environmental protection provided by MACT standards is not undermined.

Example: A facility has potential emissions of 100 tons/year. After compliance with the applicable MACT standard, which requires a 99 percent emissions reduction, the facility's total potential emissions would be 1 ton/year. Under today's guidance, that facility could not subsequently operate with emissions exceeding the maximum achievable control technology emission level. The facility could not escape continued applicability of the MACT standard by obtaining "area source" status through limitations on emissions up to the 10/25 ton per year major source thresholds.

Additionally, the Act requires all major sources to obtain a Part 70 operating permit. Section 501(2) provides that any source that is major under section 112 will also be major under title V. It follows that a source that is major for purposes of any MACT standard will be subject to title V as a major source. As clarification, most MACT standards explicitly require operating permits for major sources. However, this principle applies regardless of whether it is specified in the particular standard. Therefore, a source required to comply with MACT requirements applicable to major sources will also be required to obtain a Part 70 permit for that MACT requirement.

APPLICABILITY OF MULTIPLE MACT STANDARDS TO A SINGLE FACILITY

A facility that is subject to a MACT standard is not necessarily a major source for future MACT standards. For example, if after compliance with a MACT standard, a source's potential to emit is less than the 10/25 tons per year

applicability level, the EPA will consider the facility an area source for purposes of a subsequent standard.

EXAMPLE: A facility has degreasing operations which emit 30 tons per year of HAP. The same facility also has the potential to emit 5 tons/year of HAP from the coating of miscellaneous metal parts. After complying with the Halogenated Solvent Cleaning MACT, the maximum potential emissions from degreasing operations is 3 tons per year. The total federally enforceable potential emissions from this facility would now be 8 tons per year which meets the definition for an "area source." Therefore, this facility would not be subject to the major source requirements of the future miscellaneous metal parts MACT standard.

It should be noted that EPA has authority to require additional reductions in toxic emissions from sources that avoid MACT requirements through reductions in potential to emit. Section 112(f), the residual risk program, requires EPA to evaluate the risk and to promulgate additional standards for each category or subcategory of major sources, and allows EPA discretion to do the same for area sources, where there is not an ample margin of safety to protect public health within 8 years after promulgation of the MACT standard. The EPA will consider whether residual risk standards are appropriate for sources complying with MACT standards or potential to emit limits.

In addition, EPA is committed to implementation of the urban area source program as required in Section 112(c)(3) of the CAA. This program requires EPA to issue air toxics standards for area sources representing 90 percent of the area source emissions of the 30 hazardous air pollutants that present the greatest threat to public health in the largest number of urban areas. Together, the Residual Risk Standards and the Urban Area Source Standards ensure protection of public health beyond that achieved by implementation of the MACT standards for major sources.

S/L Directors, BC

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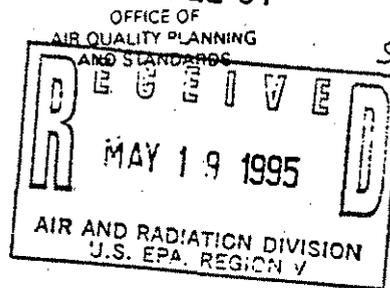


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

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MEMORANDUM

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FINAL MACT STANDARDS

40 CFR 63 Subpart	Source Type	Pollutant	Effective Proposed	Guidance Documents	General Info.
L	Coke Oven Batteries	Emissions	10/27/93 12/04/92	See: Ed Wojo, Region V 312-886-6785	
M	Perc Dryclean	Perchloro ethylene	09/22/93 12/09/91	FR, SS, IN, PP, Amend, IF, TC, FS, Qax2, RCRA USEPA, CR	
A	General Provision	HAP's	03/16/94 08/11/93	FR	
F, G, H, I	HON	112 Chems	04/22/94 12/31/92	FR, Amend, FS, SS	
Q	Indust. Process Cooling Towers	Hexvalent Chromium (banned from use)	09/08/94 08/12/93	FR, Amend, FS, TM,	
T	Halogenated Solvent Degreaser	MC, PCE, CT TCE, CHCL3 111TCA	12/02/94 11/29/93	IF, SS, TC, FR, FS	
O	Comercial Sterilization & Fumigation	Ethylene Oxide	12/06/94 03/07/94	FR, TC, SS,	
N	Hard & Deco Electroplating & Anodizing Tanks	Hexvalent & Trivalent Chromium	01/25/95 12/16/93	FR, FS, SS, IF, TC, IN	

R	Gasoline Distrib (Stage I)	HAP's	12/14/94 02/08/94	FR, Amend,	
EE	Magnetic Tape Manufact.	HAP's	12/15/94 03/11/94	FR	
W	Epoxy Resins & Non-Nylon Polyamide Prod. II	Epichlor o-hydrin	03/08/95 05/16/94	SS,	
X	Secondary Lead Smelters	HAP'S	06/23/95 05/31/94		
CC	Petroleum Refinries	HAP's	08/18/95 6/30/94	FR, Amend,	
GG	Aerospace Manufact. & Rework	HAP'S	09/01/95 06/06/94	FR	
Y	Marine Tank Vessel Loading & Unloading	VOC's & HAP's	09/19/95 05/13/94		
II	ShipBldg & Repair	HAP's	12/06/94		
DD	Off-site Waste & Recovery	HAP'S Table 1. Chemicals	10/13/94		
JJ	Wood Furniture Manuf.	HAP's	12/07/95 11/21/94	FR	

SS = Summary Sheet

IN = Intial Notification Report

PP = Polution Prevention Compliance

CR = Compliance with Control Requirements

Amend = Federal Register of Rule Amendment/correction

IF = Inspection Form

TC = Terms & Conditions

FS = Fact Sheet

QA = Questions & Answers (x2 = two Q&A's)

RCRA = Hazardous Waste issues

USEPA = Federal guidance

FR = Federal Register where final rule was published

TM = Test Method(s)

Proposed MACT

KK	Printing & Publ	3/14/95
S	Pulp & Paper	12/17/93
	Polymers & Resins Grp 1	6/12/95
	Polymers & Resins GRP 4	3/29/95

MACT, CTG, NSPS, ACT AND TITLE I RULE SCHEDULES**

MACT STANDARD	Proposal	Final	ACT	Final
Asbestos MACT/GACT	*1/24/95***	11/95***	Plywood/Particle Board (PM10)	Schedule Under Dev.
Asbestos Litigation	*1/1/93	***		
Ferroalloys	4/96	7/97	NSPS	Proposal
Flexible Polyurethane Foam	8/96	7/97	Cold Cleaning	*9/9/94
Gasoline Distribution	*12/8/95	5/96	Degreaser NSPS	*8/31/94
Haz. Waste Inc.	4/96	4/97	Elec. Utility Gen. Rev. (NOx)	*5/30/94
Mineral Wool	4/96	10/97	Landfill NSPS & 111(d)	*5/30/91
Off-site Waste & Recovery	*10/13/94	6/96	Med. Waste Inc. NSPS & 111(d)	*2/27/95
Oil & Gas Production	4/96	9/96	Mun. Waste Combustors II & III	*9/20/94
Pharmaceutical Production	6/96	1/98	NOx NSPS Revision (407(c))	*11/31/95
Polymers & Resins I	*6/12/95	7/96	SOCMI Sec. Sources NSPS	*8/31/94
Polymers & Resins III	Schedule under revision		Starch Mfg. Industry NSPS	*8/31/94
Polymers & Resins IV	*3/15/95	5/96		
Portland Cement	4/96	11/97	Other Rules	Proposal
Primary Aluminum Prod.	3/96	11/96	Arch./Ind. Coatings (§183e)	3/96
Primary Copper Smelting	7/96	8/97	Auto Refinishing (§183e)	*9/5/95
Printing/Publishing	*3/1/95	5/96	Consumer Products List (§183e)	*8/31/95
Pulp & Paper (combustion)	*2/27/95	8/96	Household Consumer Products	3/96
Pulp & Paper (non-comb.)	*10/29/95	8/96	Haz. Waste TSDf, Phase II (RCRA)	*7/22/91
Secondary Aluminum Prod.	8/96	10/97	Haz. Waste TSDf Phase III (RCRA)	*12/6/94
Shipbuilding (coatings)	*11/22/94	*12/15/95		Schedule under revision
Steel Pickling-HC1 Process	5/96	5/97		
Wood Furniture Coating	*11/21/94	*12/7/95		
Wood Treatment	Proposal to be delisted			
Wool Fiberglass Mfg.	6/96	10/97		

CTG ****	Proposal	Final
Aerospace Coatings	3/96	4/97
Industrial Wastewater	*12/29/93	*****
Shipbuilding (coating)	*12/6/94(BACM)	*****
Offset Lithography	*11/93	*****
Plastic Parts Coating	*****	*****
VOL Storage	*12/93	*****

NOTE:

- * Indicates date completed
- Ⓢ Indicates on a court ordered deadline
- ** All schedules are tentative and subject to change without notice. Only those rules with proposal or promulgation dates within one year are included. Completed rules are removed from list after six months.
- ***Schedule to be determined by litigation/negotiation
- ****ACT's were issued for most CTG categories in April 1995
- *****Final CTG cancelled or no plans to finalize

CTC ASSISTANCE

No cost assistance to staff of State and Local agencies and EPA Regional Offices on air pollution control technology issues.

CTC HOTLINE: CALL (919) 541-0800 to access EPA expert staff for consultations, references to pertinent literature, or access to EPA technical data and analyses. No question is too simple! Our Fax numbers are (919) 541-0242 or (919) 541-0361. E-Mail: blaszczak.bob@epamail.epa.gov.

ENGINEERING ASSISTANCE PROJECTS: If you need in-depth assistance concerning a specific control technology problem, call the HOTLINE or write the CTC. EPA staff and contractors are available for short-term projects such as review of proposed or existing control technology applications. Projects are subject to CTC Steering Committee approval.

TECHNICAL GUIDANCE PROJECTS: If the CTC receives a number of similar HOTLINE calls or a joint request from a group of agencies, the CTC Steering Committee may undertake broad, long-term projects of national or regional interest. The result may be a control technology document for a particular type of source, microcomputer software, or seminars and workshops.

CTC BBS: Call (919) 541-5742 for up to 14400 baud modem to access the CTC Bulletin Board. Set communications parameters to 8 data bits, N parity, and 1 stop bit, and use a terminal emulation of VT100, VT102, or ANSI. You may leave HOTLINE requests, order documents, suggest projects, and download software. The BBS is part of the OAQPS Technology Transfer Network (TTN). Voice Help Line (919) 541-5384.

FEDERAL SMALL BUSINESS ASSISTANCE PROGRAM (FSBAP): Call the CTC HOTLINE to access the FSBAP or use the FSBAP BBS on the TTN. (See the CTC BBS for connection information.) The CTC is the focal point for coordination of efforts among the four EPA centers participating in the program. The Federal program is intended to support State Small Business Assistance Programs, as required by the Clean Air Act.

RACT/BACT/LAER CLEARINGHOUSE (RBLC): The RBLC data base (BLIS) is available on the OAQPS TTN BBS. (See the CTC BBS for connection information.) The Clearinghouse provides summary information for control technology determinations made by permitting agencies.

GLOBAL GREENHOUSE GASES TECHNOLOGY TRANSFER CENTER (GGGTTC): Call the CTC HOTLINE to access GGGTTC information greenhouse gas emissions, prevention, mitigation, and control strategies.



State of Ohio Environmental Protection Agency

DAPC, Section Managers:

Please share the attached memo from Laura Powell with your staff.

NET ADDRESS:

State Government Center
2 S. Front Street
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Thank you,
Bob Hodanbosi

MEMO

Route AQMEL STAFF
RETURN - HELMICK

TO: Division Chiefs and Assistant Chiefs
District Chiefs and Assistant Chiefs

cc: Deputy Directors
Director's Office

FROM: Laura Powell, Chief, Legislative Affairs

DATE: December 1, 2000

RE: Legislative Communication

The purpose of this memo is to restate Ohio EPA's policy regarding legislative communication as well as the format for all written legislative correspondence. *Please review this information carefully and share it with your staff.*

It is important to note that in January 2001, due to term limits, we will have over 40 new legislators in the General Assembly. This turnover will present a significant challenge to our legislative office and to the Agency as a whole. Kristin Helmick, Tracy Freeman, and I will be attempting to meet all the new members as quickly as possible after the new year. However, please be aware that these new legislators are not likely to be familiar with Ohio EPA or with our protocol for handling legislative inquiries. We ask for your assistance and diligence in this time of major transition.

Because of the potential for increased contacts by new legislators to agency staff, it is most important that any communication received from a legislative office (oral or written) be reported to either Kristin, Tracy, or me. We appreciate the efforts most staff make to keep the legislative office "in the loop." However, there are still instances where we hear from legislators or their staff about direct involvement with Ohio EPA staff on issues that have not been brought to our attention. There have also been cases where Agency staff cc: legislators on correspondence without our prior notification. It is vital that Kristin, Tracy and I be made aware of (and have input on) these communications in order to ensure that we, as an agency, are being responsive and consistent. Please realize that the legislative office is here to assist and relieve your staff from having to communicate directly with legislators as the situation warrants.

Weekly reports sent to the Director are not an efficient or effective way for us to track specific legislative issues. In terms of reporting legislative contacts or providing updates on ongoing legislative issues, we would greatly appreciate separate notification -- e-mails are fine. Please let us know who you talked to, the facility or issue(s) prompting the call, what response was provided, and if follow up is required.

In terms of written correspondence, please note the following guides to preparing letters for signature:

- If you or your staff receive a letter (from a citizen, company, etc.) with a legislator on the cc: list, please do not automatically cc: the legislator on your response unless requested by our office. It is unnecessary and potentially confusing to cc: legislators when they have not requested this response. If you would like to cc: our office (with a copy of the original letter) we will keep it on file in case a legislator asks. If you feel it is important to cc: legislators on a particular response, we'd be happy to do so with a separate cover letter explaining why we are sending it.
- Two minor drafting reminders that would prevent delays if corrected--first, we see no reason to send legislative responses Certified Mail. Please do not put this on the top of draft responses. Second, our legislative office is the contact to reference at the close of every legislative response. Please do not reference division or district staff. If we are contacted, we will follow up with staff for additional information. This particular issue continues to delay legislative MCRs when they arrive here for sign-off and only the closing sentence needs to be changed. The format to use is as follows:

"I hope this information is helpful to you. If you have additional questions or concerns regarding this matter, please feel free to contact Kristin Helmick or Tracy Freeman of my legislative staff at (614) 644-2782."

- Kristin Helmick primarily coordinates and signs-off on written legislative responses. She is more than happy to work with you or your staff to ease the burden of these letters. Please feel free to e-mail her draft responses (which will speed things up if changes are necessary), call her with formatting or protocol questions, or contact her with any concerns you may have about expected delays, etc.

If you have any questions about my expectations regarding legislative communication, please feel free to contact me. As you well know, we rely on you and your staff for your assistance and expertise on many issues of interest to legislators, and we *thank you* for your assistance and cooperation.



State of Ohio Environmental Protection Agency

STREET ADDRESS:

Lazarus Government Center
122 S. Front Street
Columbus, Ohio 43215

TELE: 614, 644-3020 FAX: 614 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

MEMO

TO: Division Chiefs and Assistant Chiefs
District Chiefs and Assistant Chiefs

cc: Deputy Directors

FROM: Laura Powell, Chief, Legislative Affairs 

DATE: June 1, 2000

RE: **Legislative Communication**

The purpose of this memo is to restate Ohio EPA's policy regarding legislative communication as well as the format for all written legislative correspondence.

Any communication received from a legislative office (oral or written) needs to be reported to either Kristin Helmick or me. We appreciate the efforts most staff make to keep the legislative office "in the loop." However, there have been instances where Agency staff have cc'd legislators on correspondence without our prior notification. We also hear from legislators or their staff about direct involvement with Ohio EPA on issues that have not been brought to our attention. It is vital that Kristin and I be made aware of (and have input on) these communications in order to ensure that we, as an agency, are being responsive and consistent. Please realize that the legislative office is here to assist and relieve your staff from having to communicate directly with legislators as the situation warrants.

In terms of reporting, please provide us with a quick e-mail to let us know who called, when they called, what was said and if follow-up is needed. Weekly reports sent to the Director are not an efficient or effective way for us to track specific legislative issues.

In terms of written correspondence, please note:

- If you or your staff receive a letter (from a citizen, company, etc.) with a legislator on the cc: list, please do not automatically cc: the legislator on your response unless requested by our office. It is unnecessary and potentially confusing to cc: legislators when they have not requested this response. If you would like to cc: our office (with a copy of the original letter) we would keep it on file in case a legislator asks.

- Two minor drafting reminders that would prevent delays if corrected—first, we see no reason to send legislative responses Certified Mail. Please do not put this on the top of draft responses. Second, our legislative office is the contact to reference at the close of every legislative response. Please do not reference division or district staff. If we are contacted, we will follow up with staff for information and pass that along to the legislative office.
- Kristin Helmick primarily coordinates and signs-off on written legislative responses. She is more than happy to work with you or your staff to ease the burden of these letters. Please feel free to e-mail her draft responses (which tends to speed things up down the road if changes are necessary), call her with formatting or protocol questions, or concerns you may have about delays, etc.

If you have any questions about my expectations regarding legislative communication, please feel free to contact me. As you well know, we rely on you and your staff for your assistance and expertise on many issues of interest to legislators, and we thank you for your assistance and cooperation.



State of Ohio Environmental Protection Agency

STREET ADDRESS:

1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

MEMORANDUM

TO: All Chiefs
FROM: Chris Snider, Asst. to the Director
RE: Formatting Correspondence
DATE: March 30, 1999

In an effort to assist you in preparing documents for the Director's signature, I have attached a sample format that your staff should use as a guideline.

Some other suggestions that will help facilitate the Director's signature include making sure you include a thorough briefing memo on the subject at hand and carefully reviewing the document for typographical and grammatical errors. Using the spell check function in word processing is always helpful, but please remember that spell check does not differentiate between correctly spelled words i.e. "toxics and tonics." Documents should be single-sided and should not be presented for signature on tattered or coffee stained letterhead. As far as a time line for moving your document through the system, please remember that some documents may require sign off from more than one deputy director and the assistant director before going to the director for his consideration. If you have something that needs to move through the system quickly, please don't hesitate to call me and I will help "walk" the document through the necessary signatures to the best of my ability to help you meet your deadline.

All documents for signature must be logged into the Director's Office computerized tracking system. If a logged in document is returned to you for revision, please DO NOT resubmit it with a new sign off sheet. You should resubmit the original sign off sheet with your revised document.

Lastly, the director requires all official comments for the record, made on behalf of Ohio EPA, to be approved by the Director's Office. This is especially important with regard to comments solicited by USEPA on rulemaking and other related programmatic concerns. Comment letters must be prepared for the director's signature.

I hope this information is helpful to you. Following these guidelines should help reduce the number of times that documents need to be returned to you for revisions. Please feel free to call me at 4-2782 with any questions or concerns you may have.

Thank you.



State of Ohio Environmental Protection Agency

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Columbus, OH 43215-1099

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P.O. Box 1049
Columbus, OH 43216-1049

SAMPLE - NOT FOR RELEASE

March 23, 1999

The Honorable John Doe
1432 Longworth House Office Building
Washington DC 20515-3505

Re: Lexmark Drinking Water

Dear Congressman Doe:

Thank you for your letter of November 17, 1998 regarding a serious drinking water problem at Lexmark.

I appreciate the plight of the families affected by the loss of water from their wells. Staff of the Ohio Environmental Protection Agency have visited some of the homes to offer what assistance they could in evaluating the problem.

Representatives of executive branch agencies sit on the board and I will gladly forward copies of your correspondence to them with a request for their timely consideration.

Sincerely,

Christopher Jones
Director

cc: Jennifer Tiell, Assistant Director
Pat Madigan, Deputy Director

Attachment

CJ/cmw



State of Ohio Environmental Protection Agency

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Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

(Arial font, no less than 12 pitch)

Date (No less than 3 returns from top, more if room permits)

Address (No less than 3 returns from date)

Re: (subject line here if applicable)

Salutation (Dear _____:)

Body of letter - Full justification (block to left and right)

Sincerely,

Christopher Jones (At least 3 returns - 4 if room permits)
Director

cc's here

Any attachments/enclosures here

Initials here (CJ/)

CANTON CITY HEALTH DEPARTMENT
DIVISION OF AIR POLLUTION CONTROL
420 MARKET AVENUE NORTH
CANTON, OHIO 44702

FAX: (216) 489-3335

TELEFAX TRANSMITTAL

DATE: 7-21-94

FOR THE ATTENTION OF: MISTY PARSONS

FIRM: OHIO EPA AIR NSR

FAX NUMBER: 9-1-614-644-3681

RE: PERMITS FOR MINING

This transmission consists of 3 pages including this page.

Please notify us if you do not receive all the pages at (216) 489-3385.

FROM: DAN SCHILTZ

THIS AIR LINES CAME OUT IN LATE
1980'S. I THINK OHIO EPA ALSO
CAME OUT WITH A MEMO ABOUT
NO PERMITS NEEDED FOR OIL + GAS
WELLS.

ADMINISTRATIONAcid Rain

We have attached a new issue of the air fact sheet on acid rain prepared by Bill Spires. This is good recent information which can help you respond to the public's general interest in acid rain. Thanks Bill.

CAA changes

Several bills are under active consideration in Congress which would amend the CAA. Changes contemplated include a new O₃/CO control plan, air toxic's and acid rain. Becky Blood of the Governor's Ohio office is following these issues closely and recently visited the agency to update us. Director Shank will be in Washington in May to meet with USEPA officials and the Congressional delegation to be briefed on current issues and raise certain agency concerns.

Region V news

Director Shank and deputies Rich Sahlf and Maury Walsh will be in Region V on Thursday and Friday of this week. Thursday will be DSHWM and Friday DAPC. Pat Walling will join them on Friday for an all day discussion of air issues including a meeting with Val Adamkus. We are pleased to have this much time given to Ohio by Region V to update each other.

Personnel

We have a full house! All positions are filled except for a newly established EE-1 for Right to Know activities. This position will set up administrative

procedures for handling the influx of information due to the agency on July 1, 1988, concerning toxic air emission and mass balance calculations. Interviews have been conducted for this job.

We filled both QA jobs in the past two weeks as well as the supervisor slot in the AQMPS for NESHAPS.

AIR QUALITY MODELING & PLANNINGNew Source Review - Best Available Technology (BAT) Determination

Ohio EPA has recently received a number of applications for permits to install (PTI's) replacement storage tanks at bulk plants located in rural counties. BAT has been determined to be submerged filling and control with a vapor balance system while transferring gasoline from a delivery vessel to the stationary storage tank. The transfer of kerosene, fuel oil and diesel fuel into the stationary storage tank must be done through a submerged fill pipe installed within six inches of the bottom of the storage tank.

New Employee

Tom Hadden has joined the AQM&P Section to be in charge of the Hazardous Pollutant Control Group. He will be supervising the activities of the air toxics control program, NESHAP, and Section 313 of SARA. Tom was formerly employed with Ohio EPA in the Division of Water Pollution Control.

Permit to Install Requirements for Mineral Extraction

Ohio EPA has received two permit to install applications for mineral extraction that includes coal strip mining. Because strip mining is regulated by the DNR, Ohio EPA does

not require these operations to obtain permits to install. However, new coal washing and/or coal preparation plants must obtain a permit to install. Any PTI applications or portions of a PTI application for coal strip mining should be returned to the applicant.

Toxic Inventory

Just a reminder; the local air agencies and district offices should be in the process of mailing surveys to facilities for the compounds that were contained on the Battelle list of toxic, but not on the original list mailed to facilities. These compounds and their ranking (Battelle) are: 8. Nickel, 11. Mercury, 17. Trichloroethylene, 20. Polychlorinated Biphenyls (PCBs), 22. Epichlorohydrin, 27. Aniline

USEPA NO₂ Increments Proposal

On February 8, 1988 USEPA proposed to incorporate NO₂ air quality increments into the PSD program. Comments were due April 8, 1988. Attached for your information are ALAPCO's and Ohio EPA's comments on the USEPA proposal.

ENGINEERING

Stack Test Review Summary Form Tracking:

Please find attached, the stack test review form tracking update for the 2nd quarter of 1988 (SFY). Certain field offices need to increase the percentage of review forms submitted in a timely manner. Please work toward increasing this percentage for the 3rd quarter. If you're having problems getting facilities or test firms to submit the final test reports within the required time frame, please inform this office so these facilities or

firms can be contacted and reminded of their obligation.

Also attached for your use is an updated version of the stack test review summary form. The form has been redesigned to facilitate data input to the stack test clearinghouse. Since the form provides all the information utilized in the clearinghouse database, it will no longer be necessary for field offices to submit copies of the stack test reports (except where necessitated by special situations or enforcement actions); however, we would still appreciate receiving any observer's reports, printouts of test results (MS) or visible emission readings associated with the test summary.

EER Summary Tracking:

The EER summary tracking update for the 4th quarter of 1987 is attached for your information. We would like to commend those field offices who put forth the extra effort to ensure that all their EER summaries were submitted in a timely manner. We hope this level of effort can be maintained during the upcoming quarters. Only two (2) field offices kept us from having an exceptionally high performance level.

Twinsburg (NEDO) Smoke School:

The schedule and registration form for Twinsburg's spring smoke school are attached for your information. Please contact Fred Long or Dennis Bush for additional information (216-425-9171).

CEM Audits:

The Ohio EPA, in conjunction with the U.S. EPA/Region 5 and Entropy Environmentalists, will be conducting performance audits on 9



State of Ohio Environmental Protection Agency

P.O. Box 163669, 1800 WaterMark Dr.
Columbus, Ohio 43216-3669
(614) 644-3020
FAX (614) 644-2329

George V. Voinovich
Governor

May 10, 1995

Matthew F. Johnston
Corporate Engineer
Environmental Affairs
Worthington Industries
1205 Dearborn Drive
Columbus, Ohio 43085

Dear Mr. Johnston:

This is in response to your letter of March 1, 1995 in which you have requested that air contaminate sources (150 injection molding machines in the State of Ohio) that are presently required to obtain permits to install be exempted. Specifically, you are requesting that the Agency provide guidance in interpreting the applicability of Ohio Administrative Code (OAC) rule 3745-31-03 (A) (1) and (m).

In order to respond to your request we spent some time reviewing the existing regulation and some of the background documentation which was used to develop the exemptions. This review did not give us much additional insight on the intention of the exemptions for plastic molding operations. However, the exemption rule it self is relatively clear in its language. As such, our interpretation of the rules are as follows.

Under OAC rule 3745-31-03 (A) (1) (k), the rule exempts "equipment used for compression and injection molding of plastics...". The exemption does not apply to equipment which "requires an outside source of heat that either liquifies or caused sublimation or equipment which "requires the use of organic compounds as mold release agents". Our interpretations of this rule is just as it says - if an source of heat is used, than the exemption does not apply. If an organic compound is used as a mold release, then the exemption does not apply.

In the case you supplied, an electric heater was used (an outside source or heat) and, therefore, the exemption does not apply.

We also believe that if any mold release is used, then the exemption does not apply. Non organic compound mold releases can be used and the exemption would apply.

We believe that the "presses" exemption would be interpreted the same way.



As you pointed out, emissions from some injection molding machines and plastics presses could be very small. Some of these could be significant sources depending upon the amount of heat supplied, the vaporization characteristics of the plastic and the amount and type of mold release compound used. Because of the possibility of significant emissions it would not be appropriate to exempt all of these machines.

However, in your case the machines may have emissions small enough to qualify for other exemptions. Specifically, Ohio has a "less than 10 pounds per day" exemption which might apply to these sources. I recommend that you look closely at this rule to see if it will exempt any of your sources. It can be found under OAC rule 3745-15-05(A).

If you have any questions, please contact Alan Lloyd of my staff at (614) 644-3613.

Sincerely,



Robert Hodanbosi
Chief
Division of Air Pollution Control

RH/all

cc: Brad Miller, SWOAPCA
Gerry Rich, NWDO
Alan Lloyd, DAPC
Mike Hopkins, DAPC

c:\save\worth.mj

OEPA inter-office communication

to: Distribution date: October 1, 1996
from: Mike Hopkins, AOM&P, DAPC
subject: PTI Modeling during the application review

The purpose of this memo is to clarify who should:

1. conduct air pollution modeling (both major modeling and minor modeling); and
2. who should review the modeling.

The questions of when modeling is required and how modeling should be done have been answered in the most recent version of the modeling policy (currently June 1995).

Who should conduct "Major Modeling"?

Major modeling is defined as any modeling required under major New Source Review (PSD, nonattainment review) or any refined modeling where the Screen model is not used. Most major modeling should be completed by the applicant. Field offices that have the experience to run the ISC models may do so in order to support/check major New Source Review modeling submitted, or to provide ISC runs when screen models fail to show compliance. These ISC runs are at the option of the field office staff and must be done in accordance with the DAPC modeling policy. If additional model runs are needed for a major New Source Review package they should normally be completed by the applicant.

Who should conduct "Minor Modeling"?

Minor modeling is defined as modeling required by the Air Toxics Policy, for pollutants under our state Modeling Policy (NAAQS and toxics), or similar modeling where Screen model is used. Field office staff should use their best judgement to decide when to require companies to do their own modeling. This judgement should be based on what is best for the customer. Typically, large facilities with significant environmental staff will choose to do their own modeling in order to:

1. have more control over the various modeling options; and
2. to expedite the permitting process by saving us from having to do the modeling.

For smaller facilities, or those without the expertise to do the Screen modeling, the DO/LAA should do the minor modeling (with Central Office assistance as needed). An exception to this should be for cases where there are many sources, or the modeling is fairly complex. In these cases, it is appropriate for the company to hire someone to do the modeling rather than relying on us. The new SBA program may be able to assist qualifying small businesses by doing some modeling for them. Again, field office staff should guide facilities to help them decide which option is best.

When it is appropriate for the Ohio EPA to do minor modeling, the

staff should do this work, not the Central Office staff. All DO/LAA offices have been provided training concerning the use of the Screen models. It is best to have DO/LAA staff do this modeling because it is better to find out as early in the review process as possible whether or not a source passes this requirement. When you receive an application, this is one item you should consider early in your review, as soon as you have determined the emission rates.

Who should review major modeling?

This should be decided on a case-by-case basis by the AQM&P modeling unit. Most major modeling should be reviewed by the Central Office modeling staff. This has been the case with PSD PTI modeling in the past. In some cases, where the DO/LAA staff has developed the expertise, and with the modeling unit's agreement, DO/LAA staff can conduct this review.

Who should review minor modeling?

This review should be conducted at the DO/LAA level. DO/LAA staff should include a copy of the Screen model runs with the worksheet they submit to Central Office. Calculations should also be attached showing that the modeling passes the Air Toxics policy MAGLC or is less than $\frac{1}{2}$ the increment for NAAQS. If this information is not provided, Central Office staff will return the worksheet to the DO/LAA.

We are very willing to answer any modeling related questions that come up, so please contact us. We realize that there are questions that arise which will likely require our assistance (such as, whether or not Screen is the appropriate model for multiple sources in a certain case, whether terrain should be included and what can be suggested to the applicant if they fail). If you do not feel confident in the basics of running the model, we can assist you in learning this as well. Bill Spires is the primary Modeling Policy contact. You can also pose questions to your NSR contact person at CO at (614) 644-2270. Thank you.

DISTRIBUTION

Don Waltermeyer, NWDO
Sam Araj, NWDO
Fred Klingelhafer, SEDO
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NOVAA Modeling Discussion
Agenda
February 7, 1996

Topics we cover

General Modeling

Description

Inputs

Outputs

Accuracy, Validity, Limitations

New Source Review Requirements

Major: PSD, Non-attainment

State-only permits

toxics

1/2 PSD increment

NAAQS

Special Modeling (can we require it, what do the results mean?)

Enforcement

Verified Complaints

Permit Renewal

Source data....source characterizations

Field offices responsibility for review

Downwash and GEP buildings

Flat, Simple and Complex terrain

Toxics; What policy?

Urban vs Rural

Non traditional sources (rain caps, window vents, etc)

Definition of Ambient Air

Fugitives and/or uncaptured emissions - Model or not

SCREEN and TSCREEN hands on; Current projects??

Input/Output Examples



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Areas where we will be revising the Guidance

Combined concentration target and significant emissions table

Most current version vs specific model numbers

volume source guidance

SCREEN settings and work sheets

TSCREEN settings to mimic SCREEN

additional rain cap guidance and other special emission types

Effective date of BAT changes (toxic modeling requirement changes)

Issues such as BAT extending to existing emissions at a modified source

ack Effluents

and that smoke
 different ap-
 py or during
 been through
 various kinds
 related with
 meteorological
 apt in rare
 continuous
 equations,
 Where sev-
 and more or
 rt stacks on
 it (see Fig.
 levied by the
 ations,

are also limited. Although some variations may be found, it is believed that there are five major types of plume behavior,²³ and these are shown schematically in Fig. 5.1, along with

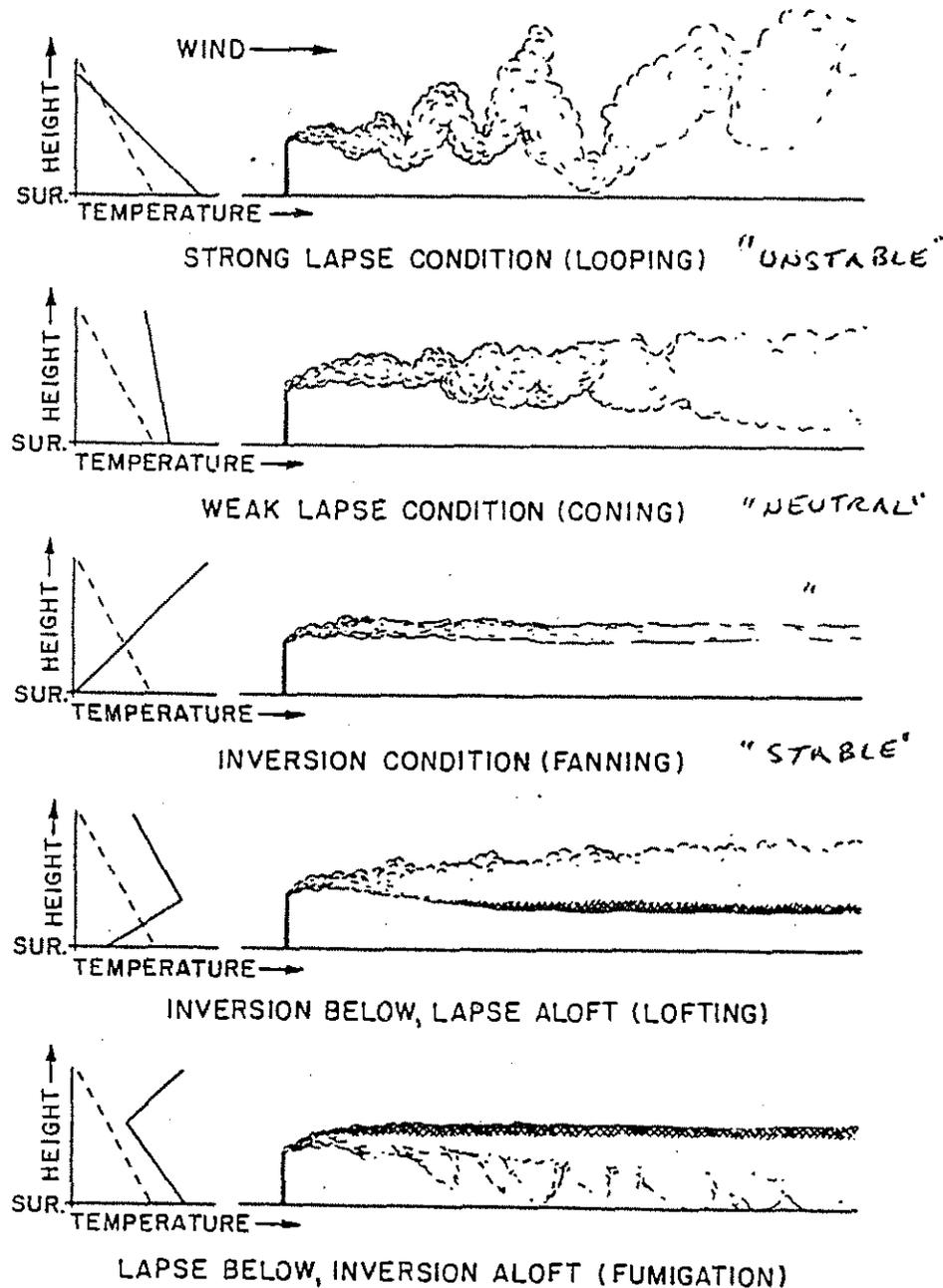


Fig. 5.1—Schematic representation of stack gas behavior under various conditions of vertical stability. ---, dry adiabatic lapse rate.

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the general form of vertical temperature

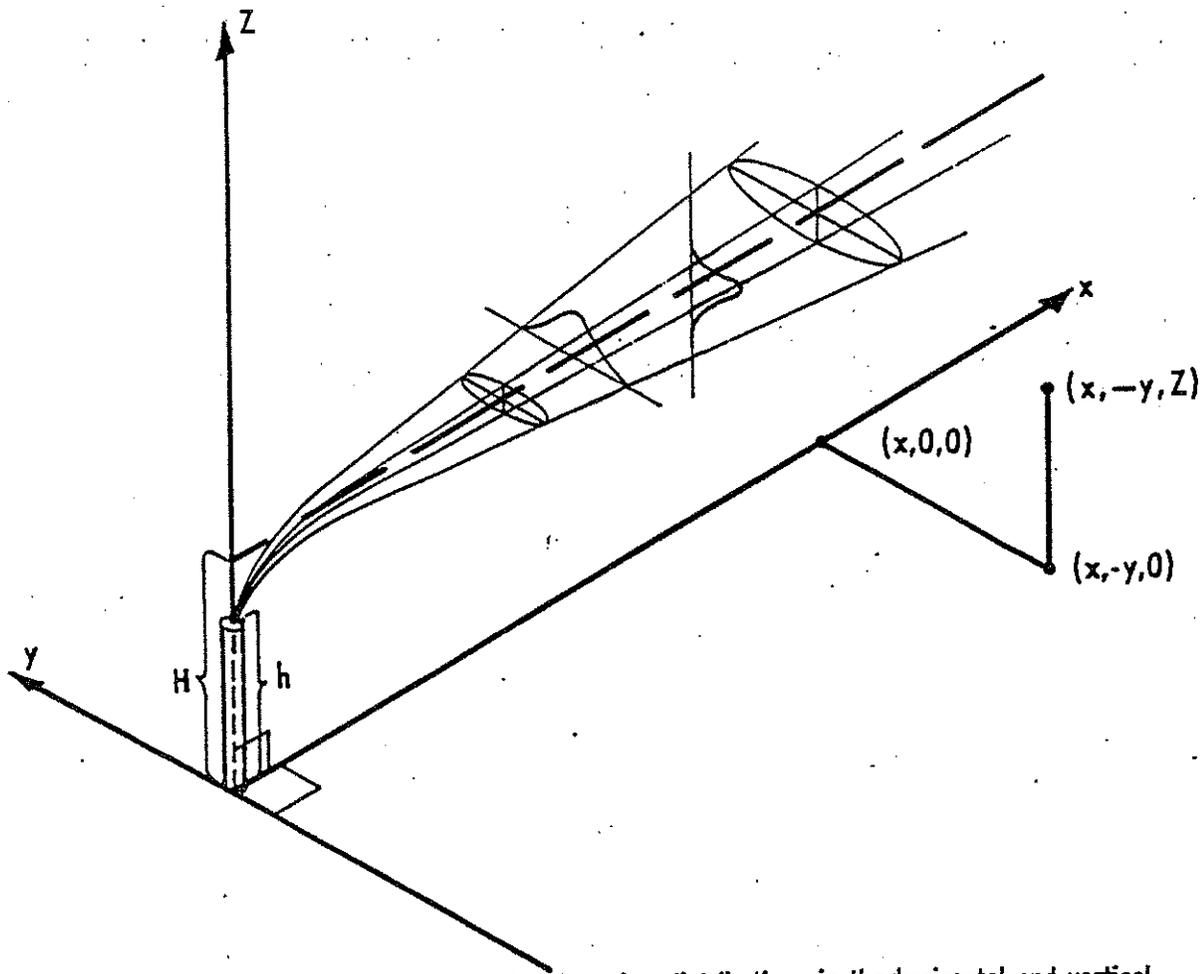


Figure 3-1. Coordinate system showing Gaussian distributions in the horizontal and vertical.

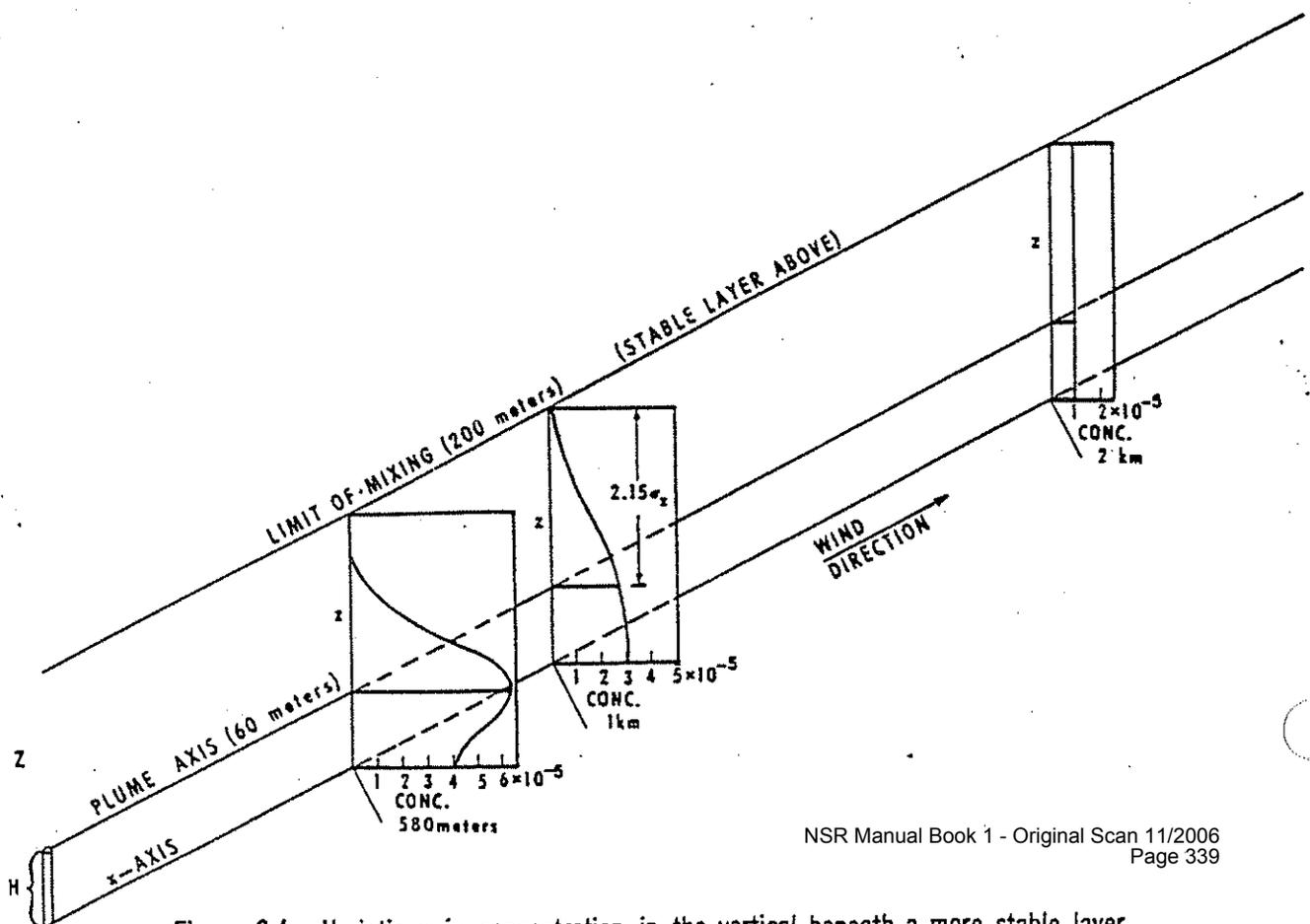
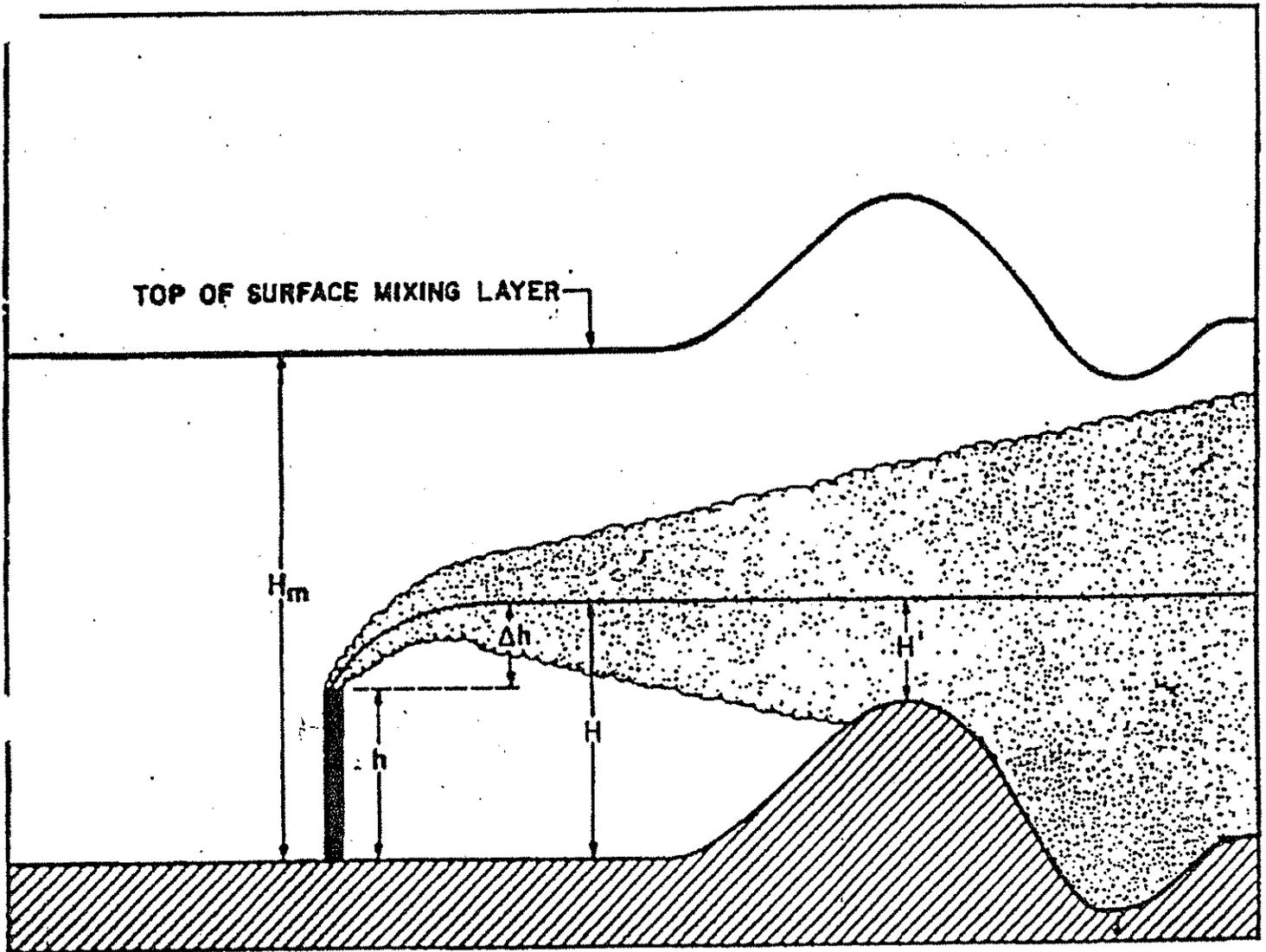
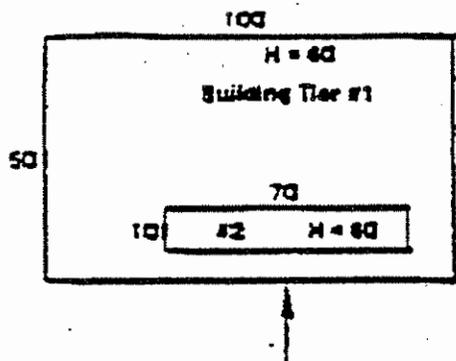


Figure 3-4. Variations in concentration in the vertical beneath a more stable layer.





Height of wake effects is $H_w = H + 1.5 L_B$
 where L_B is the lesser of the height of the
 width.

East and west wind:

$$H_{w1} = 60 + 1.5(50) = 135$$

$$H_{w2} = 80 + 1.5(10) = 95$$

Therefore, the lower building tier #1 width and
 height
 ($H = 60, W = 50$) are used

North and South winds:

$$H_{w1} = 60 + 1.5(60) = 150$$

$$H_{w2} = 80 + 1.5(70) = 185$$

Therefore, the upper building tier #2
 width and height
 ($H = 80, W = 70$) are used

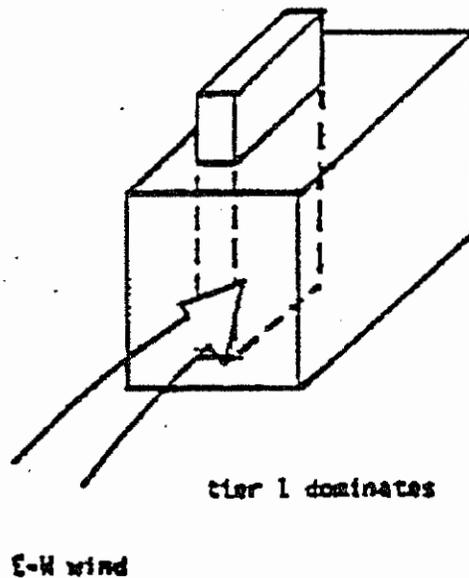
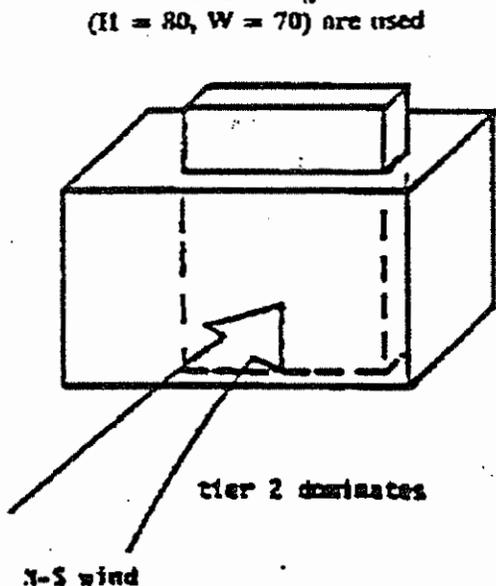


FIGURE 1-2. ILLUSTRATION OF TWO TIERED BUILDING WITH DIFFERENT TIERS DOMINATING DIFFERENT WIND DIRECTIONS

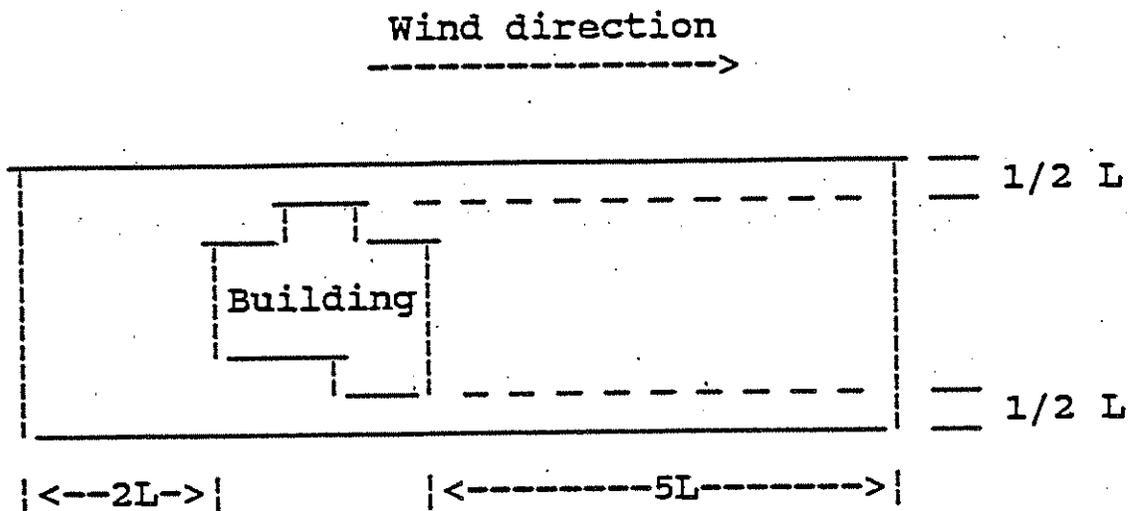
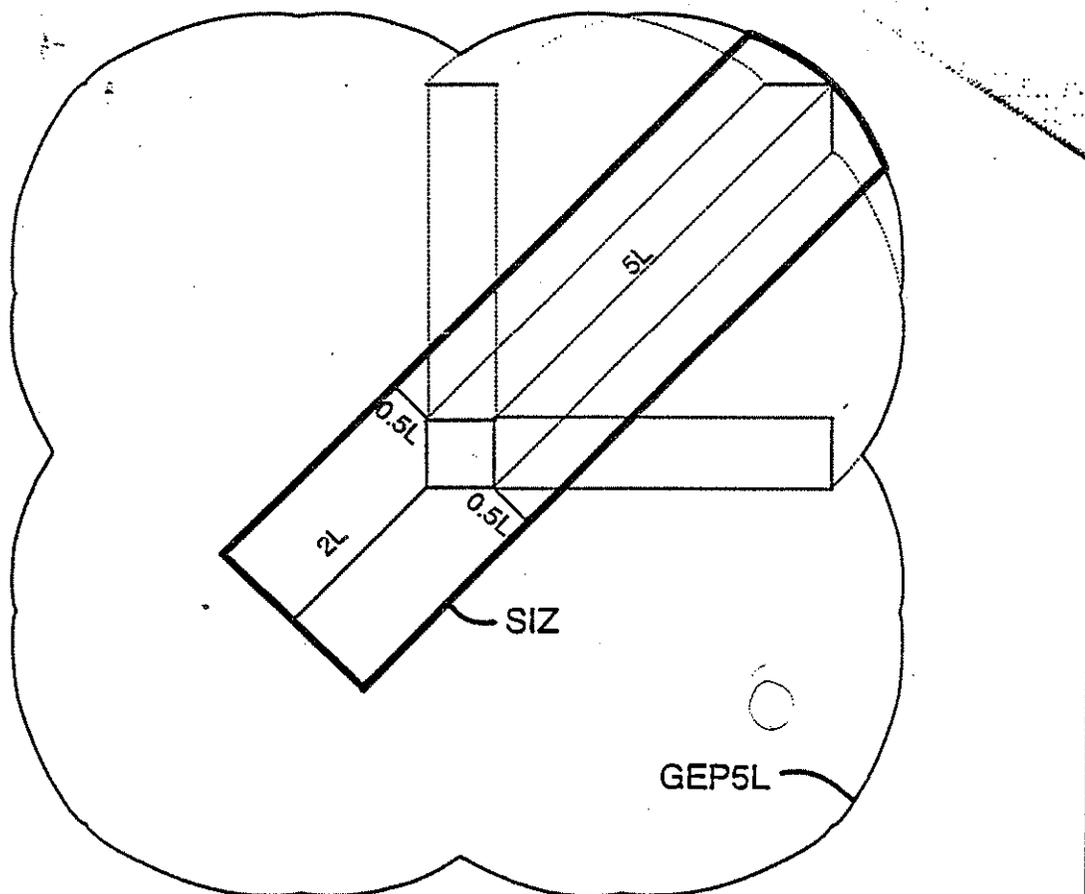


Figure 1

Plan View of Area of Influence of Building Wake Effects



The influence zone around a tall building is clearly not a describable shape in EPA's new BP/IP.

Permit Application Guidance for New Air Pollution Sources

*IMPACT
TO PARKS*

John Bunyak

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Air Quality Division
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Denver, CO 80225-0287

Natural Resources Report NPS/NRAQD/NRR-93/09

March 1993

United States Department of the Interior
National Park Service
Natural Resources Publication Office
Denver, Colorado

The National Park Service, Air Quality Division, is responsible for preserving, protecting, and enhancing air quality and air quality-related values in the national park system by ensuring compliance with the requirements of the Clean Air Act and the National Park Service Organic Act. Air quality-related values include visibility, flora, fauna, cultural and historical resources, odor, soil, water, and virtually all resources that are dependent upon and affected by air quality. The Air Quality Division monitors air quality in park units; reviews permit applications for proposed major emitting sources, air quality legislative and regulatory proposals, and NPS and other federal or state air quality plans; develops data on sensitive park resources; researches acid deposition and its impacts; and develops meteorological and atmospheric dispersion modeling methodologies.

The National Park Service disseminates reports on high priority, current resources management information, with managerial application for managers, through the Natural Resources Report Series. Technologies and resource management methods; "how to" resource management papers; proceedings on resource management workshops or conferences; natural resources program recommendations; and descriptions and resource action plans are also disseminated through this series. Documents in this series usually contain information of a preliminary nature and are prepared primarily for internal use within the National Park Service. This information is not intended for use in open literature.

Mention of trade names or commercial products does not constitute endorsement or recommendation for use by the National Park Service.

Copies of this report are available from the following:

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Permit Application Guidance for New Air Pollution Sources

John Bunyak

Natural Resources Report NPS/NRAQD/NRR-93/09

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Acknowledgements

I gratefully acknowledge the assistance of the National Park Service, Air Quality Division staff, especially Tonnie Maniero, John Notar, and Bud Rolofson of the Permit Review Team, in supplying information and comments on the document, and Christine Schumacher for her excellent clerical support in preparing this document.

Purpose

This document provides guidance to persons intending to submit a Prevention of Significant Deterioration (PSD) of Air Quality permit application for a new major source or major modification to an existing source, the emissions from which have the potential to impact a class I area managed by the National Park Service (NPS) or the U.S. Fish and Wildlife Service (FWS). This document also identifies to permitting authorities the NPS and FWS contacts, and provides NPS and FWS personnel background information on the PSD process and information and analysis requirements. In addition to this document, permit applicants should also use a copy of the Environmental Protection Agency (EPA) draft New Source Review Workshop Manual (Environmental Protection Agency 1990). The EPA manual describes all aspects of the PSD review process in detail.

Questions regarding the EPA manual, which was revised in October 1990, should be directed to the Environmental Protection Agency, New Source Review Section (919) 541-5591.

Under a memorandum of agreement with the U.S. Fish and Wildlife Service, the National Park Service, Air Quality Division, provides technical review of PSD permit applications that may affect FWS class I areas. Therefore, the guidance in this document also applies to both NPS and FWS class I areas.

For areas of the national park system, the National Park Service Organic Act of 1916 requires conserving resources "unimpaired for the enjoyment of future generations." The Clean Air Act of 1970, as amended in 1977, charges the federal land manager (FLM) with an affirmative responsibility to protect the air quality-related values of designated class I areas from adverse impact. Much of the information that the National Park Service and the U.S. Fish and Wildlife Service need to carry out these statutory responsibilities must be collected by the applicant well before the PSD permit application is submitted.

By delegation of authority from the secretary of the interior, the assistant secretary for Fish and Wildlife and Parks is the federal land manager for areas under NPS and FWS jurisdiction.

By following the guidance in this document, an applicant can prevent delays in the review process that are caused by an incomplete application and can obtain useful information from the National Park Service. For example, the National Park Service may provide the applicant with air quality and visibility data, data regarding ecological resources, and lists of NPS park-specific or FWS refuge-specific resources that are known to be sensitive to air pollution. Finally, although much of the discussion in this document pertains to class I areas, resources that are sensitive to air pollution may also exist in class II federal lands. Consequently, the federal land manager is concerned about potential impacts on class II sensitive resources as well.

Statutory Requirements Applicable to Class I Areas

Clean Air Act

In 1970, Congress passed the Clean Air Act, establishing a national policy toward protecting and enhancing air quality (42 *United States Code* (USC) 7401 *et seq.*). Upon amendment in 1977, the act became an important tool in protecting air quality and sensitive resources in national parks and national wilderness areas. The Clean Air Act Amendments of 1990 (Public Law No. 101-549) retained and enhanced the park and wilderness protection provisions (e.g., visibility studies and transport commissions).

Sections 160-169A of the act established the PSD program to protect the quality of the air in regions of the United States in which the air is cleaner than that required by the federal National Ambient Air Quality Standards.

Under the PSD provisions, Congress developed a classification approach for controlling the increase of air pollution in those areas of the country with air quality better than the National Ambient Air Quality Standards.

One of the purposes of the PSD program is "to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value."

Class I areas are afforded the greatest degree of air quality protection. Very little deterioration of air quality is allowed in these areas. Moderate deterioration, associated with well-managed industrial growth, is allowed in class II areas, while more deterioration is allowed in class III areas. In no case, however, may pollution concentrations violate any of the National Ambient Air Quality Standards.

Congress designated certain areas as mandatory class I. This designation precludes reclassifying these areas to a less protective category.

The 1990 amendments clarified that class I area boundaries are to conform to boundary changes in the underlying park or wilderness area. The national park system includes 48 mandatory class I areas, and the national wildlife refuge system contains 21 mandatory class I areas.

Mandatory class I areas include the following areas that were in existence as of August 7, 1977:

1. international parks
2. national wilderness areas and national memorial parks in excess of 2,024 ha (5,000 acres)
3. national parks in excess of 2,428 ha (6,000 acres)

(42 USC 7472)

NPS-administered class I areas are shown on a map in Appendix A, and FWS-administered class I areas on a map in Appendix B.

The states and, in some cases, Indian tribes can redesignate lands in accordance with section 164 of the Clean Air Act. Certain class II areas, however, may not be redesignated to class III. These class II "floor" areas include national wildlife refuges, wild

and scenic rivers, lakeshores and seashores in excess of 4,047 ha (10,000 acres), and newly established national parks and wilderness areas in excess of 4,047 ha (10,000 acres). As with class I areas, the 1990 amendments clarify that the boundaries of class II floor areas are to conform to the boundaries of the underlying areas. All other clean air areas of the country were initially designated by the Clean Air Act as class II, and can be redesignated as either class I or class III.

Section 164(d) required the federal land manager to review all national monuments, primitive areas, and preserves, and to recommend for redesignation to class I any appropriate class II areas possessing air quality-related values as important attributes. The recommendations, with supporting analyses, were provided to Congress and the affected states and Indian tribes with authority for redesignation. These recommendations, published in the June 25, 1980, *Federal Register* (FR) (45 FR 43002) are listed in Appendix C.

Air quality-related values include visibility, odor, flora, fauna, and geological resources; archeological, historical, and other cultural resources; and soil and water resources.

Major sources of air pollution that propose to build new, or significantly modify, existing facilities in areas of the country with pollutant concentrations below the National Ambient Air Quality Standards (clean air regions) are subject to certain requirements generally designed to minimize air quality deterioration. Where emissions from new or modified facilities may affect class I areas, set aside by Congress for their pristine air quality or other natural, scenic, recreational, or historic values potentially vulnerable to air pollution, the act imposes special requirements to ensure that the new and existing pollution will not adversely affect such areas. In addition, Congress gave the federal land manager, and the NPS park superintendent or FWS refuge manager who is charged with direct responsibility for managing class I areas, an affirmative responsibility to protect all those values of an area that may be affected by changes in air quality. They are also to consider, in consultation with the permitting authority (the Environmental Protection Agency or the state), whether a proposed major emitting facility will have an adverse impact on such values.

The Clean Air Act establishes several tests for judging a proposed facility's impact on the clean air regions in general, and on the class I areas in particular. One such test is the PSD increment test. PSD increments represent the small amount of additional pollution that Congress thought, as a general rule, could be allowed in each classified area (class I, II, or III). Currently, area-specific increments have been established for particulate matter, sulfur dioxide, and nitrogen dioxide.

For class II areas, the permitting authority will not grant a permit if the proposed emissions would cause, or significantly contribute to, exceeding a class II increment. All PSD applicants must provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the proposed source, as well as an analysis of commercial, residential, industrial, and other growth associated with the source.

For class I areas no permit will be issued if an increment would be exceeded, unless the major emitting facility can convince the permitting authority and the federal land manager that no adverse impact to air quality-related values would occur. Congress realized, however, that in certain instances, sensitive air quality-related resources could be adversely affected at air pollution levels below the class I increments, or by pollutants for which increments do not exist.

Therefore, the act requires a determination of whether proposed emissions from a proposed major emitting facility would have an adverse impact on the air quality-related values, including visibility, of a class I area. If the federal land manager demonstrates to the satisfaction of the permitting authority that proposed emissions would adversely affect the air quality-related values of a class I area, even though the proposed facility would not cause or contribute to pollutant concentrations that exceed the class I increments, then the permitting authority may not authorize the proposed project.

Congress also determined that visibility in mandatory class I areas required additional protective regulations. Section 169A sets, as a national goal, preventing of any future, and remedying of any existing, man-made visibility impairment in mandatory class I areas. The act requires that reasonable progress be made toward the national goal. In accordance with section 169A, the Environmental Protection Agency promulgated visibility regulations on December 2, 1980 (40 *Code of Federal Regulations* (CFR) 51 subpart P) that require those states with mandatory class I areas to submit implementation plans that ensure preventing of future and remedying of existing visibility impairment. All mandatory class I areas where visibility is an important value were identified in the November 30, 1979, *Federal Register* (44 FR 69122). The list includes all NPS and FWS class I areas.

To remedy existing visibility impairment, Congress mandated states to establish regulations requiring, among other things, major stationary sources that were

Preventing future impairments is to be accomplished, in a large measure, through the new source permit review process.

The adverse impact test is critical for proposed facilities with the potential to affect a class I area.

in existence for 15 years or less on August 7, 1977, be retrofitted with controls representing the best available retrofit technology, if those sources cause or contribute

to impairing visibility in a mandatory class I area. This emission limitation is to be established on a case-by-case basis, taking into account such considerations as available technology and the costs of compliance.

Organic and Wilderness Acts

In addition to the Clean Air Act of 1970, the National Park Service Organic Act of 1916 (16 USC 1, *et seq.*) and the Wilderness Act of 1964 (16 USC 1131, *et seq.*) guide the protection of park and wilderness areas. The general mandates of the Organic Act state that the National Park Service will

promote and regulate the use of . . . national parks . . . by such means and measures as conform to the fundamental purpose of the said parks, . . . which purpose is to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (16 USC 1).

The 1978 amendments to the Organic Act further clarify the importance Congress placed on protecting park resources, as follows:

The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by the Congress (16 USC 1a-1).

The Wilderness Act defines wilderness as

an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain . . . an area of undeveloped Federal Land retaining its primeval character and influence . . . which is protected and managed so as to preserve its natural conditions (16 USC 1131(c)).

The Wilderness Act also states that wilderness areas will be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

Role of Federal Land Manager in PSD Permit Review Process

Background

As indicated previously, the federal land manager and NPS park superintendent and FWS refuge manager have an affirmative responsibility under section 165 of the Clean Air Act to protect the air quality-related values of class I areas. One process used to meet this responsibility is reviewing permit applications for new and modified sources that may impact class I lands. The FLM role in the PSD permit review process and the information that the federal land manager requires to review the permit application are discussed in this section.

The primary regulations that affect new major sources and major modifications are the Prevention of Significant Deterioration regulations (40 CFR 52.21).

Federal Land Manager Notification

General

Section 165 of the act requires the Environmental Protection Agency or the state permitting authority to notify the federal land manager if emissions from a proposed project may impact a class I area. This notification includes the applicant's PSD application, which allows the federal land manager to review the application concurrently with the permitting authority. The Environmental Protection Agency provided guidance on FLM notification as follows.

Generally, the permitting authority should notify the federal land manager of all major facilities proposing to locate within 100 km (62 miles) of a class I area. In addition, the permitting authority should notify the federal land manager of very large sources proposing to locate at distances greater than 100 km (62 miles). These sources also may affect class I increments or the air quality-related values of a class I area due to the quantity or type of air emissions or the presence of certain meteorological conditions.

To minimize delays in the PSD permit review process, the federal land manager also encourages preapplication meetings with states and permit applicants to discuss air quality concerns for a specific class I area in question. Given preliminary information, such as the source's location and the types and quantity of projected air emissions, the federal land manager can discuss specific air quality-related values for an area and advise the applicant as to the level of analysis needed to assess potential impacts on these resources.

The federal land manager may request notification of major sources beyond 100 km (62 miles) in special circumstances (e.g., when increments are exceeded, or adverse impacts have been documented, or when resources are known to be sensitive).

The permitting authority should forward PSD applications to the federal land manager for review and analysis as soon as possible after receipt. For national park system areas, the application should be sent to the National Park Service, Air Quality Division, Policy, Planning and Permit Review Branch, and notice should be provided to the NPS regional director and park superintendent. If a national wildlife refuge is involved, the application should be sent to the U.S. Fish and Wildlife Service, Air Quality Branch, and notice provided to the FWS regional director and the refuge manager. Appropriate addresses are given in Appendixes D and E.

Visibility

As required by the visibility protection provision of the Clean Air Act, additional procedural requirements apply when a proposed source has the potential to impair visibility in a class I area (40 CFR 52.27 (d)). Specifically, the permitting authority (a state or the Environmental Protection Agency) must, upon receiving a permit application for a source that may affect visibility in any class I area, notify the federal land manager in writing.

Such notification should include a copy of all information relevant to the permit application, including the proposed source's anticipated impacts

on visibility in a class I area. The permitting authority should also notify the federal land manager within 30 days of receipt of any advance notification of any such permit application.

The federal land manager must be notified in writing within 30 days of receiving the permit application and at least 60 days before any public hearing on the application.

Additional procedural requirements apply if the federal land manager notifies the permitting authority of a finding that the proposed source may adversely impact visibility in a class I area, or may adversely impact visibility in an integral (scenic) vista which may have been identified by a state for a class I area. If the permitting authority agrees with the federal land manager's finding that visibility in a class I area may be adversely affected, the permit may not be issued. However, if the permitting authority agrees with the federal land manager's adverse impact finding regarding integral vistas, the permitting authority may still issue a permit if the emissions from the source are consistent with reasonable progress toward the national goal of preventing or remedying visibility impairment. In making this decision, the permitting authority may take into account the costs of compliance, the time needed for compliance, the energy and non-air quality environmental impacts of compliance, and the useful life of the source.

If the permitting authority does not agree with the federal land manager's finding, in the public hearing notice for the project, the permitting authority must either explain its decision or indicate where the explanation can be obtained.

Generally, the federal land manager will make a preliminary determination regarding possible adverse visibility impacts within 30 days of receipt of all relevant information. The permitting authority should consult with the federal land manager on the completeness of a permit application, and to officially notify the federal land manager as soon as the application is considered complete.

Need help
Page 17

Federal Land Manager Review of Applications

The FLM review of a PSD application for a proposed project that may impact an NPS or FWS class I area consists of three main analyses:

1. a best available control technology (BACT) analysis to ensure that the emission increases from the proposed project are minimized
2. an air quality analysis to ensure that the pollutant levels do not exceed ambient air quality standards and PSD increments
3. an air quality-related values analysis to ensure that the class I area values (i.e., visibility, flora, fauna, etc.) are not adversely affected by the proposed emissions

Each of these analyses is described in detail.

Best Available Control Technology Analysis

The applicant should conduct the BACT analysis using a top-down approach. In brief, a top-down process ranks all available control technologies in descending order of control effectiveness. The applicant first examines the

The permit applicant must perform a case-by-case BACT analysis that considers environmental, energy, and economic impacts for each regulated pollutant emitted in significant amounts.

most effective, or top, alternative. That alternative is established as the best available control technology unless the applicant demonstrates, and the permitting authority agrees, that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not achievable in that case.

If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on. Permit applicants should refer to chapter B of the EPA New Source Review Workshop Manual for a detailed discussion of the top-down policy.

Note: The Environmental Protection Agency is reviewing its top-down policy, and this policy may be revised. However, regardless of the outcome of this review, permit applicants should carefully evaluate all air pollution control options more efficient than that proposed as the best available control technology in their BACT analysis.

The federal land manager reviews the applicant's BACT analysis to determine if the best available pollution control technology is being proposed, thereby minimizing the proposed emission increases and their corresponding impact on a class I area in question. If the federal land manager disagrees with the applicant's BACT analysis, technical comments are submitted to the permitting authority who has the ultimate responsibility to make the BACT determination and issue the permit.

The environmental impacts analysis is not to be confused with the air quality impact analysis discussed later. The environmental impacts analysis of the BACT review should concentrate on impacts other than ambient air quality impacts of the regulated pollutant in question, such as solid or hazardous waste generation, discharges of polluted water from a control device, visibility impacts, or emissions of unregulated pollutants. Thus, the fact that a given control alternative would result in only a slight improvement in ambient concentrations of the pollutant in question when compared to a less stringent control alternative should **not** be viewed as a basis for rejecting the more stringent control alternative.

Regarding the economic impact analysis, given the special protection class I areas are afforded under the Clean Air Act, the federal land manager believes that the need to minimize potential impacts on a class I area should be a major consideration in the BACT determination for a project proposed near such an area. Therefore, if a source proposes

to locate near a class I area, additional costs to minimize impacts on sensitive class I resources may be warranted, even though such costs may be considered economically unjustified under other circumstances.

If a permit applicant wants to locate a source near a class I area, the federal land manager contends that the applicant should be expected to do more to reduce emissions than an applicant proposing to locate elsewhere.

2. demonstrate to the federal land manager that the estimated concentrations will not have an adverse impact on air quality-related values.

Only option 1 is available to applicants if the proposed emissions would cause or contribute to exceeding a class II increment.

Air Quality Analysis

General. The permit applicant must also perform an air quality analysis for each pollutant subject to PSD review. This analysis should show the contribution of the proposed emissions to the total PSD increment consumption and to the existing ambient pollution levels in a class I park or refuge. Because proposed sources are not yet operating, the air quality analysis must rely on mathematical dispersion models to estimate the air quality impact of the proposed emissions.

The applicant should base the air quality review on approved models and procedures as specified in 40 CFR 52.21(i) (*Guideline on Air Quality Models*, revised July 1986, Environmental Protection Agency 1986). All assumptions for the analysis should be explicitly stated, and sufficient information on modeling input should be furnished so that the National Park Service can validate and duplicate the model analysis.

The model must make maximum use of meteorological data as specified in the referenced *Guideline on Air Quality Models*. If analysis indicates that proposed emissions would cause, or significantly contribute to exceeding class I increments, the applicant may

1. apply better control technology; downsize, change emission-producing processes, or relocate the source; or obtain emission offsets such that the source (in conjunction with offsets) no longer contributes to increment exceedance

or

The applicant may discuss the air quality analysis methodology with the National Park Service, Air Quality Division, before performing the analysis to ensure that the dispersion model and meteorological data base chosen for the analysis will adequately predict the impact on a class I area and its values.

Misuse of Significant Impact Levels.

In instances where cumulative impact analyses are lacking, permit applicants do not perform an analysis of the proposed source, plus all other PSD increment-consuming and background sources. The applicants often incorrectly claim that the proposed project would result in insignificant impacts, and therefore, no further analysis is required. Permit applicants generally cite two references to significant levels.

One common problem with air quality analyses submitted for FLM review is the lack of cumulative impact analyses.

The first reference is the term "significant" as defined in the PSD regulations (40 CFR 52.21(b)(23)) and used in pollutant-specific PSD applicability determinations. A PSD review applies to new major stationary sources and major modifications to existing major stationary sources (40 CFR 52.21). A major modification is defined as any physical change or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Clean Air Act. The Environmental Protection Agency establishes significant emission rates individually for each regulated pollutant (40 CFR 52.21(b)(23)(i)).

Consistent with the special emphasis Congress has placed on class I areas in developing amendments to the Clean Air Act, more stringent criteria apply to modifications at major stationary sources located near class I areas. Any net emission increase of a regulated pollutant at a major stationary source that is located within 10 km (6.2 miles) of a class I area must be examined for impacts with an air quality modeling analysis. If the maximum predicted impact on the class I area exceeds 1 microgram per cubic meter ($\mu\text{g}/\text{m}^3$) on a 24-hr basis, the emissions increase is considered significant and constitutes a major modification subject to PSD review (40 CFR 52.21(b)(23)(iii)).

This 1 $\mu\text{g}/\text{m}^3$ significance level is to be used only for PSD applicability determination purposes.

This level is used to determine if a proposed modification at a source located within 10 km (6.2 miles) of a class I area is major, and therefore, subject to PSD re-

view. This level should not be used to determine whether air quality impacts in class I areas are significant. Once a source is determined to be subject to PSD review, the federal land manager's responsibility is to determine if the proposed project would significantly impact a class I area. This determination is made on a case-specific basis, whereby the federal land manager may consider the existing air quality conditions, the sensitivity of the resources, and other relevant data.

The second reference to significance levels is discussed in the preamble to the Environmental Protection Agency PSD regulations (June 19, 1978), in terms of impacts to air quality (43 FR 26398 (1978)). In performing dispersion modeling analyses, the Environmental Protection Agency provides permit applicants with guidance in using the dispersion models. Generally, for PSD analyses in class II areas, the Environmental Protection Agency limits the application of air quality models to a downwind distance of 50 km (31 miles) due to limitations of the methods used to establish commonly used dispersion parameters. Also, since the air quality impact of many sources decreases rapidly with distance away from the sources, the Environmental Protection Agency usually extends the analysis of impacts of a source only to the point where the concentrations from the source fall below certain class II area significant impact levels. For example, the sulfur dioxide significance levels are

25, 5, and 1 $\mu\text{g}/\text{m}^3$ for the 3-hr, 24-hr, and annual averaging times, respectively.

Oftentimes, permit applicants use the 1978 significance levels as a screening tool to determine the level of detail necessary in the air quality analysis. They neglect the agency's caution that this approach does not apply when a proposed source could be reasonably expected to impact a class I area. For

example, in non-class I situations, the significance levels are used to define the impact area of the proposed source. Accordingly, the impact area of a source is established by a circular area whose radius is equal to the greatest distance from the source to which approved dispersion modeling shows the proposed emissions will be at the significance levels. The permit applicant would then perform a cumulative modeling analysis that includes all air pollution sources affecting air quality in the impact area. Based on EPA guidance, if a proposed source is found to have no impact area (i.e., dispersion modeling demonstrates that proposed emissions will not exceed the referenced significance levels), further air quality analysis of that pollutant will generally not be required.

In the case of a class I area, however, an air quality analysis should be performed for each pollutant subject to review irrespective of the significance levels. This analysis should be cumulative, considering pollutant concentrations present in the class I area, the pollution contribution of sources permitted but not yet operating, and the concentration of pollutants contributed by the proposed source and any associated secondary growth.

The Environmental Protection Agency added, "since the 1977 amendments to the Clean Air Act provided special concern for class I areas, any reasonably expected impacts for these areas must be considered irrespective of the 50 km model limitation or the above significance levels."

The Environmental Protection Agency further clarified the use of significant impact levels in a September 10, 1991, policy memorandum from John Calcagni, Director of Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Management Division, to Thomas J. Maslany, Director of Environmental Protection Region III, Air, Radiation, and Toxics Division. Furthermore, although Mr. Calcagni's memorandum allows the state of Virginia to use alternative significant impact levels for class I increment analyses on a case-by-case basis, the memorandum prohibits their use for determining whether a source should conduct an adverse impact analysis for any air quality-related value in a class I area, or whether a source would have an adverse impact on a value.

Mr. Calcagni makes it clear that the significant impact levels that the agency established for use in some cases (e.g., sulfur dioxide 24-hr impact of $5 \mu\text{g}/\text{m}^3$) were never intended to be used for evaluating impacts on the class I increments or values.

Mr. Calcagni concludes by stating, "a determination concerning the need for a full assessment of an air quality-related value is made by the Federal Land Manager based on an analysis of the proposed source's (and other cumulative) potential impacts on a value for that particular class I area. This analysis is independent of the inquiry into whether a proposed source would have a significant impact on any applicable class I increment."

The problem with using predetermined significant impact levels, from a resource impact standpoint, is discussed in detail later in the Air Quality-related Values Analysis section. However, the following discussion illustrates the problem with the misuse of these levels from a class I increment consumption perspective.

The class I 24-hr and 3-hr sulfur dioxide increments are 5 and $25 \mu\text{g}/\text{m}^3$, respectively. As indicated previously, the 24-hr and 3-hr significance levels cited in the preamble to the 1978 PSD regulations are also 5 and $25 \mu\text{g}/\text{m}^3$. Using significant levels that are equivalent to the respective class I increments makes little sense. Using these significance levels for class I areas would allow

two insignificant sources, each contributing $4.99 \mu\text{g}/\text{m}^3$ (24-hr average), to cause concentrations nearly double the allowable class I increment, and yet both would be exempt from a detailed increment analysis.

Similarly, a source contributing $0.99 \mu\text{g}/\text{m}^3$ (24-hr average) at a class I area would consume nearly 20% of the class I increment, but still would be less than the $1 \mu\text{g}/\text{m}^3$ significant value cited in 40 CFR 52.21(b)(23)(iii), and would be exempt from detailed review. Applying the $5 \mu\text{g}/\text{m}^3$ or the $1 \mu\text{g}/\text{m}^3$ significance levels in these instances would preclude a cumulative impact analysis from being required, in essence, allowing potential class I increment violations. Using these levels would also preclude the federal land manager from making an informed decision regarding the potential impacts on a class I area resources. In addition, using a 24-hr significance level to determine the need for cumulative analyses may allow increment exceedances for the 3-hr or annual averaging times. In other words, the proposed source claiming to be insignificant (i.e., misapplying the $1 \mu\text{g}/\text{m}^3$ criteria) for the 24-hr averaging time could cause or contribute to increment violations for the 3-hr or annual averaging times.

Some applicants and state permitting agencies have misinterpreted the EPA guidance, and have used either of the significance criterion even though a source is proposing to locate near a class I area.

In technical review comments to the permitting authority, the federal land manager points out this misuse of significance levels and requests that applicants perform both cumulative increment and ambient analyses to assess the total impacts on class I air quality. The federal land manager is considering a size and distance screening criteria for class I analysis. In the meantime, permit applicants should be aware of this problem, and to minimize potential delays in the permit review process should consult with the federal land manager to determine the need for, and extent of, detailed cumulative air quality impact analyses.

Modeling Distance Criteria. Regarding the distance limitation for using dispersion models in assessing class I area impacts, as referenced previously, although the Environmental Protection Agency limits the application of air quality models listed in the *Guideline on Air Quality Models, Appendix A*, to a downwind distance of 50 km (31 miles) in non-class I situations, any reasonably expected impacts for class I areas must be considered irrespective of the 50-km model limitation. Nevertheless, some state permitting agencies and permit applicants limit class I analyses to sources located within 100 km (62 miles) of a class I area.

The possibility of impacts from sources located more than 100 km from a class I area has long been recognized in EPA guidance, and limiting analysis to an area within 100 km is inconsistent with this guidance.

For example, in the March 19, 1979, guidance memorandum regarding federal land manager notification of pending permit applications for major new sources, the Environmental Protection Agency states that

notice should be provided [to the federal land manager] for any facility which will be located within 100 km of a Class I area. Very large sources, however, may be expected to affect air quality related values at distances greater than 100 kilometers. The appropriate Federal Land Manager should be notified if such impacts are expected on a case-by-case basis.

If the Environmental Protection Agency intended that the federal land manager be notified of certain projects located more than 100 km from a class I area, the potential impacts of these sources are to be assessed (i.e., modeled). In fact, the EPA *Guideline on Air Quality Models* also acknowledges the potential for impacts from more distant sources and indicates that the federal land manager should be consulted regarding the selection of an appropriate model to use in the analysis. Section 7.2.6. states in part that

section 165(e) of the Clean Air Act requires that suspected significant impacts on PSD class I areas be determined. However, the useful distance to which most Gaussian models are considered accurate for setting emission limits is 50 km. Since in many cases class I areas may be threatened at distances greater than 50 km from sources, some procedure is needed to (1) determine if a significant impact will occur, and (2) identify the model to be used in setting an emission limit if the class I increments are threatened (models for this purpose should be approved for use on a case-by-case basis as required in Section 3.2). **This procedure and the models selected for use should be determined in consultation with the EPA Regional Office and the appropriate federal land manager (emphasis added).**

The notification and consultation requirements are consistent with, and incorporated into, the EPA New Source Review Workshop Manual, which has been widely disseminated to permitting agencies. This recent guidance supports modeling of major sources beyond 100 km, as indicated on page E.16 of the manual:

Also, if a major source proposing to locate at a distance greater than 100 km is of such size that the reviewing agency or the federal land manager is concerned about potential emission impacts on a class I area, the reviewing agency can require the applicant to perform an analysis of the source's potential emissions impact on the class I area. This is because certain meteorological conditions, or the quantity, or type of air emissions from large sources locating further than 100 km, may cause adverse impacts on a class I area. A reviewing agency should not exclude a major new source or major modification from performing an analysis of the potential impacts if the federal land manager identifies some reason to believe that the source would affect a class I area.

The Environmental Protection Agency further clarified its guidance regarding class I area modeling in an October 19, 1992, policy memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards. Mr. Seitz states that "the Agency's position is that generally a 100 kilometer range is an acceptable modeling domain. However, impacts from large sources located at distances greater than 100 kilometers need to be considered when such impacts reasonably could affect the outcome of the Class I analysis." Mr. Seitz concludes that "circumstances may warrant consideration of other sources (initially using various screening techniques) which are located more than 100 kilometers from a Class I area. . . ." and the modeling protocols should be "determined on a case-by-case basis in consultation with the appropriate EPA Regional office and **Federal Land Manager**" (emphasis added).

Therefore, the federal land manager recommends that the analysis of increment consumption and impacts on air quality-related values not be limited to 100 km, but should include all increment-consuming sources and other large sources that could impact the class I area. In fact, such analysis is required by section 165(d)(2)(c)(i) of the Clean Air Act.

The federal land manager, on a case-by-case basis, may recommend that the applicant perform a refined modeling analysis using a long-range transport model. The use of long-range transport models requires the approval of the EPA regional office. Advances in the science of long-range transport modeling continue to result in more refined models being developed.

In appropriate cases, the federal land manager and the Environmental Protection Agency will recommend using these more refined long-range transport models to assess impacts beyond 50 km. The applicant should consult with the federal land manager before using a long-range transport model.

Air Quality-related Values Analysis

In addition to the control technology and air quality analyses discussed in the previous sections, the federal land manager's review of a PSD application includes an analysis of potential effects to class I area air quality-related values.

General. Air quality-related values (AQRV) are generally expressed in broad terms. The impacts of increased pollutant levels on some air quality-related values may be assessed by measuring specific parameters that reflect the status of these values. For

instance, the projected impact on the presence and vitality of certain species of plants or animals may indicate the potential impact of pollutants on air quality-related values associated with species diversity, or with possible impacts on certain endangered species. Similarly, a value associated with water quality may be measured by the pH or acid neutralizing capacity of a water body, or by the level of certain nutrients in the water. The air quality-related values of various class I areas may differ, depending on the purposes and characteristics of a particular area. Also, the concentration at which a pollutant adversely impacts a value may vary among class I areas.

When evaluating the effects of air emissions from a proposed source on a class I area's air quality-related values, the federal land manager is not concerned solely with the proposed project's estimated air quality impact, but rather with the total pollutant concentration the air quality-related values will experience.

A cumulative air quality analysis in which the proposed source and any recently permitted (but not yet operating) sources in the area are modeled is an important part of any AQRV analysis. This total modeled concentration is then added to measured ambient levels in order to assess the effect of the anticipated ambient concentrations on air quality-related values. Without such an analysis, the total pollutant level to which the air quality-related values would be exposed cannot be esti-

mated, and the federal land manager cannot make an informed decision regarding potential impacts on the class I area resources. As required by law, the federal land manager's responsibility is to conserve and protect the resources for present and future generations.

Effects Versus Significant Impact Levels.

Frequently the AQRV analysis, which an applicant must prepare, lacks a cumulative analysis. As with the air quality analysis, applicants often use the EPA significance levels, discussed in the previous section, as guidance for assessing air quality impacts to air quality-related values. If the proposed emissions alone result in estimated concentrations below the EPA significance levels, applicants often conclude the proposed emissions will have an insignificant impact on class I area air quality-related values, and a cumulative modeling analysis is not performed. Again, this is misinterpreting the EPA guidance regarding significance levels.

Using the EPA significance levels, in an absolute sense, does not provide the assurance the federal land manager needs to be convinced that a particular class I area will be adequately protected. Therefore, an applicant should not conclude that just because an impact is less than the significant impact level for class I increments, that such an impact is insignificant with respect to effects on air quality-related values. However, the federal land manager believes the converse to be true. In other words, if an impact is considered significant with respect to a class I increment, it seems reasonable to conclude that such an impact is also significant with respect to effects on air quality-related values, especially in the case where air quality-related values are being adversely impacted by current air pollution levels (e.g., at Shenandoah and Great Smoky Mountains national parks).

The Environmental Protection Agency did not intend using significance levels for sources locating near class I areas to be the only criterion in reaching this conclusion, and they deferred to the federal land manager to determine the need for a full assessment of impacts on air quality-related values.

The federal land manager's assessment of potential effects on air quality-related values considers the sensitivities of specific air quality-related values found in a class I area and the existing air pollution effects on these resources. Consequently, significance levels may differ depending on the conditions that currently exist at a particular class I area. If the threshold concentration for effects on sensitive class I area resources is being approached, a significant impact could possibly occur at concentrations below the EPA significance levels. Once the effects threshold is actually reached, any increase in class I area pollutant concentrations may be significant.

For example, the federal land manager has expressed concern that visibility, aquatic, and terrestrial resources at Shenandoah National Park, a class I area in Virginia, are currently being adversely impacted by air pollution (September 18, 1990, *Federal Register*, 55 FR 38403). The federal land manager also is concerned that the effects of additional emissions proposed for the area would contribute to, and exacerbate, the existing adverse effects and are, therefore, unacceptable. Consequently, the federal land manager recommended that no new major emission sources be permitted near Shenandoah National Park unless such sources would be assured of not contributing to the adverse impacts. The federal land manager expressed similar concerns about Great Smoky Mountains National Park, a class I area in Tennessee and North Carolina (February 5, 1992, *Federal Register*, 57 FR 4465).

As another example, because of the relatively high sulfur dioxide concentrations estimated at Theodore Roosevelt National Park, and the specific air quality-related values found at the park that are known to be sensitive to sulfur dioxide (e.g., lichens), the North Dakota State Department of Health and the federal land manager agreed that the 24-hr significance level for sulfur dioxide should be $0.2 \mu\text{g}/\text{m}^3$ for proposed projects impacting the park. Pollutant concentrations at the park were below the effects threshold for lichens. As conditions change, based on scientific data, the significant impact level for Theodore Roosevelt National Park may even be lower for future applications.

Significance levels for air quality-related values must be based on scientific data on a case-by-case basis to reflect the particular facts and current knowledge in each situation over time. Therefore, the federal land manager recommends that permit applicants proposing to construct facilities that could potentially impact a class I area consult with the federal land manager to determine the specific sensitivities of air quality-related values and the requirements of the cumulative impact analysis in their PSD application.

Effects Versus Secondary National Ambient Air Quality Standards (NAAQS). Some applicants claim that a proposed source would not cause any adverse impacts on class I resources because emissions from the project would not cause or contribute to a violation of the secondary National Ambient Air Quality Standards that have been established to protect public welfare. Such a statement by the applicant is not acceptable. In fact, an express purpose of the PSD regulations is to protect public welfare from any actual or potential adverse effects, notwithstanding attainment and maintenance of all National Ambient Air Quality Standards.

The reasons for this distinction are clear. The NAAQS-setting process does not necessarily focus on the types of diversity of vegetation set aside for protection in national park areas or wildlife refuges. The secondary National Ambient Air Quality Standards are typically based primarily on effects on cash crops, such as wheat and tobacco, rather than sensitive park or refuge soils or vegetation. In addition, the secondary National Ambient Air Quality Standards are national levels that protect against effects from multiple and diverse sources. These standards do not necessarily provide adequate protection for sensitive species found in only certain areas of the country, and they do not address deposition effects or synergistic effects of multiple pollutants. Similarly, the secondary National Ambient Air Quality Standards do not adequately protect visibility, which is an important air quality-related value in most class I areas. In areas that are relatively pristine, small increases in pollutant concentrations can cause significant visibility degradation. For example, a 1 $\mu\text{g}/\text{m}^3$ addition of fine particulate matter in a clear atmosphere may reduce visual range by 30%. Therefore, as research continues to confirm, instances exist where adverse effects to air quality-

related values can occur at levels below the secondary National Ambient Air Quality Standards.

A summary of the literature on the relevant air pollution effects for ozone, nitrogen oxide, and acidifying nitrates and sulfates is provided in the technical support document for the FLM adverse impact determination for Great Smoky Mountains National Park (U.S. Department of the Interior, National Park Service 1992, unpublished report). This document is accessible through the EPA new source review electronic bulletin board, or from the Air Quality Division.

Effects on Visibility. Regarding the visibility analysis, the federal land manager recommends that the applicant first use the VISCREEN model as recommended in the EPA *Workbook for Plume Visual Impact Screening and Analysis* (Environmental Protection Agency 1988), rather than the EPA original 1980 Visibility Workbook. To satisfy specific FLM needs with respect to impacts on the visual resources of NPS and FWS lands, the permit applicant should consider the following guidance in the visibility impact demonstration.

The federal land manager has consulted with the Environmental Protection Agency, Office of Air Quality Planning and Standards, regarding the background visual range values included in the VISCREEN model. Where available, these more appropriate values should be used in the analysis, which should also address the seasonal variability in background visibility.

The National Park Service now has site-specific data for many class I areas which, in some cases, (e.g., Colorado Plateau, Great Basin) indicate greater background visual range values than those cited in the 1988 workbook.

The National Park Service is very concerned about protecting the best visibility days from degradation because those days are the most sensitive to impairment (i.e., visibility is more rapidly and perceptibly affected if the atmosphere is initially "clean"). This policy is supported by the national visibility goal of preventing any future and remedying any existing visibility impairment. Therefore, the federal land manager has been recommending that permit applicants use the top 10% background visual range values. The

National Park Service is working with the Environmental Protection Agency to document this approach in a revised VISCREEN manual.

If the permit applicant fails the VISCREEN visibility analyses, the applicant should then perform a more sophisticated visibility analysis using the EPA PLUVUE II model. The National Park Service is available to discuss the use of the VISCREEN and PLUVUE II models.

The National Park Service also recommends that applicants consider visibility impacts on scenic views from class I areas as part of the visibility analysis. Applicants should be aware of state requirements for analysis of impacts on integral vistas which, at a minimum, includes vistas that have been appropriately identified by the federal land manager. These analyses should be in accordance with the regulations published in the December 2, 1980, *Federal Register*. Pictorial presentation of the results using photographs, computer simulations, or artist's conceptions would be beneficial.

In addition to potential plume impacts, potential exists for proposed sources to contribute to existing regional haze levels.

Regional haze is a problem that impairs visibility in many class I parks and refuges. Preliminary work on methods for assessing single-source impacts on regional haze has been conducted, and

the federal land manager is willing to provide guidance to permit applicants on conducting acceptable haze impact analyses.

In summary, a complete permit application should include a thorough AQRV analysis, including analysis of the impacts on visibility, soils, water, odor, flora, and fauna, that would occur as a result of the source or modification, in conjunction with all other emission sources affecting an area. Also, an air quality impact analysis is required to predict the effects of general commercial, residential, industrial, and other growth associated with the source or modification.

To assist the applicant in performing these additional impact analyses, the National Park Service will provide the applicant, within 60 days of the applicant's request, a list of sensitive resources in the potentially impacted class I area. The applicant should submit the request to the National Park Service, Air Quality Division.

Ambient Air Quality and Air Quality-related Values Monitoring Requirements

A complete permit application must also contain representative ambient air monitoring data. In general, at least one year of data is required. For projects located in the proximity of NPS or FWS class I areas, the National Park Service, Air Quality Division, should be contacted to facilitate installing monitoring equipment in the class I areas. The Air Quality Division initiates most air monitoring studies in the national parks, with the cooperation of the appropriate NPS regional office and park superintendent. The division will also coordinate monitoring efforts with the appropriate FWS authorities, if applicable. The National Park Service currently conducts monitoring in each of its 48 class I parks, and these data may be appropriate for using in permit applications. A summary of the NPS air quality monitoring activities is included in Appendix F. The NPS-collected data are in the EPA Aerometric Information Retrieval System (AIRS) and can be readily retrieved from this system. Contacting the Air Quality Division can help avoid duplication of effort with respect to ambient air quality monitoring.

In addition to preconstruction ambient monitoring, in certain instances, permit applicants may have to conduct pre- or postconstruction visibility or biological effects monitoring or studies. Permit applicants should consult with the federal land manager regarding the need for additional AQRV monitoring or studies.

Adverse Impact Considerations

The legislative history of the Clean Air Act provides direction to the federal land manager on how to comply with the affirmative responsibility to protect air quality-related values in class I areas:

The Federal land manager holds a powerful tool. He is required to protect Federal lands from deterioration of an established value, even when class I numbers are not exceeded. . . . While the general scope of the Federal Government's activities in preventing significant deterioration has been carefully limited, the Federal land manager should assume an aggressive role in protecting the air quality values of land areas under this jurisdiction. . . . In cases of doubt the land manager should err on the side of protecting the air quality-related values for future generations (Senate Report No. 95-127, 95th Congress, 1st Session, 1977).

The assistant secretary for Fish and Wildlife and Parks, as federal land manager for NPS- and FWS-managed class I areas, has stated that air pollution effects on resources in class I areas constitute an unacceptable adverse impact if such effects

1. diminish the national significance of the area
2. impair the quality of the visitor experience
3. impair the structure and functioning of ecosystems

Also, the federal visibility protection regulations (40 CFR 51.300, *et seq.*, 52.27) define adverse impact on visibility as

visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Federal class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and time of visibility impairment, and how these factors correlate with: (1) times of visitor use of the Federal class I area, and (2) the frequency and timing of natural conditions that reduce visibility.

. . . (Id. 51.301(a))

The internal procedures used by the federal land manager for determining adverse impact under section 165(d)(2)(C)(ii) and (iii) of the Clean Air Act are presented in Appendix G; see also 47 FR 30223, July 12, 1982. The procedures have been modified in some cases. Such modifications have been necessary because the federal land manager often does not have sufficient time after being notified that a permit application is complete to publish a *Federal Register* notice, solicit and consider comments, and make a final adverse impact determination. Permitting authorities typically provide the federal land manager 60 days or less to submit comments on a complete application. Although decisions on particular permits are always made on a case-by-case basis, public comments may be solicited in advance on a range of issues or recommendations (e.g., 55 FR 38403, September 18, 1990, and 57 FR 4465, February 5, 1992).

Factors that are considered in determining whether an effect is unacceptable, and therefore adverse, include the projected frequency, magnitude, duration, location, and reversibility of the impact.

Literature Cited

Environmental Protection Agency. 1986. Guideline on air quality models. Revised. EPA-450/2-78-027R.

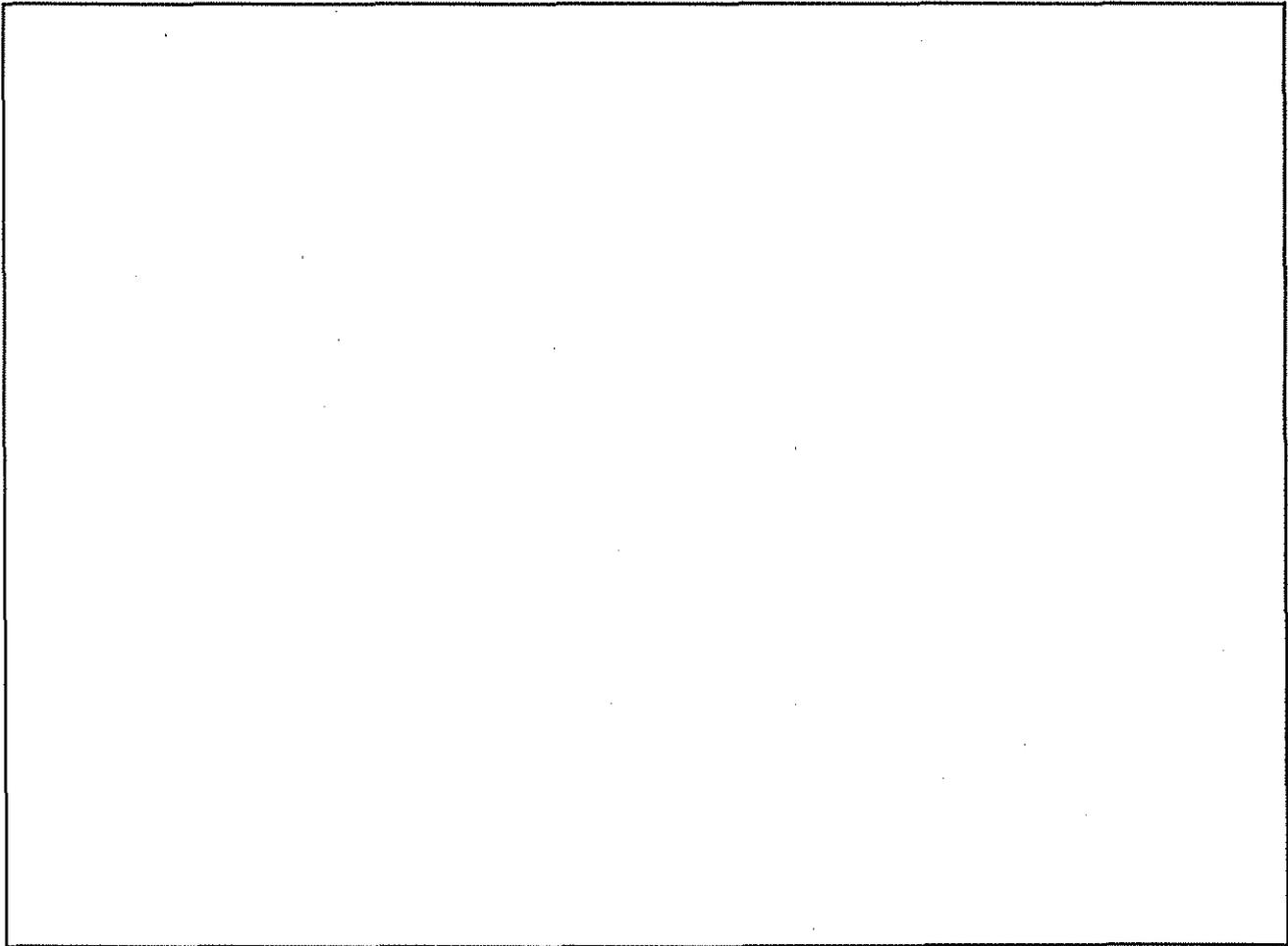
Environmental Protection Agency. 1988. Workbook for plume visual impact screening and analysis. EPA-450/4-88-015.

Environmental Protection Agency. 1990. New source review workshop manual. Draft.

U.S. Department of the Interior, National Park Service. 1992. Technical support document regarding adverse impact determination for Great Smoky Mountains National Park. Unpublished report.

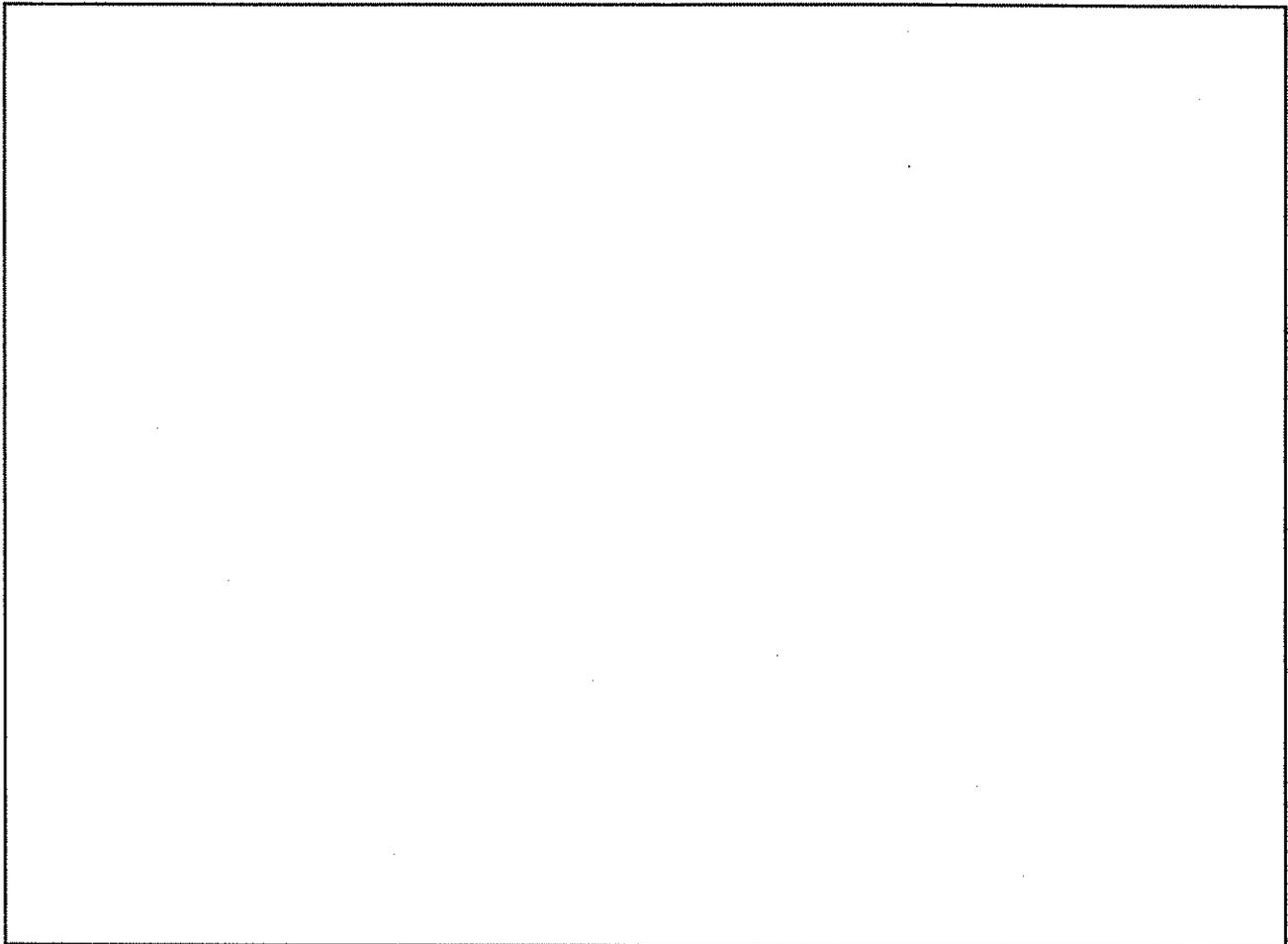
Appendix A.

NPS Class I Areas



Appendix B.

FWS Class I Areas



Appendix C.

Class II Areas Possessing Air Quality-related Values as Important Attributes

Area Name	State or Territory
Glacier Bay National Park and Preserve	AK
Katmai National Park & Preserve	AK
Canyon de Chelly National Monument	AZ
*Chiricahua National Monument	AZ
Organ Pipe Cactus National Monument	AZ
*Saguaro National Monument	AZ
Sunset Crater National Monument	AZ
Wupatki National Monument	AZ
Channel Islands National Park	CA
Death Valley National Monument	CA, NV
*Joshua Tree National Monument	CA
*Lava Beds National Monument	CA
Muir Woods National Monument	CA
*Pinnacles National Monument	CA
*Black Canyon of the Gunnison National Monument	CA
Colorado National Monument	CO
Dinosaur National Monument	CO, UT
*Great Sand Dunes National Monument	CO
Big Cypress National Preserve	FL
Biscayne National Park	FL
Fort Jefferson National Monument	FL
*Craters of the Moon National Monument	ID
*Bandelier National Monument	NM
Capulin Volcano National Monument	NM
El Morro National Monument	NM
Gila Cliff Dwellings National Monument	NM
White Sands National Monument	NM
John Day Fossil Beds National Monument	OR
*Badlands National Park	SD
Cedar Breaks National Monument	UT
Natural Bridges National Monument	UT
Buck Island Reef National Monument	VI
Devil's Tower National Monument	WY
Fossil Butte National Monument	WY

*Federal wilderness areas already designated class I.

Appendix D.

NPS Permit Notification List

In all cases notify:

Chief, Policy, Planning and Permit Review Branch
National Park Service
Air Quality Division
P.O. Box 25287
Denver, CO 80225-0287

Notify regional director at:

Region

State

Alaska Regional Office
National Park Service
2525 Gambell Street
Anchorage, AK 99503

Alaska

Mid-Atlantic Regional Office
National Park Service
143 South Third Street
Philadelphia, PA 19106

Pennsylvania, Maryland,
West Virginia, Delaware,
Virginia, excluding parks
assigned to National Capital
Region

Midwest Regional Office
National Park Service
1709 Jackson Street
Omaha, NE 68102

Ohio, Indiana, Michigan,
Wisconsin, Illinois,
Minnesota, Iowa, Missouri,
Nebraska, Kansas

National Capital Regional Office
National Park Service
1100 Ohio Drive, S.W.
Washington, D.C. 20242

District of Columbia, some
units in Maryland, Virginia,
West Virginia

Region**State**

North Atlantic Regional Office
National Park Service
15 State Street
Boston, MA 02109

Maine, New Hampshire,
Vermont, Massachusetts,
Rhode Island, Connecticut,
New York, New Jersey

Idaho, Oregon, Washington

Pacific Northwest Regional Office
National Park Service
83 South King Street, Suite 212
Seattle, WA 98104

Montana, North Dakota,
South Dakota, Wyoming,
Utah, Colorado

Rocky Mountain Regional Office
National Park Service
P.O. Box 25287
Denver, CO 80225-0287

Kentucky, Tennessee, North
Carolina, South Carolina,
Mississippi, Alabama,
Georgia, Florida, Puerto
Rico, Virgin Islands

Southeast Regional Office
National Park Service
75 Spring Street, S.W.
Atlanta, GA 30303

Arkansas, Louisiana, Texas,
Oklahoma, New Mexico,
northeast corner of Arizona

Southwest Regional Office
National Park Service
P.O. Box 728
Santa Fe, NM 87504

California, Nevada, most of
Arizona, Hawaii

Western Regional Office
National Park Service
600 Harrison Street, Suite 600
San Francisco, CA 94107-1372

**Notify NPS class I
area superintendent at:**

Parks

Acadia National Park
P.O. Box 177
Bar Harbor, ME 04609

Arches National Park
P.O. Box 907
Moab, UT 84532

Badlands National Park
P.O. Box 6
Interior, SD 57750

Bandelier National Monument
HCR 1, Box 1, Suite 15
Los Alamos, NM 87544

Big Bend National Park
Big Bend National Park, TX 79834

Black Canyon of the Gunnison
National Monument
P.O. Box 1648
Montrose, CO 81402

Bryce Canyon National Park
Bryce Canyon, UT 84717

Canyonlands National Park
125 West 200 South
Moab, UT 84532

Capitol Reef National Park
Torry, UT 84775

Carlsbad Caverns National Park
3225 National Parks Highway
Carlsbad, NM 88220

Chiricahua National Monument
Dos Cabezas Route, Box 6500
Willcox, AZ 85643

Crater Lake National Park
P.O. Box 7
Crater Lake, OR 97604

Craters of the Moon
National Monument
P.O. Box 29
Arco, ID 83213

Denali National Park and
Preserve
P.O. Box 9
McKinley Park, AK 99755

Everglades National Park
P.O. Box 279
Homestead, FL 33030

Glacier National Park
West Glacier, MT 59936

Grand Canyon National
Park
P.O. Box 129
Grand Canyon, AZ 86023

Grand Teton National Park
P.O. Box 170
Moose, WY 83012

Great Sand Dunes National
Monument
11500 Highway 150
Mosca, CO 81146

Great Smoky Mountains
National Park
Gatlinburg, TN 37738

Guadalupe Mountains Na-
tional Park
HC 60, Box 400
Salt Flat, TX 79847-9400

Haleakala National Park
P.O. Box 369
Makawao, HI 96768

Parks

Hawaii Volcanoes National
Park, HI 96718

Isle Royale National Park
87 North Ripley Street
Houghton, MI 49931

Joshua Tree National
Monument
74485 National Monument Drive
Twentynine Palms, CA 92277

Kings Canyon National Park
c/o Sequoia and Kings Canyon
National Parks
Three Rivers, CA 93271

Lassen Volcanic National Park
P.O. Box 100
Mineral, CA 96063-0100

Lava Beds National Monument
P.O. Box 867
Tulelake, CA 96134

Mammoth Cave National Park
Mammoth Cave, KY 42259

Mesa Verde National Park
Mesa Verde National Park,
CO 81330

Mount Rainier National Park
Tahoma Woods, Star Route
Ashford, WA 98304-9801

North Cascades National Park
2105 Highway 20
Sedro Woolley, WA 98284

Olympic National Park
600 East Park Avenue
Port Angeles, WA 98362

Petrified Forest National Park
Petrified Forest National Park,
AZ 86028

Pinnacles National Monument
Paicines, CA 95043

Point Reyes National Seashore
Point Reyes, CA 94956

Redwood National Park
1111 Second Street
Crescent City, CA 95531

Rocky Mountain National Park
Estes Park, CO 80517

Saguaro National Monument
3693 South Old Spanish Trail
Tucson, AZ 85730-5699

Sequoia National Park
c/o Sequoia and Kings Canyon
National Parks
Three Rivers, CA 93271

Shenandoah National Park
Route 4, Box 348
Luray, VA 22835

Theodore Roosevelt National Park
P.O. Box 7
Medora, ND 58645

Virgin Island National Park
#10 Estate Nazareth
St. Thomas, VI 00802

Voyageurs National Park
P.O. Box 50
International Falls, MN 56649

Wind Cave National Park
Hot Springs, SD 57747

Yellowstone National Park
P.O. Box 168
Yellowstone National Park, WY
82190

Yosemite National Park
P.O. Box 577
Yosemite National Park, CA
95389

Zion National Park
Springdale, UT 84767

Appendix E.

FWS Permit Notification List

In all cases notify:

Chief, Air Quality Branch
U.S. Fish and Wildlife Service
c/o National Park Service
Air Quality Division
P.O. Box 25287
Denver, CO 80225-0287

Notify regional director at:

Region

Fish and Wildlife Service Region 1
911 NE 11th Avenue
Eastside Federal Complex
Portland, OR 97232

Fish and Wildlife Service Region 2
P.O. Box 1306
Albuquerque, NM 87103

Fish and Wildlife Service Region 3
Federal Building, Fort Snelling
Twin Cities, MN 55111

Fish and Wildlife Service Region 4
75 Spring Street, S.W.
Atlanta, GA 30303

States

Washington, Oregon, Idaho,
Nevada, Hawaii, California

Arizona, New Mexico,
Oklahoma, Texas

Minnesota, Wisconsin, Illi-
nois, Indiana, Ohio, Iowa,
Missouri, Michigan

Arkansas, Louisiana,
Mississippi, Alabama,
Georgia, Florida, North
Carolina, South Carolina,
Tennessee, Kentucky,
Puerto Rico

Region**States**

Fish and Wildlife Service
Region 5
One Gateway Center, Suite 700
Newton Corner, MA 02158

Virginia, West Virginia, Maryland,
Delaware, Pennsylvania, New Jersey,
New York, Vermont, New Hampshire,
Massachusetts, Connecticut, Rhode
Island, Maine

Fish and Wildlife Service
Region 6
P.O. Box 25486
Denver Federal Center
Denver, CO 80225

Montana, Wyoming, North Dakota,
South Dakota, Nebraska, Utah,
Colorado, Kansas

Fish and Wildlife Service
Region 7
1011 E. Tudor Road
Anchorage, AK 99503

Alaska

**Notify FWS class I area
refuge manager at:**

Refuge Areas

Bering Sea
Alaska Maritime National
Wildlife Refuge
202 West Pioneer Avenue
Homer, AK 99603

Breton
Bogue Chitto National
Wildlife Refuge
1010 Gause Blvd., Bldg. 936
Slidell, LA 70458

Brigantine
Edwin B. Forsythe National
Wildlife Refuge
Great Creek Road, Box 72
Oceanville, NJ 08231

Bosque del Apache
Bosque del Apache National
Wildlife Refuge
Box 1246
Socorro, NM 87801

Cape Romain
Cape Romain National
Wildlife Refuge
390 Bulls Island Road
Awendaw, SC 29429

Chassahowitzka
Chassahowitzka National
Wildlife Refuge
7798 S. Suncoast Blvd.
Route 2, Box 44
Homosassa, FL 32646

Lostwood
Lostwood National
Wildlife Refuge
Rural Route 2, Box 98
Kenmare, ND 58746

Medicine Lake
Medicine Lake National
Wildlife Refuge
HC 51, Box 2
Medicine Lake, MT 59247

Mingo
Mingo National
Wildlife Refuge
Rural Route 1, Box 103
Puxico, MO 63960

Moosehorn (Edmunds and
Baring Units)
Moosehorn National
Wildlife Refuge
Box 10077
Calais, ME 04619

Okefenokee
Okefenokee National
Wildlife Refuge
Route 2, Box 338
Folkston, GA 31537

Red Rock Lakes
Red Rock Lakes National
Wildlife Refuge
Monida Star Route
Box 15
Lima, MT 59739

Salt Creek
Bitter Lake National
Wildlife Refuge
Box 7
Roswell, NM 88202-0007

Seney
Seney National
Wildlife Refuge
Seney, MI 49883

Simeonof
Alaska Maritime National
Wildlife Refuge
202 West Pioneer Avenue
Homer, AK 99603

St. Marks
St. Marks National
Wildlife Refuge
Box 68
St. Marks, FL 32355

Swanquarter
Mattamuskeet National
Wildlife Refuge
Route 1, Box N-2
Swanquarter, NC 27885

Tuxedni
Alaska Maritime National
Wildlife Refuge
202 W. Pioneer Avenue
Homer, AK 99603

UL Bend
Charles M. Russell National
Wildlife Refuge
Box 110
Lewistown, MT 59457

Wichita Mountains
Wichita Mountains National
Wildlife Refuge
Route 1, Box 448
Indiahoma, OK 73552

Wolf Island
Georgia Coastal Complex
Box 8487
Savannah, GA 31412

Appendix F.

NPS Air Quality Monitoring Activities



inter-office communication

to: New Source Review Contacts date: 31 January 1989
from: Bob Hodanbosi, Manager-AOM&P Division of Air Pollution Control
subject: New Source Modeling

This memorandum supersedes the April 9, 1981 Division of Air Pollution Control policy on the requirements for new source modeling. Due to recent changes in the ambient air quality standards (PM₁₀), Prevention of Significant Deterioration (PSD) increments (nitrogen oxides), and U.S. EPA guideline models, an update of the previous guidance is necessary.

Any proposed new source or modification resulting in the increase of potential emissions greater than the following significant rates shall undergo an air quality modeling analysis prior to receiving a permit to install (PTI). As applied here, "potential emissions" refers to controlled emissions including any operating rate restrictions which are included as terms and conditions of the PTI.

The significant emission rates are:

Carbon monoxide (CO)	100 tons per year
Nitrogen oxides (NO _x)	25 tons per year
Sulfur dioxide (SO ₂)	25 tons per year
Particulate matter (TSP)	15 tons per year
Particulate matter less than 10 microns (PM ₁₀)	10 tons per year
Volatile organic compounds (VOC)	40 tons per year
Lead (Pb)	0.6 tons per year
Asbestos	0.007 tons per year
Beryllium (Be)	0.0004 tons per year
Mercury	0.1 tons per year
Vinyl chloride	1.0 tons per year
Fluoride	3 tons per year
H ₂ SO ₄ acid mist	7 tons per year
Hydrogen sulfide	10 tons per year
Total reduced sulfur	10 tons per year
Reduced sulfur compounds	10 tons per year
TLV air toxics	1.0 tons per year

With the exception of NO_x, SO₂, TSP, PM₁₀ and TLV air toxics, these values are equal to the New federal PSD definitions of significant emission rates. A New Source Review Coding Form should be completed for any proposed source which has emissions equal to or greater than these values. Upon request, we can also model other sources which you believe may have a significant air quality impact.

U.S. EPA has also revised the models that are to be used in new source modeling. There is a greater emphasis on the effects of terrain and structure on plume dispersion. The models allow for the consideration of building downwash, lake breeze fumigation, and terrain elevation. The New Source Coding Form will need to be completed with building dimensions in order to utilize the increased modeling capabilities. Obtaining these data will no longer be optional. The revised form is attached for your use.

If you have any questions, please contact me at (614) 644-2270.

BH:jlc

Attachment

cc: Tom Tucker
Kathleen Shannon

NEW SOURCE REVIEW CODING FORM

FACILITY NAME _____ SOURCE NO. _____

CITY _____ COUNTY _____ PTI NO. 1 - 5

	MAXIMUM RATE	AVERAGE RATE
POLLUTANT _____		
ALLOWABLE EMISSION (G/SEC, LB/HR)	10 ----- 17	10 ----- 17
POLLUTANT _____		
ALLOWABLE EMISSION (G/SEC, LB/HR)	10 ----- 17	10 ----- 17
STACK HEIGHT (M, FT)	18 ----- 23	
STACK TEMPERATURE (°K°F)	24 ----- 29	24 ----- 29
STACK VELOCITY (M/SEC, FT/MIN)	36 ----- 41	36 ----- 41
STACK DIAMETER (M, FT)	42 ----- 47	
VOLUME FLOW (M ³ /SEC, FT ³ /MIN)	48 ----- 55	48 ----- 55

U.T.M. COORDINATES: EASTING _____ KM NORTHING _____ KM

OPERATING SCHEDULE: _____ HOURS/DAY _____ DAYS/WEEK _____ WEEKS/YEAR

REVIEWING ENGINEER: _____ DATE: _____

AGENCY: _____

I. THE SOURCE IS LOCATED IN (CHECK ONE): _____ URBAN AREA _____ RURAL AREA

II. DESCRIBE ANY SIGNIFICANT TERRAIN FEATURES (HILLS, VALLEYS, LAKES, ETC.) WITHIN A FEW MILES OF THE SOURCE. (IF POSSIBLE, INCLUDE A COPY OF THE PORTION OF A U.S.G.S. MAP WHICH INCLUDES THE PLANT LOCATION.)

III. COMPLETE THE FOLLOWING [NEEDED FOR BUILDING DOWNWASH CALCULATIONS].

A. DIMENSIONS OF BUILDING TO WHICH STACK IS ATTACHED:

LENGTH _____ WIDTH _____ HEIGHT _____

A. DIMENSIONS OF NEARBY STRUCTURES (IF SIGNIFICANT):

LENGTH _____ WIDTH _____ HEIGHT _____

IV. DESCRIBE ANY ADDITIONAL SITING OR DESIGN CONSIDERATIONS.



April 9, 1981

TO: New Source Review Contacts

FROM: Bob Hodanbosi, Chief, DAQMP

SUBJECT: New Source Review Modeling

In response to the recent revisions of the PSD and Emission Offset Regulations it has become necessary to modify the Ohio EPA requirements regarding the modeling analysis of proposed new sources.

Any proposed new source or modification resulting in the increase of potential emissions greater than the following significant rates shall undergo an air quality modeling analysis prior to receiving a permit to install. As applied here, "potential emissions" refers to controlled emissions including any operating rate restrictions which are included as terms and conditions of the Permit to Install.

The significant emission rates are:

Carbon Monoxide	100	Tons per year
Oxides of Nitrogen	25	Tons per year
Sulfur Dioxide	25	Tons per year
Particulate Matter	10	Tons per year
Volatile Organic Compounds	40	Tons per year
Lead	0.6	Tons per year
Asbestos	0.007	Tons per year
Beryllium	0.0004	Tons per year
Mercury	0.1	Tons per year
Vinyl Chloride	1.0	Tons per year
Fluoride	3	Tons per year
H ₂ SO ₄ Acid Mist	7	Tons per year
Hydrogen Sulfide	10	Tons per year
Total reduced sulfur	10	Tons per year
Reduced sulfur compounds	10	Tons per year

With the exception of NO_x, SO₂ and PM, these values are equal to the new federal PSD definition of significant emissions rates. A New Source Review Modeling form should be completed for any proposed sources which have emissions equal to or greater than these values. Upon request, we can also model other sources which you feel are significant. If you have any questions about this revision please call me at (614) 466-6116.

BH/gm

APPROXIMATE DISTANCE FROM VARIOUS
OHIO CITIES TO MANDATORY CLASS I PSD AREAS*

	<u>Mammoth Cave</u>	<u>Dolly Sods/ Otter Creek</u>	<u>Great Smokey Mountains</u>	<u>Seney</u>
Akron	350	160	340	400
Canton	350	150	340	440
Cincinnati	150	270	230	480
Cleveland	380	200	370	390
Columbus	240	200	270	460
Dayton	200	250	270	440
Portsmouth	190	200	190	530
Steubenville	360	100	320	480
Toledo	330	270	390	333
Youngstown	390	150	360	450

*All units in miles



ROUTE MISTY, ALAN, SIDDHANT, LAVNA FYI
 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 5
 77 WEST JACKSON BOULEVARD
 CHICAGO, IL 60604-3590

Round
 MB

LAVNA FYI
 Copy for
 Tom R.
 Tim K.
 Gene
 Terry
 Jane
 s/er

MAY 18 2001

REPLY TO THE ATTENTION OF:
 (AE-17J)

Jim Orlemann, Manager
 Engineering Section
 Division of Air Pollution Control
 Ohio Environmental Protection Agency
 P.O. Box 1049
 Columbus, Ohio 43215

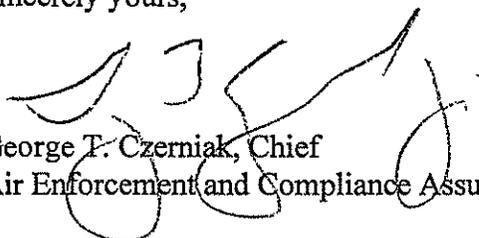
Dear Jim:

Enclosed you will find the final version of the "Issuance of the Clean Air Act Stationary Source Compliance Monitoring Strategy (CMS)". This guidance underwent revision subsequent to the 1998 United States Environmental Protection Agency (U.S. EPA) Inspector General report on this issue.

This policy is immediately effective and will be a part of U.S. EPA's discussions with States during the various FY 2002/2003 grant/enforcement agreement/Memorandum of Understanding negotiations. In an effort to address questions and implementation issues, Region 5 will be hosting a one-day CMS training session on Friday, June 15, 2001, from 9:00 am until 4:00 am at our offices in Chicago. Those interested in attending this training, should notify Lisa Holscher, of my staff, by Thursday, May 31. Ms. Holscher can be reached by telephone at (312) 886-6818 or by email at holscher.lisa@epa.gov.

Please review this document and share it with your staff. If you should have any questions with regard to its implementation, please contact Lisa Holscher at the number provided above.

Sincerely yours,


 George T. Czerniak, Chief
 Air Enforcement and Compliance Assurance Branch

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

RECEIVED

APR 30 2001

APR 25 2001

AIR ENFORCEMENT BRANCH,
U.S. EPA, REGION 5

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Issuance of the Clean Air Act Stationary Source Compliance Monitoring Strategy

FROM: Michael Stahl, Director
Office of Compliance *Michael Stahl*

TO: See Addressees

Attached you will find the revised Clean Air Act Stationary Source Compliance Monitoring Strategy (CMS). This policy was developed by the Office of Compliance, working closely with the Office of Regulatory Enforcement, the Office of General Council, the Regions, and STAPPA/ALAPCO.

This revised policy replaces the 1991 CMS and we will begin implementing it immediately. Therefore, it is important that each Region discuss the policy and negotiate with the States/locals their FY 2002 air compliance monitoring programs consistent with the revised CMS. Our goal in updating the policy has been to take into account the changes that have occurred in the air program since CMS was last revised, while continuing to provide States/locals with flexibility in implementing compliance monitoring programs. This revised CMS also addresses the major concerns raised in the 1998 EPA Inspector General report on this issue. The major changes to CMS are as follows:

- (1) Emphasis has been placed on Title V major sources and a limited subset of synthetic minor sources.
- (2) Minimum frequencies have been recommended for determining the compliance status of facilities covered by this policy. Alternatives may be developed and negotiated with the Regions to enable States/locals to address important local compliance issues.
- (3) The policy explicitly recognizes that a variety of tools ranging from self-certifications to traditional stack tests are available and should be used to evaluate compliance. It further recognizes that on-site visits may not be necessary to evaluate the compliance status of a facility given the wide range of self-reported information such as annual Title

V compliance certifications, deviation reports, and semi-annual monitoring reports based on periodic monitoring and compliance assurance monitoring. However, to ensure a compliance presence in the field, a minimum frequency for on-site visits has been recommended.

(4) Three categories of compliance monitoring replace the current levels of inspection. The new compliance monitoring categories are: Full Compliance Evaluations, Partial Compliance Evaluations, and Investigations.

(5) CMS plans are no longer required to be submitted every year, but may be submitted once every two years.

To facilitate implementation of the revised CMS in FY 2002, changes are currently being made to the Aerometric Information Retrieval System/AIRS Facility Subsystem (AIRS/AFS) and are being incorporated in the Information Collection Request, "Source Compliance and State Action Reporting," OMB Number 2060-0391. Specifically, changes are being made to the system to provide for additional collection activities associated with identifying facilities; conducting compliance evaluations; and inputting information on Title V compliance certifications and stack tests. Changes to the system are scheduled to be completed by the end of this fiscal year.

I appreciate the support your offices provided during the development of this policy and look forward to your continued support as we implement CMS. In the upcoming weeks, we plan to provide training to the Regions/States/locals on the overall policy, as well as the resulting changes to AIRS/AFS. We will be working with your offices to develop the training schedule. In the meantime, if you have any questions or comments, please contact Mamie Miller at (202) 564-7011.

Attachment

Addressees:

Director, Office of Ecosystem Protection, Region I
 Director, Division of Enforcement and Compliance Assistance, Region II
 Director, Air Protection Division, Region III
 Director, Air, Pesticides, and Toxics Management Division, Region IV
 Director, Office of Enforcement and Compliance Assurance, Region V
 Director, Compliance Assurance and Enforcement Division, Region VI
 Director, Air, RCRA, and Toxics Division, Region VII
 Assistant Regional Administrator, Office of Enforcement, Compliance,
 and Environmental Justice Region VIII
 Director, Air Division, Region IX
 Director, Office of Air, Region X

cc: Eric Schaeffer, Office of Regulatory Enforcement
Michael Alushin, Office of Compliance
Ken Gigliello, Office of Compliance
Fred Stiehl, Office of Compliance
Bruce Buckheit, Office of Regulatory Enforcement
Rich Biondi, Office of Regulatory Enforcement
Mario Jorquera, Office of Regulatory Enforcement
Mamie Miller, Office of Compliance
Rob Lischinsky, Office of Compliance
Mark Antell, Office of Compliance
Debbie Thomas, Office of Compliance
Jim Nelson, Office of General Counsel
Barbara Pace, Office of General Counsel
Greg Snyder, Federal Facilities Enforcement Office
Steve Hitte, Office of Air Quality Planning and Standards
Fred Weeks, Region I
Arnie Leriche, Region I
Ken Eng, Region II
Karl Mangels, Region II
Bernie Turlinski, Region III
Beverly Spagg, Region IV
George Czerniak, Region V
John Hepola, Region VI
Betsy Metcalf, Region VI
Don Toensing, Region VII
Ron Rutherford, Region VII
Mike Bandrowski, Region IX
Duane James, Region IX
John Borton, Region IX
Betty Wiese, Region X
S. William Becker, Executive Director STAPPA/ALAPCO
Felicia Robinson, STAPPA Chair, Enforcement and Compliance Committee
Curt Marshall, ALAPCO Chair, Enforcement and Compliance Committee
Geri O'Sullivan, STAPPA/ALAPCO

CLEAN AIR ACT
STATIONARY SOURCE COMPLIANCE MONITORING STRATEGY
April 2001

DISCLAIMER

The discussion in this document is intended solely as guidance. This document is not a regulation. It does not impose legally binding requirements on EPA, States, or the regulated community. This policy does not confer legal rights or impose legal obligations upon any member of the public. The general description provided here may not apply to a particular situation based on the circumstances. Interested parties are free to raise questions and objections about the substance of this policy and the appropriateness of the application of this policy to a particular situation. EPA retains the discretion to adopt approaches on a case-by-case basis that differ from those described in this policy where appropriate. This document may be revised periodically without public notice. EPA welcomes public input on this document at any time.

Any questions concerning this policy may be directed to either Mamie Miller or Rob Lischinsky at 202-564-2300.

CLEAN AIR ACT STATIONARY SOURCE COMPLIANCE MONITORING STRATEGY
April 2001

I INTRODUCTION

- The Clean Air Act Stationary Source Compliance Monitoring Strategy (CMS) was last revised in 1991. In the intervening years, the national policy was not consistently implemented across the country by the EPA Regions and their State/local agencies. Two major factors contributed to this situation: (1) The policy became dated as new Clean Air Act (CAA) programs were implemented, and the Environmental Protection Agency (EPA) planning process changed. (2) EPA Headquarters ceased to provide oversight of the policy on a national level when the Agency's enforcement program was reorganized, thus giving the impression that it was no longer necessary to implement the policy.

- A review by the EPA Office of the Inspector General ("Consolidated Report on OECA's Oversight of Regional and State Air Enforcement Programs," E1G-AE7-03-0045-8100244, September 25, 1998) identified this abandonment as a fundamental problem that adversely affected the effectiveness of the air enforcement program.

- In response to the Office of Inspector General report, the Office of Enforcement and Compliance Assurance (OECA) made a commitment to evaluate how the policy was being implemented, and to revise it as necessary. The Office of Compliance was given the responsibility for satisfying this commitment.

- Between October 1998 and May 1999, interviews were conducted with all of the EPA Regions and twenty-two States. The purpose of these interviews was to collect baseline information on implementation of the policy; obtain feedback on its strengths and weaknesses; and identify any appropriate alternatives. A report entitled "A Review of the Compliance Monitoring Strategy" summarized the findings of these interviews, and was issued on July 26, 1999.

- A Workgroup with representatives from OECA Headquarters, the Regions and several States was formed to review these findings and develop a revised policy.

- The following policy is based on the recommendations of this Workgroup; comments received during the comment period on the draft proposals; and in-depth discussions with representatives of the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO).

• The major differences between this policy and the 1991 version are as follows:

(1) Emphasis has been placed on Title V major sources and a limited subset of synthetic minor sources.

(2) Minimum frequencies have been recommended for determining the compliance status of facilities covered by this policy. Alternatives may be developed and negotiated with the Regions to enable States/locals to address important local compliance issues.

(3) The policy explicitly recognizes that a variety of tools ranging from self-certifications to traditional stack tests are available and should be used to evaluate compliance. It further recognizes that on-site visits may not be necessary to evaluate the compliance status of a facility given the wide range of self-reported information such as annual Title V compliance certifications, deviation reports, and semi-annual monitoring reports based on periodic monitoring and compliance assurance monitoring. However, to ensure a compliance presence in the field, a minimum frequency for on-site visits has been recommended.

(4) Three categories of compliance monitoring replace the current levels of inspection defined in the 1987 Clean Air Act Compliance/Enforcement Guidance Manual. The new compliance monitoring categories are: Full Compliance Evaluations, Partial Compliance Evaluations and Investigations.

(5) CMS plans are no longer required to be submitted every year, but may be submitted once every two years.

II GOALS OF THE COMPLIANCE MONITORING STRATEGY

1. Provide national consistency in developing stationary source air compliance monitoring programs, while at the same time provide States/locals with flexibility to address local air pollution and compliance concerns.
2. Improve communication between States/locals and Regions on stationary source air compliance monitoring programs, and enhance EPA oversight of these programs.
3. Provide a framework for developing stationary source air compliance monitoring programs that focuses on achieving measurable environmental results.

4. Provide a mechanism for recognizing and utilizing the wide range of tools available for evaluating and determining compliance.

III OVERALL PROCESS

1. States/locals submit a CMS plan biennially for discussion with and approval by the Regions. Regions also prepare a plan biennially for discussion with their States/locals.

2. The plans are summarized, and incorporated into the annual Regional response to the OECA Memorandum of Agreement (MOA).

3. States/locals and Regions maintain records of their compliance monitoring activities, and enter facility-specific compliance data in the national air compliance data base (AIRS/AFS, or its successor).

4. States/locals and Regions review the results of the compliance monitoring activities annually, and prepare an annual update to the biennial plan as necessary. Major redirections are discussed as they arise.

5. Regions conduct in-depth evaluations of the overall State/local compliance monitoring program periodically. Headquarters conducts similar evaluations of the Regional programs as well.

IV SCOPE OF POLICY

• EPA recognizes that State/local agencies perform additional compliance monitoring activities beyond those addressed by this policy. This policy is not designed to preclude those activities, but focuses on federally enforceable requirements for the following source categories: (1) Title V major sources; and (2) synthetic minor sources that emit or have the potential to emit at or above 80 per cent of the Title V major source threshold. For purposes of this policy, potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable or legally and practicably enforceable by a state or local air pollution

control agency.

The 80 per cent threshold was selected to ensure that those facilities that either have the potential to emit or actually emit pollutants close to the major source threshold are evaluated periodically. This enables States/locals to focus resources on those facilities that are most environmentally significant. In determining whether a synthetic minor source falls within the scope of this policy, all facilities with the potential to emit at or above the 80 per cent threshold are included regardless of whether their actual emissions are lower.

V COMPLIANCE MONITORING CATEGORIES

- States/locals and Regions are encouraged to use a variety of techniques to determine compliance, and utilize the full range of self-monitoring information stemming from the 1990 CAA Amendments.
- Consistent with this approach, there are three categories of compliance monitoring: Full Compliance Evaluations, Partial Compliance Evaluations, and Investigations. Each of these categories is defined below:

1. Full Compliance Evaluations

A Full Compliance Evaluation is a comprehensive evaluation of the compliance status of a facility. (For the purposes of this policy, "facility" is used in the broadest sense of the term incorporating all regulated emission units within the facility.) It addresses all regulated pollutants at all regulated emission units. Furthermore, it addresses the current compliance status of each emission unit, as well as the facility's continuing ability to maintain compliance at each emission unit.

A Full Compliance Evaluation should include the following:

- A review of all required reports, and to the extent necessary, the underlying records. This includes all monitored data reported to the regulatory agency (e.g., CEM and continuous parameter monitoring reports, malfunction reports, excess emission reports). It also includes a review of Title V self-certifications, semi-annual monitoring and periodic monitoring reports, and any other reports required by permit.

- An assessment of control device and process operating conditions as appropriate. An on-site visit to make this assessment may not be necessary based upon factors such as the availability of continuous emission and periodic monitoring data, compliance certifications, and deviation reports. Examples of source categories that may not require an on-site visit to assess compliance include, but are not limited to, gas-fired compressor stations, boilers in large office and apartment buildings, peaking stations, and gas turbines.
- A visible emission observation as needed.
- A review of facility records and operating logs.
- An assessment of process parameters such as feed rates, raw material compositions, and process rates.
- An assessment of control equipment performance parameters (e.g., water flow rates, pressure drop, temperature, and electrostatic precipitator power levels).
- A stack test where there is no other means for determining compliance with the emission limits. In determining whether a stack test is necessary, States/locals should consider factors such as: size of emission unit; time elapsed since last stack test; results of that test and margin of compliance; condition of control equipment; and availability and results of associated monitoring data.

In addition to conducting a stack test when there is no other means of determining compliance, States/locals should conduct a stack test whenever they deem appropriate.

A Full Compliance Evaluation should be completed within the fiscal year in which the commitment is made, except in the case of extremely large, complex facilities (hereafter referred to as mega-sites). Regulatory agencies may take up to three years to complete a Full Compliance Evaluation at a mega-site, provided the agency is conducting frequent on-site visits or Partial Compliance Evaluations throughout the entire evaluation period.

A Full Compliance Evaluation may be done piecemeal through a series of Partial Compliance Evaluations.

2. Partial Compliance Evaluations

A Partial Compliance Evaluation is a documented compliance assessment focusing on a subset of regulated pollutants, regulatory requirements, or emission units at a given facility. A Partial Compliance Evaluation should be more comprehensive than a cursory review of individual reports. It may be conducted solely for the purpose of evaluating a specific aspect of a facility, or combined over the course of a year (or up to three years at mega-sites) to satisfy the requirements of a Full Compliance Evaluation.

This type of evaluation could be used for example to effectively assess compliance with the HON MACT requirements if that is the primary area of concern at a chemical manufacturing facility. If at some point later in the year, the regulatory agency decided a Full Compliance Evaluation was necessary, the agency could combine the results of the MACT evaluation with subsequent evaluations focusing on the balance of other CAA requirements.

3. Investigations

An Investigation can be distinguished from the other two categories in that generally it is limited to a portion of a facility, is more resource intensive, and involves a more in-depth assessment of a particular issue. It usually is based on information discovered during a Full Compliance Evaluation, or as the result of a targeted industry, regulatory or statutory initiative. Also, an Investigation often requires the use and analysis of information not available in EPA data systems. It is best used when addressing issues that are difficult to evaluate during a routine Full Compliance Evaluation because of time constraints, the type of preliminary field work required, and/or the level of analytical expertise needed to determine compliance.

Examples of this category of compliance monitoring are the in-depth PSD/NSR and NSPS reviews conducted by EPA of the pulp, utility and petroleum refining industries. These investigations were initiated following analyses of publicly available information on growth within the industries, and a comparison of this information to data maintained by the regulatory agencies on the number of PSD/NSR permits issued during the same timeframe. The analyses indicated that many facilities failed to obtain the necessary permits. As a result,

the facilities had not controlled pollutant emissions as required, and thus realized significant economic benefits.

For a more complete definition of an Investigation, see "MOA Guidance (Air Program)-Clarification and National Performance Measures Strategy (NPMS) Pilot" from Eric Schaeffer and Elaine Stanley to MOA Coordinators, Enforcement Coordinators, and RS&T Coordinators (October 26, 1998).

VI RECOMMENDED EVALUATION FREQUENCIES

- The following minimum frequencies are recommended:

(1) A Full Compliance Evaluation should be conducted, at a minimum, once every two years at all Title V major sources except those classified as mega-sites. For mega-sites, a Full Compliance Evaluation should be conducted, at a minimum, once every three years.

Each Region, in consultation with affected States/locals, has the flexibility to define and identify mega-sites as it deems appropriate within the Region. However, this universe of facilities is expected to be small. When identifying mega-sites, the Regions should consider the following factors: the number and types of emission units; the volume and character of pollutants emitted; the number and types of control and monitoring systems; the number of applicable regulatory requirements; the availability of monitoring data; the degree of difficulty in determining compliance at individual units and at the entire facility; and the footprint of the facility. Examples of industries that may have qualifying facilities are petroleum refining, integrated steel manufacturing, chemical manufacturing, and pharmaceutical production.

(2) A Full Compliance Evaluation should be conducted, at a minimum, once every five years at synthetic minor sources that emit or have the potential to emit at or above 80 per cent of the Title V major source threshold.

(3) An on-site visit should be conducted, at a minimum, once every five years at all Title V major sources to ensure a compliance presence in the field, verify record reviews, observe modifications or new construction, and identify any major permit deviations.

- In those years when a Full Compliance Evaluation is not conducted, States/locals should continue to review annual compliance certifications, and the underlying reports supporting those certifications (e.g., semi-annual and periodic monitoring reports, continuous emission and continuous parametric monitoring reports, and malfunction and excess emission reports).

VII ALTERNATIVES TO THE RECOMMENDED EVALUATION FREQUENCIES

- States/locals may develop with Regional approval alternatives to the recommended evaluation frequencies. Alternatives may be developed on a facility-by-facility basis, or for an entire source category. However, in determining whether an alternative frequency is appropriate, the following factors should be considered:

- Compliance history,
- Location of facility,
- Potential environmental impact,
- Operational practices (e.g., whether operation is steady state or seasonal),
- Use of control equipment,
- Participation in Agency-sponsored voluntary programs (e.g., Project XL, Performance Track),
- Identified deficiencies in the overall State/local compliance monitoring program.

VIII ELEMENTS OF THE CMS PLAN

- CMS plans should be submitted biennially, consistent with the current EPA two-year MOA planning process. These plans are a building block in the MOA process, and should be finalized so that they can be summarized and incorporated into the Regional MOA submissions to EPA Headquarters. Therefore, they should be completed prior to the beginning of the Federal fiscal year. It is not necessary to duplicate the detailed information in the CMS plan when submitting the Regional MOA response. Rather, Regions should summarize and reference the CMS plans as appropriate.
- A separate CMS plan is not necessary if Regions and States/locals wish to continue using other formally negotiated documents (e.g., Selective Enforcement Agreements, Performance Partnership Agreements, and Grant Agreements), provided these documents contain the same level of detail discussed below. If this approach is selected, the document should specifically state that it satisfies the

CMS plan.

- The content of CMS plans will vary depending upon whether States/locals develop and negotiate alternatives to the minimum frequencies.

- In those instances where States/locals meet the recommended minimum frequencies and do not develop and negotiate alternative approaches, the plan should include the following elements:

- (1) A facility-specific list (including the AFS identification numbers) of all Title V major sources. The list should identify by fiscal year those facilities for which a Full Compliance Evaluation will be conducted. It should also identify those for which an on-site visit will be conducted.

- (2) A facility-specific list (including the AFS identification numbers) of all synthetic minor sources and a list of those facilities covered by the policy. It also should identify by fiscal year those facilities for which a Full Compliance Evaluation will be conducted.

- (3) A description of how a State/local will address any identified program deficiencies in its compliance monitoring program. These deficiencies can stem from evaluations conducted internally, or by outside organizations such as the EPA Office of Inspector General.

- In those instances where the States/locals propose alternatives to the recommended minimum frequencies, States/locals should provide a more detailed plan. In addition to the above elements, States/locals should include a rationale describing: (1) why it is not necessary to evaluate specific facilities or source categories subject to the minimum frequencies; and (2) why it is appropriate to substitute other facilities.

- If at the end of the first year, States/locals anticipate or know that they will be unable to meet their two year commitments by the end of the second year, they should notify the Region and revise their CMS plan accordingly.

- The "Source Compliance and State Action Reporting Information Collection Request" (ICR), OMB Number 2060-0391, will be revised to incorporate the development and submission of this plan.

IX COMPLIANCE MONITORING REPORTS

- States/locals may continue to format compliance monitoring reports as they deem appropriate; however, the following basic elements should be addressed in the reports.

- (1) General information--date, compliance monitoring category (i.e., Full Compliance Evaluation, Partial Compliance Evaluation, or Investigation), and official submitting the report.
- (2) Facility information--facility name, location, mailing address, facility contact and phone number, Title V designation and mega-site designation.
- (3) Applicable requirements--all applicable requirements including regulatory requirements and permit conditions.
- (4) Inventory and description of regulated emission units and processes.
- (5) Information on previous enforcement actions.
- (6) Compliance monitoring activities--processes and emission units evaluated; on-site observations; whether compliance assistance was provided and if so, nature of assistance; any action taken by facility to come back into compliance during on-site visit.
- (7) Findings and recommendations relayed to the facility during the compliance evaluation. Please note, this does not apply to information traditionally reserved for enforcement case files.

In providing the above information, States/locals should reference or attach other relevant documents as appropriate to avoid duplication. For example, the relevant section of a Title V permit could be attached to the compliance monitoring report rather than rewriting all of the applicable requirements.

- Compliance monitoring reports should be maintained and made available to the Regions upon request. Regions shall maintain similar files of regional activities and provide Headquarters with access upon request.

X REPORTING

- Changes will be made in the national air compliance data base (AIRS/AFS) to facilitate the reporting of information consistent with the revised structure of this policy. In addition, the ICR will be revised to incorporate the new data elements. In order to collect compliance information in a format that allows EPA to evaluate and compare

compliance monitoring programs, Regions and States/locals will need to:

- Continue to maintain records of compliance monitoring activities, and report these activities and the results in AIRS/AFS, or its successor, on a routine basis.
- Continue to designate the High Priority Violator (HPV) status of violating facilities in accordance with the EPA HPV Policy dated December 22, 1998.
- Utilize the following compliance monitoring categories to report activities at the facility level in AIRS/AFS, or its successor:
 - Full Compliance Evaluations
 - Partial Compliance Evaluations
 - Investigations
- Report the following information for all Title V annual compliance certification reviews in AIRS/AFS, or its successor:
 - date due
 - date received
 - whether deviations were reported
 - date reviewed
 - compliance status

Please note: Regions shall enter the first three data elements for each Title V compliance certification unless otherwise negotiated with States/locals.

- Enter the date and results of all stack tests in AIRS/AFS, or its successor, and adjust the HPV status as appropriate.
- The compliance status of a facility will automatically revert from "in compliance" to "unknown" if a Full Compliance Evaluation is not completed:
 - within the recommended minimum evaluation frequencies, or
 - in accordance with negotiated alternatives that extend the recommended minimum evaluation frequencies.

XI EVALUATION/OVERSIGHT

- At the end of each fiscal year, the Regions shall evaluate whether the States/locals met their commitments, and in those cases where they did not, determine why they did not and what adjustments need to be made for the following year. EPA Headquarters shall in turn conduct a similar analysis nationally. This information should be transmitted back to the appropriate officials in a timely manner so that they can make mid-course corrections in their program if necessary.

- Regions periodically shall conduct more in-depth analysis of the compliance monitoring program as a whole. They should look beyond how successful States/locals have been in meeting commitments, and evaluate for example whether adequate inspector training is available; quality monitoring evaluations are being conducted; violations are being found and are significant enough to warrant enforcement action; and data are accurately reported in a timely manner. They should also assess whether States/locals are using an appropriate mix of compliance monitoring techniques, and making full use of all available data. In addition, Regions should attempt to quantify the impact of the compliance monitoring program on parameters such as compliance rates; specific and general deterrence; and moving beyond compliance. To the extent possible, Regions should inform States/locals in advance of the criteria that will be used in the more in-depth analyses.

Regions shall prepare and submit to Headquarters a plan describing the approach and schedule they intend to use for conducting these more in-depth evaluations.

Headquarters shall conduct similar evaluations of each Region, and use the information to monitor implementation of the policy; identify program deficiencies and successes; establish national trends; compare programs; and develop new national priorities. To the extent possible, Headquarters should inform Regions in advance of the criteria that will be used in evaluating Regional programs.

CC: DANA
MISTY
ALAN
SAFAR



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
AIR AND RADIATION DIVISION
REGULATION DEVELOPMENT BRANCH (AR-18J)
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590
FAX #: (312) 886-5824

FYI
Return to
Mike

FAX TO: MIKE HOPKINS, JIM ORLEMANN AND TOM RIGO

OFFICE: DAPC

PHONE #: (614) 644-3681 FAX

DATE: 6/13/97

FROM: KAUSHAL GUPTA

PHONE #: (312) 886-6803 **# OF PAGES** (including cover sheet): 6

MESSAGE:

Policy from Region 7 on periodic monitoring for opacity. I had e-mailed this to you, but you won't be able to view it without the Adobe Acrobat Reader program.

April 18, 1997

Region 7 Policy on Periodic Monitoring for Opacity

Purpose and Scope

The purpose of this document is to provide guidance to permitting agencies and sources in EPA Region 7 on selecting appropriate periodic opacity monitoring for Title V sources which are subject to an opacity requirement. This policy is intended to encourage consistent application of the periodic monitoring requirements of 40 CFR §70.6(a)(3) and corresponding requirements of permitting agencies. Failure by a permitting agency to consider the policy and to document periodic monitoring in the permits' public record may result in an EPA objection to the permit.

Initial Compliance Certification for Opacity

Part 70 requires that the Title V permit application include an initial compliance certification. It is anticipated that any Title V application not yet submitted as of the date of this guidance will include whatever information is available to document the source's compliance with any generic opacity standard at the time of submission, including the results of any annual state or local agency inspection.

Ongoing Compliance Certification for Opacity

General Principles

Opacity limitations apply during all periods of source operation, except for certain time periods due to startup, shutdown, or malfunction as specified by rule.

Once-a-year or other infrequent inspections by a state or local agency do not satisfy the requirements for ongoing periodic monitoring of opacity. Periodic monitoring is a *source* responsibility.

A source has an obligation to certify, at least once per year or more often as required by the permit authority, whether compliance with the applicable opacity standard was continuous or intermittent. Implicit in this obligation is that the *source* has collected data throughout the compliance period for which they can then rely on when making the certification.

To the extent possible, a source should use the appropriate reference method to verify compliance with opacity limits. However, Reference Method 9 and continuous opacity monitors (COMS) are not a practical solution for all situations.

Routine source surveillance, along with record keeping and reporting of the results of the surveillance should provide some assurance that sources are meeting their visible emissions requirements. This daily, routine operation and maintenance practice results in more environmental benefit than less frequent, "official" compliance determinations.

It is not practical for a state or local agency to inspect every facility on a frequency that provides meaningful assurance that they are meeting their visible emission requirements on a continuous basis. To minimize any doubts, the permit authority should require the source to certify at least annually -- or more frequently -- that they conducted a visible emissions survey each day the plant operated and that they were in compliance with, or in violation of, with the applicable opacity requirements. Public complaints and department inspections should also help to verify the validity of source observations.

General Strategy

Even though preferred, COMS or Method 9 readings may not be appropriate for every situation. For example, COMS or Method 9 readings on clean gas-fired boilers or internal combustion engines, or other infrequently operated equipment may not provide fruitful results. The following approach outlines a hierarchy that can be used to select the appropriate "monitoring" technique for each piece of air pollution equipment at a plant. Where appropriate, the permit authority may elect to mix the "tiers" to match the appropriate situation.

Tier 1

COMS are the preferred visible emissions measurement technique. COMS create an unbiased, continuous, and permanent record of opacity. In conjunction with a periodic quality assurance program and the regulatory authority's ability to use "any credible evidence" to establish a violation, COMS may be used to assess whether a source is in compliance. Where the source already has a COMS, the instrument would be used as the periodic monitoring device.

COMS are appropriate for vents or stacks which carry a major portion of the plant's particulate or other condensible emission streams. For example, coal-fired boilers are good candidates for COMS. In addition, any other equipment for which an NSPS establishes a COMS requirement -- whether NSPS affected or not -- should be considered strong candidates for COMS. EPA has already verified that COMS are both technically and economically feasible for a large number of emission units, including industrial, institutional, commercial, and utility steam boilers firing other than natural gas or "clean" fuel oil, fluidized catalytic cracking units, portland cement kilns and clinker coolers, primary metal smelters, ferroalloy and steel arc furnaces, pulp mill recovery furnaces, glass melting furnaces, rotary lime kilns, and phosphate rock and other mineral dryers, calciners, and grinders. The above list is not meant to limit the source types for which COMS may be appropriate, but instead provides examples of the sources types for which COMS already work.

When evaluating Title V permit applications that involve emissions units at the source types described above, the presumption is that COMS will be specified by the permit authority as the opacity measurement method. The responsibility to show that COMS are not technically or economically feasible for a particular installation, and that lesser monitoring under Tiers 2 or 3 is more appropriate, rests with the permit applicant.

Tier 2

Alternatives to COMS may be acceptable if such devices are not technically or economically practical. For example, wet, condensible plumes or roof vents that exceed the practical path length of an opacity monitor present technical challenges for which COMS may not be appropriate. In addition, the economics of installing COMS on multiple opacity emission points or low capacity factor units may not be justifiable. In these cases, lesser monitoring under Tiers 2 and 3 may be appropriate. Reasons for selecting lesser monitoring requirements under Tiers 2 and 3 should be fully explained in the permit statement of basis or other documents contained in the permit administrative record.

"Lesser monitoring" may include visual observations by Reference Method 9, a plant-wide visible emissions survey, measurement of other surrogate parameters, or a combination of one or more of these measures to evaluate whether opacity is likely being met or not.

Visual Observations

Method 9 is the preferred visual observation method. To the extent practicable, a source should attempt to record daily opacity measurements on each emission point subject to an opacity standard. Of course, readings would only be required when the emission unit is operating and when the weather conditions allow. Method 9 data may be used by EPA, the state or local agency, and the public as direct evidence of an opacity violation.

In those cases where Method 9 readings are impractical because of a large number of emission points or because a certified Method 9 observer is not available, the source representative would note the visible emissions performance of the plant each operating day. Specifically, the source would first conduct a quick survey of the entire plant. In most cases, this "qualitative" assessment shouldn't take more than 10-15 minutes, even for complex sources. The source representative would maintain a daily log noting 1) whether any air emissions (except for water vapor) were visible from the plant, 2) all emission points from which visible emissions occurred, and 3) whether the visible emissions were normal for the process. If no visible or other significant emissions are observed then no further observations would be required.

For those emission points with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would attempt to record formal Method 9 readings for the emission points of concern. If Method 9 readings can not be obtained, the source would also indicate 1) the color of the emissions, 2) whether the emissions were light or heavy, 3) the cause of the abnormal emissions, and 4) any



INTER-OFFICE COMMUNICATION

Missy, Ann, Bob
FYI *2* *rb*

Ohio Environmental Protection Agency

Date: January 27, 1999

To: Distribution List

From: *John S.* John Sadzewicz, Acting Deputy Director, Water Programs

Subject: Compliance with all Applicable Laws when Issuing Permits ("Bessie Williams" Case Precedent)

What does this
mean?
John
How about LPAH
George
pg

During recent discussions with Ohio EPA's legal office and the Ohio Attorney General's Office, it has become clear our various permitting programs are failing to determine compliance with all applicable laws prior to final issuance of permits to install or plan approvals. Ohio EPA must ascertain compliance with all "applicable laws" when issuing a PTI. This determination is based on OAC Rule 3745-31 and a 1994 appeal ruling by the ERAC. The case, Bessie Williams et al. v. Schregardus, 1994 Ohio ENV Lexis 5, (April 19, 1994) states that before the Agency issues a permit, compliance with all applicable laws must be established. The term "applicable laws" is defined as any applicable provision of ORC Chapters 3704 (air), 3734 (solid and hazardous waste), 3745 (procedures) and 6111 (water); any OAC regulations adopted under those ORC Chapters; the Clean Air Act; the Federal Water Pollution Control Act; and U.S. EPA regulations. If you are interested in reading the ruling or need more details on this ruling, please contact Julianne Kurdila, Jeanne Mallet or Ed Tormey in Legal.

The following is a proposed procedure to ensure that all applicable laws have been evaluated and that the evaluation is documented. Please review the following procedure, and provide comments within two weeks of the above date.

Proposed New Procedure

Since most PTI applications are received and reviewed in the District Offices, the District Office staff will be responsible for evaluating the PTIs and making a recommendation. Managers and Supervisors of the affected programs will be responsible for informing their staff of this procedure and ensuring implementation.

District Office Permit Reviews. For permit applications normally received and reviewed at the District Offices, the public information specialist (or whomever is assigned the task of logging permit applications in and handling the checks) will contact the appropriate Divisions within their office requesting a review of the project and applicability of other permits, using the attached form. The parts of the permit application applicable to the other Divisions should be sent, with a copy of the form, to the Section Manager of that Division. If additional permits are deemed necessary, the lead staff person in the

Division receiving the initial application will inform the applicant in writing and provide information on a contact person within the Division requesting a permit application.

Central Office Permit Reviews. For permits normally reviewed at Central Office (general PTIs, livestock PTIs and plans, and DEFA PTI reviews), the lead CO staff person assigned to the project will send the attached form to the District Office Section Manager for their program requesting a review of the project and the applicability of other laws. The request shall be accompanied by the appropriate parts of the PTI application and any necessary supporting documentation such as construction, operation and waste management plans. The District Section Manager receiving the application shall be responsible for passing the request onto the other Divisions in the District Office and getting a response back to the CO staff person responsible for the project. If additional permits are deemed necessary, the lead CO staff person will inform the applicant in writing and provide information on a contact person within the Division requesting a permit application.

It is critical that adequate documentation be present in our records demonstrating that each project was reviewed independently for compliance with all applicable laws.

For non-antidegradation projects, no PTI should be recommended for approval until the reviewer is certain that applications for all applicable permits have been received. If the antidegradation rule has been triggered, all permits should be reviewed simultaneously and the final actions issued at approximately the same time.

The Divisions of Air Pollution Control and Solid and Infectious Waste are developing similar procedures and will issue them when complete.

If you have any questions, please contact George Elmaraghy, Assistant Chief, DSW.

Distribution list:

District Chiefs
Division Chiefs
DSW Section managers (CO and DO)
Ed Tormey, Legal

Julianne Kurdila, Legal
Joan DeMartin, Legal
Jeanne Mallet, Legal

pc: Jenny Tiell, DIR
Kate Bartter, DIR
George Elmaraghy, DSW

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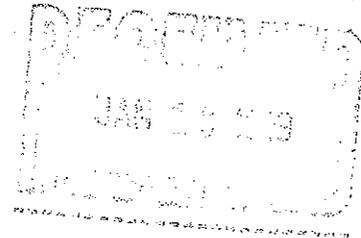
Inter-office Memorandum

To: Dan Aleman, Canton Health Department
Ed Fasko, Cleveland Division of the Environment
Lynn Malcolm, Akron Regional Air Quality Management
District

From: Dennis Bush^{DB}, Ohio EPA, NEDO

Date: January 14, 1999

Subject: Besse Williams Decision



As a result of the Besse Williams decision, there needs to be some changes in the manner that PTI's are reviewed. Two other Ohio EPA divisions (Solid Waste and Surface Water) need to be informed about every PTI that is processed by DAPC. Likewise, DAPC needs to be informed about every PTI processed by those two divisions.

The Besse Williams decision involved a surface water PTI that was appealed to the Environmental Review Appeals Commission (ERAC). The PTI was revoked because DAPC (and other divisions) had not been given an opportunity to decide if there were any regulatory requirements resulting from their rules.

To accomplish this at NEDO, we have developed a form (attached) to be used for this purpose. The local air agencies need to be involved in this since you process a lot of PTI's.

The preliminary procedure we have developed is as follows:

- 1) For PTI applications for non-air projects received at NEDO:
 - a) Our Administrative Assistant (Lily Aaron) will log the application, complete the new form, and distribute the form to the two non-directly involved divisions (including me).
 - b) For those applications in your counties, I will attempt to decide if there is any need for a DAPC PTI. This will be based primarily on the project description. If there appears to be no need for air involvement (eg. a sewer line extension), I will complete the form and return it to the involved division. For some of these where the decision is not clear cut and especially if

the company is Title 5, I will need to send you the form to complete (bottom part) and return to me within one week. I will then route your completed form back to the involved division.

- c) On the bottom part of the form, if you circle NO, you will need to explain why on the back of the form. Possible explanations would be: "appears likely to be de minimis per OAC 3745-15-05"; "exempt per OAC 3745-31-03(A)(1)(g)"; or "not an air contaminant source". There may be other explanations. If you circle YES, you will need to pursue obtaining a PTI application for the air contaminant source.

2) For PTI applications received at the locals:

- a) You will need to complete the top part of the form and send it to me.
- b) I will route it to the other divisions and return the completed forms to you. Hopefully this can all be done within one week. The original copy of the form will need to be kept in your file and a copy should be attached to the PTI worksheet.

We need to begin this procedure immediately. Please begin with any PTI applications that are received after January 18, 1999.

A refinement of this procedure may occur within the next month or two. If you have any questions, please let me know.

cc: Tom Rigo, DAPC
Cindy DeWulf, DAPC
Mike Hopkins, DAPC
Mike Ahern, DAPC
Bill Skowronski, NEDO
Bob Wysenski, NEDO

IN THE COURT OF APPEALS OF OHIO
TENTH APPELLATE DISTRICT

MIKO W
JAN 27 1995
FOR YOUR FILES
L. H. H.

Bessie Williams et al., : Nos. 94APH05-712,
Appellants-Appellees, : 94APH05-891,
v. : 94APH05-892,
Donald R. Schregardus, Director of : 94APH05-893,
Environmental Protection, : 94APH05-894,
Appellee-Appellant, : 94APH05-895,
Oeder and Sons Garage, Inc., : 94APH05-896,
Appellee-Appellee, : 94APH05-897,
: 94APH05-898,
: 94APH05-899,
: 94APH05-900,
: 94APH05-901,
: 94APH05-902,
: 94APH05-903,
: and 94APH05-904,
: (REGULAR CALENDAR)

Albert Meeks, et al., :
Appellants-Appellees, : Nos. 94APH05-713,
v. : 94APH05-905,
Donald R. Schregardus, Director of : 94APH05-906,
Environmental Protection, : 94APH05-907,
Appellee-Appellant, : 94APH05-908,
Buckeye Ready-Mix Concrete, Inc., : 94APH05-909,
Appellee-Appellee. : 94APH05-910,
: and 94APH05-911
: (REGULAR CALENDAR)

O P I N I O N

Rendered on October 13, 1994

*Young & Alexander Co., L.P.A., and A. Mark Segreti, Jr.,
for Albert Meeks et al.*

*Lee Fisher, Attorney General, and John K. McManus, for
Donald R. Schregardus.*

*Rendigs, Fry Kiely & Dennis, and Jonathan Saxton, for
Oeder and Sons Garage, Inc.*

*Kevin J. Happer Co., and Kevin J. Happer, for Buckeye
Ready-Mix Concrete, Inc.*

APPEAL from the Environmental Board of Review

TYACK, J.

On September 5, 1991, Oeder and Sons Garage, Inc., ("Oeder") filed an application with the director of the Ohio Environmental Protection Agency ("OEPA") for a Permit to Install ("PTI") an air contaminant source. Oeder is a diesel fuel storage and dispensing facility located in Lebanon, Ohio. Specifically, Oeder sought a PTI for three 10,000 gallon diesel fuel tanks and one 4,000 gallon diesel fuel tank. On January 15, 1992, a PTI was issued to Oeder by the OEPA. In a separate action, Buckeye Ready-Mix Concrete, Inc., ("Buckeye"), a concrete plant also located in Lebanon, Ohio, filed for a PTI for a 4.2 MMBTU #2 oil-fired boiler. On January 23, 1992, the PTI was issued by the OEPA.

In February 1992, several area residents (hereinafter "appellees") filed what the Environmental Board of Review ("EBR") later construed as a Notice of Appeal regarding both PTIs with the EBR. The parties agreed to proceed with

one hearing on both matters. A hearing was held on August 18, 1993 and on April 19, 1994, the EBR issued its findings of fact, conclusions of law and final order which vacated the director's issuance of the PTIs and remanded the matter to the director for further consideration. The OEPA, Oeder and Buckeye (hereinafter "appellants") have appealed to this court, assigning one error for our consideration:

"The Environmental Board of Review erred in holding that when an applicant requests a permit to install or plan approval under OAC 3745-31-05, Ohio EPA must review virtually every state and federal environmental regulation and determine that the emission source is in compliance with every one of these regulations prior to issuing a permit."

In reaching its decision to remand the matter to the director, the EBR stated that the director based his decision to issue the PTIs only upon consideration of applicable air regulations. (Conclusion of law No. 3.) The EBR concluded that additional matters should have been considered; however, it did not state specifically what those matters were. The EBR's findings of fact do indicate that appellees were concerned with the effect of the tanks and boiler on their wells and with the location of the tanks and boiler on a sole source aquifer. Alan Lloyd, Environmental Scientist in the OEPA's Division of Air, testified that upon application for a PTI for an air contaminant source, he considered only ambient air quality standards and Division of Air regulations and no water regulations. As stated above, the EBR remanded the matter to the director for consideration of additional matters.

Appellants contend that the EBR's order is erroneous because Ohio Adm.Code 3745-31-05 limits the director's scope of review to only those regulations that apply to the type of emissions for which a permit is sought, here, air contaminants. Appellants contend that the EBR's order requires the OEPA to review essentially every state and federal environmental regulation. In reviewing the order of the EBR, we are bound by the standard of review set forth in R.C. 3745.06, which states:

"The court shall affirm the order complained of in the appeal if it finds, upon consideration of the entire record and such additional evidence as the court has admitted, that the order is supported by reliable, probative, and substantial evidence and is in accordance with law."

The issue presented for our review, whether or not the director should have considered more than just air regulations in reviewing these particular PTI applications, involves the interpretation of Ohio Adm.Code 3745-31-05 and related provisions. Ohio Adm.Code 3745-31-05 states, in pertinent part:

"(A) - The director shall issue a permit to install or a plan approval, on the basis of the information appearing in the application, or information gathered by or furnished to the Ohio environmental protection agency, or both, if he determines that the installation or modification and operation of the air contaminant source, solid waste disposal facility, water pollution source, disposal system, land application of sludge, or public water system will:

"(1) Not prevent or interfere with the attainment or maintenance of applicable ambient water quality standards or ambient air quality standards; and

"(2) Not result in a violation of any *applicable laws*, including but not limited to:

"(a) Effluent standards adopted by the director or administrator of the United States environmental protection agency;

"(b) Emission standards adopted by the Ohio EPA;

"(c) Federal standards of performance for new stationary sources adopted by the administrator of the United States environmental protection agency pursuant to section 111 of the Clean Air Act ***;

"(d) Requirements regarding non-attainment areas, as defined in section 171 et seq. of the Clean Air Act ***." (Emphasis added.)

Appellants contend that the above-emphasized language can be interpreted either of two ways. One, "applicable laws" means only those provisions that apply to the type of emission sought in the permit or, two, "applicable laws" means any relevant environmental regulations that may apply to the facility regardless of whether it relates to the PTI sought. Appellants, of course, argue that "applicable laws" means only those provisions relating to the type of PTI sought. We disagree.

A plain reading of Ohio Adm.Code 3745-31-05 supports the EBR's order below. By its very language, Ohio Adm.Code 3745-31-05 contemplates that a review of an application for a PTI for diesel fuel storage tanks or an oil-fired boiler may involve consideration of regulations other than only air regulations. Ohio

Adm.Code 3745-31-05(A) states that a PTI will be issued only if the "*** air contaminant source *** [or] water pollution source *** will (1) [n]ot prevent or interfere with the attainment or maintenance of applicable ambient water quality standards ***." Even if one looks at the tanks and boiler as air contaminant sources only and not as water pollution sources, those air contaminant sources still cannot prevent or interfere with attainment or maintenance of ambient water quality standards. Of course, these tanks and the boiler may also be considered water pollution sources. Therefore, the effect these tanks and the boiler may have on ambient water quality in relation to the relevant standards must be considered.

In addition, Ohio Adm.Code 3745-31-05(A)(2)(a) states that the director will issue a PTI only if the air contaminant or water pollution source will "[n]ot result in a violation of any applicable laws, including but not limited to *** [e]ffluent standards adopted by the director or the administrator of the United States environmental protection agency ***." "Applicable laws" is defined, in Ohio Adm.Code 3745-31-01(F) as the: "*** applicable provisions *** rules, regulations, and orders of the Ohio EPA; the Clean Air Act, *** *the Federal Water Pollution Control Act*, *** and rules and regulations of the administrator of the United States environmental protection agency." (Emphasis added.) Thus, "applicable laws" expressly includes water pollution regulations. In addition, the applicable rules and regulations of the United States EPA, which include regulations other than just air regulations, must be considered. Ohio

Adm.Code 3745-31-05(A)(2)(a) expressly includes effluent standards in the "applicable laws" which cannot be violated by installation of the pollution source. Effluent standards encompass regulations with regard to the prevention of water pollution.

Although it is a discretionary provision, Ohio Adm.Code 3745-31-05(C) lends support to our ruling. Ohio Adm.Code 3745-51-05(C) states:

"In deciding whether to grant or deny a permit to install or plan approval, the director may take into consideration the social and economic impact of the air contaminants, *water pollutants, or other adverse environmental impact* that may be a consequence of issuance of the permit to install or plan approval."
(Emphasis added.)

The fuel tanks and boiler in question will be located on an aquifer and, thus, a leak or other accident could have considerable social and economic impact on the community. Such a possibility may be considered by the director upon remand.

Thus, in light of the plain language in Ohio Adm.Code 3745-31-05 and considering the location of the tanks and boiler on an aquifer, the director was obligated to consider more than just air pollution regulations. The facts of the case and the Ohio Adm.Code demand nothing less. Contrary to appellants' contention, the director is not required to look at every rule and regulation. On the facts of these PTI applications, more than air pollution regulations had to be considered; certainly, relevant water pollution regulations should have been considered. Hence, the EBR's order remanding the matter to the director for

further consideration is supported by reliable, probative and substantial evidence and is in accordance with law. Accordingly, appellants' sole assignment of error is overruled.

Having overruled appellants' assignment of error, the final order of the EBR is hereby affirmed.

Judgment affirmed.

YOUNG and PETREE, JJ., concur.

Oct 17 12:30 PM '94

Misty

Ohio EPA
Division of Air Pollution Control

inter-office communication

to: Distribution

from: *JT* Tom Tucker, Environmental Supervisor, through Mike *AM*
Hopkins, P.E., Manager, AQMPS

subject: Radionuclide Topics: Partial Recision of Subpart I;
Draft Interim Permitting Guideline; Draft Permit by
Rule

date: April 24, 1997

The following items should be considered when determining the permit requirements for sources having radionuclide emissions to the ambient air.

1. On December 30, 1996, US EPA rescinded the radionuclide NESHAP (40 CFR 61, Subpart I) as it applied to NRC-licensed facilities other than commercial power reactors. (The commercial power reactors were removed from Subpart I on September 5, 1995.) The US EPA has determined that the NRC requirements are sufficient to control these facilities to an equivalent degree of safety and that NRC is capable of enforcing those regulations. This action removes the requirement for these facilities to list radionuclide in their Title V applications.

2. I am distributing draft guidance for the permitting of all other radionuclide NESHAP sources for your review and comment. This document describes the circumstances where permits are required for federal facilities emitting radionuclides and the provisions that should be included in those permits. The Ohio EPA has generally determined that permits must be obtained for sources that are required to submit annual reports or "applications to construct or modify" under the NESHAP. This document will be redrafted and released in the form of an engineering guideline. Suggested permit terms and conditions are being drafted and will be attached to the engineering guide when it is released.

3. Also being distributed for review and comment is a draft of the permit by rule exemption for radionuclide sources whose radionuclide emissions are insignificant enough that the sources are not regulated by the radionuclide NESHAP.

Please submit any comments that you have on items 2 and 3 to Tom Tucker, DAPC-CO before May 12, 1997. Thank you.

Distribution:

Bob Hodanbosi, Chief
Cindy DeWulf, Asst. Chief
DAPC Section Managers
District Air Unit Supervisors
LAA Directors
AQMPS-NSR Specialists

Radionuclide NESHAP Permitting Procedures -- Interim Guidance

The radionuclide national emission standards for hazardous air pollutants (NESHAP) generally prevent the emission of radionuclides from federal facilities that would cause any member of the public to receive a dose of 10 mrem/yr effective dose equivalent (ede) and limit the emission of radon from radium-containing material [40 CFR 61, Subparts H, I and Q]. Federal facilities owned or operated by US DOE are governed by Subparts H and Q, and the remaining federal facilities (primarily USDOD and NASA) are subject to Subpart I. Nuclear Power Plants and NRC-licensed facilities have been exempted from Subpart I by US EPA. Until rules are adopted by Ohio EPA to address the issuing of permits to sources of radionuclides, DAPC is instituting the following practices for reviewing permits at facilities subject to the radionuclide NESHAP.

This guidance is based, prior to the adoption of rules, on:

- The explicit inclusion of "radionuclides" as air contaminants [ORC 3704.01(B), OAC 3745-31-01(C)];
- The permit requirements for air contaminant sources [OAC 3745-31-02(A), OAC 3745-35-02(A)];
- The exclusion of NESHAP sources from permit to install exemptions [OAC 3745-31-03(A)(1)];
- The inclusion of NESHAP requirements for Title V sources [OAC 3745-77-01(H)(4), OAC 3745-77-03(C)(9) and (C)(10)]; and, finally,
- The NESHAP requirements themselves [40 CFR 61].

For US DOE facilities (Subparts H and Q):

A) All US DOE facilities presently are subject to Subparts H and the K-65 Silos at the Fernald Environmental Management Project, in Fernald, Ohio are subject to Subpart Q.

B) Any new or modified radionuclide source at a DOE facility that would cause any member of the public to receive a dose of 0.10 mrem/yr ede or greater or emit more than 20 pCi/m²-s of radon-222 into the air shall require a PTI and either a PTO or Title V permit from Ohio EPA and an 'Approval to Construct or Modify' from USEPA (40 CFR 61.96). After OEPA receives a delegation of authority from US EPA for the radionuclide NESHAP a PTI will satisfy the 'Approval to Construct or Modify' requirements. Each PTI, PTO, or Title V Permit should include the following special radionuclide provisions, in addition to provisions for other pollutants:

- 1) An annual radionuclide emission limit that shall not be exceeded over any 12 month period. This emission limit may either be expressed as a mass rate of a specific radionuclide (gm/yr) or a radioactivity release rate for total radionuclides (Ci/yr). The annual radionuclide emission limit shall not cause a dose to the public that exceeds 10 mrem/yr ede (using either the CAP-88 or COMPLY models).
 - 2) All emission points shall be monitored for radionuclides that contribute greater than 10% of the dose that would result from an uncontrolled release under normal full operation of the source. Rather than monitoring, an alternative method may be used to determine these emissions with prior approval from US EPA.
 - 3) An annual report meeting the requirements of 40 CFR 61.94 shall be submitted to the Director by June 30 of each year.
 - 4) If the emission is a result of an approved remediation under CERCLA, then no permits are necessary, but the above requirements must still be met.
- C) Any new or modified source at a US DOE facility with radionuclide emissions that would cause any member of the public to receive a dose of less than 0.10 mrem/yr ede from the new or modified source shall not require a PTI or PTO, nor be included as an emission unit in a Title V Permit (although it would still be listed as an "insignificant activity" in a Title V Permit), providing the following conditions are met (note that a PTI, PTO or Title V Permit may still be required for nonradionuclide emissions):
- 1) The facility is in compliance with Subpart H as of the most recent annual NESHAP report and can demonstrate that the dose resulting from all emissions from the new source is less than 0.10 mrem/yr ede (this demonstration need not be submitted, but must be maintained onsite).
 - 2) The radionuclide emissions from the new or modified source shall be included in the next annual NESHAP report for the full facility, if one is required under 40 CFR 61.94.
 - 3) All records generated or used to meet conditions (1) and (2) must be maintained onsite for at least 5 years.
 - 4) The Director or their authorized representative shall be allowed on the premises during reasonable hours for the purposes of reviewing all records and verifying that the facility is in compliance with all air pollution law.

- 5) These sources will be subject to a future rule-making to revise OAC 3745-31-03(A) (4) to permit these sources by rule.

For other non-DOE federal facilities (Subpart I):

A) Any new facility subject to 40 CFR 61, Subpart I, having radionuclide emissions that would cause any member of the public to receive a dose of 0.10 mrem/yr ede or greater will be required to apply for and obtain at least one permit to install and, if Title V is not applicable, a permit to operate for its radionuclide emitting sources. If the facility is a Title V facility, then the Title V permit shall address the enforceable requirements of Subpart I. The PTI(s), PTO(s) and/or Title V Permit(s) will include the following special radionuclide provisions, in addition to provisions for other pollutants:

- 1) An annual emission limit that will not be exceeded over any 12 month period. This emission limit may either be expressed as a mass rate of a specific radionuclide ($\mu\text{g}/\text{yr}$) or a radioactivity release rate for total radionuclides (Ci/yr). The annual radionuclide emission limit shall not cause a dose to the public that exceeds 10 mrem/yr ede (using the COMPLY model).
- 2) All release points shall be monitored for radionuclides that contribute greater than 10% of the dose that would result from an uncontrolled release under normal full operation of the source. Rather than monitoring, an alternative method may be used to determine these emissions with prior approval from US EPA.
- 3) An annual report meeting the requirements of 40 CFR 61.104 shall be submitted to the Director by March 31 of each year, if the facility emitted radionuclides in an amount that would have caused any member of the public to receive a dose of 1.0 mrem/yr ede during the previous year.
- 4) If the emission is a result of an approved remediation under CERCLA, then no permits are necessary, but the above requirements must still be met.

B) Any facilities subject to 40 CFR 61, Subpart I, having radionuclide emissions that would cause any member of the public to receive a dose of less than 0.10 mrem/yr ede and all new or modified radionuclide sources that would cause any member of the public to receive a dose of less than 0.10 mrem/yr ede at larger facilities shall not require PTI's or PTO's, nor be included in a Title V Permit (except as a listed "insignificant activity"), providing the following conditions are met (note that a PTI, PTO

or Title V Permit may still be required to address non-radionuclide emissions):

- 1) The facility is in compliance with Subpart I as of the most recent calendar year and can demonstrate that the dose resulting from all emissions from the new source is less than 0.10 mrem/yr ede (this demonstration need not be submitted, but must be maintained onsite)
- 2) The radionuclide emissions from the new or modified source are included in the next annual NESHAP report for the full facility, if one is required under 40 CFR 61.104.
- 3) All records generated or used to meet conditions (1) and (2) must be maintained onsite for at least 5 years.
- 4) The Director or their authorized representative shall be allowed to enter the premises during reasonable hours for the purposes of reviewing all records and verifying that the facility is in compliance with all air pollution law and these provisions.
- 5) These sources will be subject to a future rule-making to revise OAC 3745-31-03 (A) (4) to permit these sources by rule.

C) Applications for 'Approvals to Construct or Modify' under 40 CFR 61.106 are required to be filed with USEPA if any of the following conditions are met. After OEPA receives a delegation of authority from USEPA for the radionuclide NESHAP, a PTI will satisfy the 'Approval to Construct or Modify' requirements.

- 1) New facilities subject to 40 CFR 61, Subpart I, having radionuclide emissions that would cause any member of the public to receive a dose of 1.0 mrem/yr ede or greater;
- 2) New or modified sources having radionuclide emissions that would cause any member of the public to receive a dose of 0.10 mrem/yr ede or greater and that are located at facilities having radionuclide emissions that would cause any member of the public to receive a dose of 1.0 mrem/yr ede or greater; or
- 3) New or modified radionuclide sources of any size at facilities subject to 40 CFR 61, Subpart I, having total facility radionuclide emissions that would cause any member of the public to receive a dose of 1.0 mrem/yr ede or greater, if the most recent annual report showed that the facility was not in compliance with 40 CFR 61, Subpart I.

3745-31-03 Permit to install exemptions.

- (A) A permit to install as required by rule 3745-31-02 of the Administrative Code must be obtained for the installation or modification of a new air contaminant source unless exempted from the requirements as follows:

.....

(4) Permit-by-rule exemptions

The following air contaminant sources are exempt from the requirement to obtain a permit to install. These exemptions are valid only as long as the owner or operator collects and maintains the records described for each air contaminant source exempted under this rule and these monthly records are retained in the owner or operator's files for a period of not less than five years and are made available to the director or any authorized representative of the director for review during normal business hours:

- (a) Emergency electrical generators or emergency firefighting water pumps greater than 50 horsepower that operate for no more than 500 hours per rolling 12 month period and that burn gasoline, natural gas, distillate oil (with less than or equal to 0.5 per cent by weight sulfur), or liquid petroleum gas and that maintain the following records:

- (i) Monthly records that contain the rolling twelve month hours of operation; and
- (ii) Records that show the type of fuel used and the sulfur content (in per cent by weight) of any distillate oil used.

- (b) AIR CONTAMINANT SOURCES HAVING RADIONUCLIDE EMISSIONS TO THE AMBIENT AIR THAT DO NOT EXCEED THOSE AMOUNTS THAT WOULD CAUSE A MEMBER OF THE PUBLIC TO RECEIVE IN ANY YEAR AN EFFECTIVE DOSE EQUIVALENT OF 0.1 MREM/YEAR AND PROVIDED THAT THE OWNER OR OPERATOR COMPLIES WITH THE FOLLOWING:

- (i) THE STATIONARY SOURCE COMPLIES WITH THE REQUIREMENTS OF ALL APPLICABLE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS, 40 CFR PART 61.
- (ii) COPIES OF ALL REPORTS REQUIRED UNDER THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS ARE SENT TO THE DIRECTOR IN A TIMELY MANNER.

- (iii) RECORDS REQUIRED UNDER THE NATIONAL STANDARDS FOR HAZARDOUS AIR POLLUTANTS ARE MADE AVAILABLE FOR INSPECTION UPON REQUEST BY THE DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE.
- (iv) IF THE EFFECTIVE DOSE EQUIVALENT FOR ANY SOURCE EXEMPTED UNDER THIS RULE IS CALCULATED TO EXCEED 0.1 MREM PER YEAR, THEN AN APPLICATION FOR A PERMIT TO INSTALL SHALL BE SUBMITTED TO THE DIRECTOR OR HIS AUTHORIZED REPRESENTATIVE AT THE SAME TIME AS THE ANNUAL REPORT IS REQUIRED TO BE SUBMITTED.
- (v) THE DIRECTOR OR AN AUTHORIZED REPRESENTATIVE WILL BE GRANTED REASONABLE ACCESS TO THE FACILITY FOR THE PURPOSE OF INSPECTING RECORDS AND DETERMINING COMPLIANCE WITH ANY APPLICABLE LAWS.

DRAFT

interoffice

MEMORANDUM

to: Radionuclide NESHAP Contacts
from: Tom Tucker
subject: Radionuclide NESHAP Grant Guidance
date: September 5, 1995

ANNOUNCING: We have been awarded a supplemental grant from US EPA to pay for the ongoing Radionuclide NESHAP permitting activities and training and preparation for a full delegation of authority for the Radionuclide NESHAPs.

BEGINNING WITH THIS CURRENT PAY PERIOD: Please retroactively code the time spent in FFY 1995 (from Oct 1, 1994 through Sep 30, 1995) on permit or other radionuclide NESHAP-related activities using the Grant Reporting Code "RN95" (including: inspections, public meetings, training, etc). Note that there are only TWO pay periods remaining in which to code work to this grant. Do not code overtime hours to this grant, unless the time worked actually consisted of overtime hours.

BEGINNING WITH FEDERAL FISCAL YEAR 1996: At the present time US EPA has not yet awarded FFY 96 Air Grants, including an extension of the radionuclide NESHAP grant. So, keep track of time spent on radionuclide NESHAP activities, but do not code any time to RN96 until instructed to do so.

IF YOU HAVE ANY QUESTIONS about this grant or any radionuclide NESHAP activities, please contact Tom Tucker (4-3699).

NESHAPs Proposal/Promulgation Dates Since 11/15/90

40 CFR	Category	Proposed	Promulgated
Part 63, Subpart A	NESHAP for Source Categories: General Provisions	8/11/93	3/16/94
Part 62, Subparts F-I	Hazardous Organic NESHAP (HON) [Synthetic Organic Chemical Manufacturing, and Certain Processes Subject to Negotiated Leak Regulations]	12/31/92 10/15/93 10/24/94 10/28/94 4/10/95	4/22/94 6/6/94 9/20/94 1/27/95 4/10/95
Part 63, Subparts F-I	HON: Regulated Cyanide Compounds	08/95	10/95
Part 63, Subpart L	Coke Oven Batteries NESHAP	12/4/92	10/27/93
Part 63, Subpart M	Perchloroethylene Dry Cleaning NESHAP	12/9/91 10/1/92	9/22/93 12/20/93
Part 63, Subpart N	Chromium Electroplating and Anodizing NESHAP	12/16/93	1/25/95 5/24/95
Part 63, Subpart O	Ethylene Oxide Commercial Sterilizer NESHAP	3/7/94	12/6/94
Part 63, Subpart Q	Industrial Process Cooling Towers NESHAP	8/12/93	9/8/94
Part 63, Subpart R	Stage I Gasoline Distribution Facilities NESHAP	2/8/94	12/14/94 2/8/95 6/26/95
Part 63, Subpart S	Pulp and Paper Industry NESHAP: Combustion	10/95	11/97
Part 63, Subpart S	Pulp and Paper: Non-Combustion	12/17/93	11/97
Part 63, Subpart S	Pulp and Paper: Mechanical, Nonwood Chemical	11/96	11/97
Part 63, Subpart T	Halogenated Solvent Cleaning NESHAP	11/29/93	12/2/94 12/30/94 6/5/95
Part 63, Subpart U	Polymers and Resins NESHAP, Group I	6/12/95	5/15/96
Part 63, Subpart V	Polymers and Resins NESHAP, Group IV	3/29/95	3/15/96
Part 63, Subpart W	Polymers and Resins NESHAP, Group II	5/16/94	3/8/95
Part 63, Subpart X	Secondary Lead Smelters NESHAP	6/9/94 4/19/95	6/23/95
Part 63, Subpart Y	Marine Vessel Loading/Unloading NESHAP	5/13/94 3/8/95	6/30/95

40 CFR	Category	Proposed	Promulgated
Part 63, Subpart AA	Phosphoric Acid Manufacturing Industry NESHAP	11/95	11/96
Part 63, Subpart BB	Phosphate Fertilizers Production Industry NESHAP	11/95	11/96
Part 63, Subpart CC	Petroleum Refineries NESHAP	7/15/94	6/30/95
Part 63, Subpart DD	Off Site Waste and Recovery Operations NESHAP	10/13/94	11/15/95
Part 63, Subpart EE	Magnetic Tape Manufacturing Operations NESHAP	3/11/94	12/15/94
Part 63, Subpart GG	Aerospace Manufacturing and Rework NESHAP	6/6/94 11/22/94	7/31/95
Part 63, Subpart HH	Oil and Natural Gas Production NESHAP	7/95	7/96
Part 63, Subpart II	Shipbuilding/Ship Repair Surface Coating NESHAP	12/6/94	11/15/95
Part 63, Subpart JJ	Wood Furniture Manufacturing NESHAP	12/6/94	11/15/95
Part 63, Subpart KK	Printing/Publishing Industry NESHAP	3/14/95 4/3/95	3/1/96
Part 63, Subpart LL	Primary Aluminum Plant NESHAP	10/95	11/96
Part 63, Subpart MM	Sulfite Pulping Industry NESHAP: Combustion	12/95	-----
Part 63, Subpart NN	Baker's Yeast Manufacturing Industry NESHAP	10/95	10/96
Part 63	Tetrahydrobenzaldehyde (Butadiene Dimer) NESHAP	7/95	-----
Part 63	Steel Pickling, HCl Process NESHAP	11/95	11/96
Part 63	Wood Treatment Industry NESHAP	11/95	11/96
Part 63	Primary Copper Smelters NESHAP	12/95	12/96
Part 63	Publicly Owned Treatment Works (POTW) NESHAP	12/95	12/96
Part 63	Flexible Polyurethane Foam Production NESHAP	1/96	-----
Part 63	Portland Cement Manufacturing NESHAP	2/96	2/97
Part 63	Chlorine Production NESHAP	3/96	-----



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

Booth

JUN 1 1988

REPLY TO THE ATTENTION OF:
(5RA-14)

CERTIFIED MAIL RETURN
RECEIPT REQUESTED

Richard L. Shank, Ph.D
Director
Ohio Environmental Protection Agency
P. O. Box 1049, 1800 WaterMark Drive
Columbus, Ohio 43266-0149

88 JUN -7 AM 2:20

Dear Dr. Shank:

This letter transmits to you the revised Delegation of Authority which allows the State of Ohio to implement and enforce the New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAPS). The revised delegation includes a list of NSPS and NESHAPS sections which cannot be delegated to the State because they involve regulation setting and amending actions that require notification in the Federal Register.

We have reviewed the pertinent procedures and supporting regulations of the State of Ohio, and have determined that the State has an adequate program for the implementation and enforcement of the NSPS and NESHAPS.

A notice announcing this delegation will be published in the Federal Register in the near future. This delegation becomes effective as of the date of this letter and, unless the United States Environmental Protection Agency receives written notice from the Ohio Environmental Protection Agency within ten days of the receipt of this letter, it will be deemed that the State has accepted all the terms and conditions of this delegation.

We trust that this amended delegation will provide for a more efficient NSPS and NESHAPS enforcement program in Ohio.

Sincerely yours,

Valdas V. Adamkus

Valdas V. Adamkus
Regional Administrator

JUN 1 1988

DELEGATION OF AUTHORITY
NEW SOURCE PERFORMANCE STANDARDS

In accordance with Clean Air Act Section 111(c), and subject to the specific terms and conditions set forth below, the United States Environmental Protection Agency (USEPA) hereby delegates authority to the State of Ohio to implement and enforce the New Source Performance Standards (NSPS) as follows:

- A. Authority for all sources located or to be located in the State of Ohio subject to the NSPS promulgated in 40 CFR Part 60. This delegation includes all future standards promulgated for additional pollutants and source categories and all revisions and amendments to existing and future standards. The delegation of authority to enforce future standards, revisions, and amendments will be effective as of the date that such standards become applicable.
- B. This delegation of authority for NSPS supersedes the previous statewide delegations of August 4, 1976, November 5, 1979, August 27, 1980, August 9, 1982, and January 10, 1985, and is subject to the following terms and conditions:
 1. Upon approval of the Regional Administrator of Region V, the Director of the Ohio Environmental Protection Agency (OEPA) may subdelegate this authority to implement and enforce the NSPS to other air pollution control authorities in the State when such authorities have demonstrated that they have equivalent or more stringent programs in force.
 2. The State of Ohio will at no time grant a waiver of compliance with NSPS. The State of Ohio may grant variances from State standards which are more stringent than the NSPS, so long as the variances do not prevent compliance with the NSPS.
 3. The Federal regulations in 40 CFR Part 60, as amended, do not have provisions for granting waivers by class of testing requirements or variances, hence this delegation does not convey to the State of Ohio authority to grant waivers by class of testing requirements or variances from NSPS regulations. Ohio may waive a performance test or specify the use of a reference method with minor changes in methodology under 40 CFR 60.8(b) on a case-by-case basis, however, the State must inform USEPA of such actions within 30 days.
 4. The State of Ohio will utilize the methods specified in appendices and Subparts of 40 CFR Part 60 in performing source tests pursuant to the regulations.
 5. Enforcement of NSPS in the State of Ohio will be the primary responsibility of the State of Ohio. Enforcement shall be consistent with USEPA's "Timely and Appropriate" guidance. If, after appropriate discussion with the OEPA, the Regional Administrator determines that a

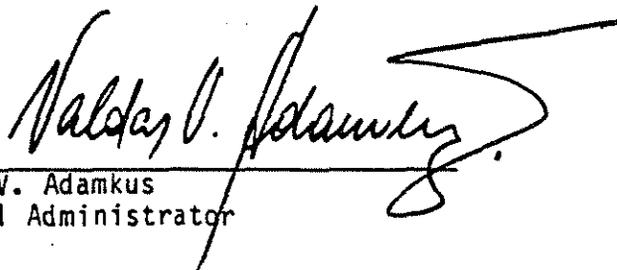
State procedure for implementing and enforcing the NSPS is not in compliance with Federal regulations (40 CFR Part 60), or is not being effectively carried out, this delegation will be revoked in whole or in part. Any such revocation shall be effective as of the date specified in a Notice of Revocation to the Director of the OEPA.

6. The OEPA and the USEPA Region V will develop a system of communication for the purpose of insuring that each office is informed on (a) the current compliance status of subject sources in the State of Ohio; (b) the interpretation of application regulations; (c) the description of sources and source inventory data; and (d) the decisions the State makes where the State is delegated certain discretionary authority in the following sections: 40 CFR 60.8(b)(4), 40 CFR 60.8(c), 40 CFR 60.46(b), and 40 CFR 60.46(d). The reporting and notification provisions in 40 CFR Part 60, requiring industry to make submissions to the USEPA, are met by sending such submissions to the OEPA. The OEPA will make available this information to the USEPA on a case-by-case basis.

OEPA's annual report, submitted to USEPA pursuant to 40 CFR Part 51, will include information relating to the status of sources subject to 40 CFR Part 60. Such information will include the name, address, type and size of each facility, date facility commenced operation, date of most recent stack test, compliance status of facility, enforcement actions initiated, surveillance action undertaken for each facility, and results of reports relating to emissions data.

7. Prior USEPA concurrence is to be obtained on any matter involving the interpretation of Section 111 of the Clean Air Act or 40 CFR Part 60 to the extent that implementation, administration, or enforcement of these sections have not been covered by determinations or guidance sent to the OEPA. All applicability determinations, including those submitted under 40 CFR 60.5, which have not been specifically treated in the Compendium of Applicability Determinations issued by USEPA are reserved for USEPA.
8. If the State of Ohio determines that a violation of a delegated NSPS exists, the OEPA shall, within 30-days of detection of the violation, notify USEPA, Region V of the nature of the violations together with a brief description of the State's efforts or strategy to secure compliance. Furthermore, if the State determines that it is unable to enforce a NSPS standard, the State shall immediately notify USEPA, Region V. This delegation in no way limits the Administrator's concurrent enforcement authority as provided in Section 111(c)(2) of the Clean Air Act.
9. In addition to any future provision which may be cited in forthcoming NSPS which cannot be delegated, the Administrator retains authority for the regulation setting and amending aspects of (1) those sections of the NSPS listed in the Appendix to this delegation of authority for NSPS, which is hereby incorporated as part of this delegation; (2) approval of equivalency for design, equipment, work practice, operational standard or combinations thereof pursuant to Section 111(h) of the Clean Air Act; and (3) for the granting of an innovative technology waiver pursuant to Section 111(j) of the Clean Air Act. The State is delegated authority for implementing such decisions made by the Administrator.

10. If the State of Ohio determines that for any reason, it is unable to administer the program with respect to any new or existing NSPS, the Director of the OEPA will notify the Regional Administrator. Upon such notification by the State, the primary enforcement responsibility for such standards will return to the USEPA.



Valdas V. Adamkus
Regional Administrator

June 1, 1988

Date

Appendix NSPS

The following sections of the NSPS are not delegated by the USEPA to the State for implementation and enforcement. These sections either require rulemaking in the Federal Register or require Federal overview in order to ensure national consistency.

- | | | |
|--|--|-----------------------------|
| 1. Subpart A
60.8(b)(2)
60.8(b)(3)
60.11(e) | 5. Subpart DD
60.302(d)(3) | 9. Subpart GGG
60.592(c) |
| 2. Subpart Da
60.45a | 6. Subpart GG
60.332(a)(3)
60.335(a)(1)(ii) | 10. Subpart JJJ
60.623 |
| 3. Subpart Ka
60.114a | 7. Subpart VV
60.482-1(c)(2)
60.484 | |
| 4. Subpart S
60.135(b) | 8. Subpart WW
60.493(b)(2)(i)(A)*
60.496(a)(1) | |

* For last sentence only concerning values of Se and Sh

DELEGATION OF AUTHORITY

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

In accordance with Clean Air Act Section 112(d), and subject to the specific terms and conditions set forth below, the United States Environmental Protection Agency (USEPA) hereby delegates authority to the State of Ohio to implement and enforce the National Emission Standards for Hazardous Air Pollutants (NESHAPS) as follows:

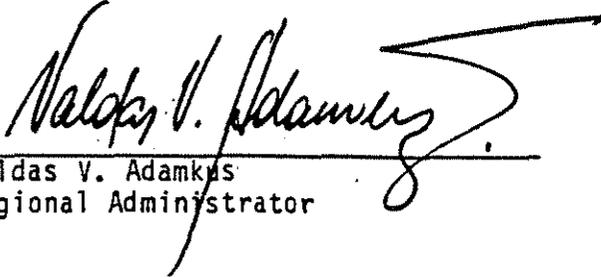
- A. Authority for all sources located or to be located in the State of Ohio subject to the NESHAPS promulgated in 40 CFR Part 61 except Subparts B, H, I, and K related to radionuclides. This delegation includes all future standards promulgated for additional pollutants and source categories and all revisions and amendments to existing and future standards. The delegation of authority to enforce future standards, revisions, and amendments will be effective as of the date that such standards become applicable.
- B. This delegation of authority for NESHAPS supersedes the previous statewide delegations of August 9, 1982, and January 10, 1985, and is subject to the following terms and conditions:
 1. Upon approval of the Regional Administrator of Region V, the Director of the Ohio Environmental Protection Agency (OEPA) may subdelegate this authority to implement and enforce the NESHAPS to other air pollution control authorities in the State when such authorities have demonstrated that they have equivalent or more stringent programs in force.
 2. The State of Ohio will at no time grant a waiver of compliance with NESHAPS except as provided in 40 CFR 61.11. The State of Ohio may grant variances from State standards which are more stringent than the NESHAPS, so long as the variances do not prevent compliance with the NESHAPS.
 3. The Federal regulations in 40 CFR Part 61, as amended, do not have provisions for granting waivers by class of testing requirements or variances, hence this delegation does not convey to the State of Ohio authority to grant waivers by class of testing requirements or variances from NESHAPS regulations. Ohio may on a case-by-case basis approve minor modifications to sampling procedures or equipment that affect single sources under 40 CFR 61.14, however the State must inform USEPA of such actions within 30 days.
 4. The State of Ohio will utilize the methods specified in appendices and Subparts of 40 CFR Part 61 in performing source tests pursuant to the regulations.
 5. Enforcement of NESHAPS in the State of Ohio will be the primary responsibility of the State of Ohio. Enforcement shall be consistent with USEPA's "Timely and Appropriate" guidance. If, after appropriate discussion with the OEPA, the Regional Administrator determines that a State procedure for implementing and enforcing the NESHAPS is not in compliance with Federal regulations (40 CFR Part 61), or is not being effectively carried out, this delegation will be revoked in whole or in part. Any such revocation shall be effective as of the date specified in a Notice of Revocation to the Director of the OEPA.

6. The OEPA and the USEPA Region V will develop a system of communication for the purpose of insuring that each office is informed on (a) the current compliance status of subject sources in the State of Ohio; (b) the interpretation of application regulations; (c) the description of sources and source inventory data; and (d) the decisions the State makes where the State is delegated certain discretionary authority in 40 CFR 61.154(b). Except for the provisions of 40 CFR 61.146 concerning asbestos demolition and renovation, the reporting and notification provisions in 40 CFR Part 61, requiring industry to make submissions to the USEPA, are met by sending such submissions to the OEPA. The OEPA will make available this information to the USEPA on a case-by-case basis. Information required by 40 CFR 61.146 must be submitted to both USEPA and OEPA.

OEPA's annual report, submitted to USEPA pursuant to 40 CFR Part 51, will include information relating to the status of sources subject to 40 CFR Part 61. Such information, will include the name, address, type and size of each facility, date facility commenced operation, date of most recent stack test, compliance status of facility, enforcement actions initiated, surveillance action undertaken for each facility, and results of reports relating to emissions data.

7. Prior USEPA concurrence is to be obtained on any matter involving the interpretation of Section 112 of the Clean Air Act or 40 CFR Part 61 to the extent that implementation, administration, or enforcement of these sections have not been covered by determinations or guidance sent to the OEPA. All applicability determinations, including those submitted under 40 CFR 61.06, which have not been specifically treated in the Compendium of Applicability Determinations issued by USEPA are reserved for USEPA.
8. If the State of Ohio determines that a violation of a delegated NESHAPS exists, the OEPA shall, within 30-days of detection of the violation, notify USEPA, Region V of the nature of the violations together with a brief description of the State's efforts or strategy to secure compliance. Furthermore, if the State determines that it is unable to enforce a NESHAPS standard, the State shall immediately notify USEPA, Region V. This delegation in no way limits the Administrator's concurrent enforcement authority as provided in Section 112(d)(2) of the Clean Air Act.
9. In addition to any future provision which may be cited in forthcoming NESHAPS which cannot be delegated, the Administrator retains authority for the regulation setting and amending aspects of (1) those sections of the NESHAPS listed in the Appendix to this delegation of authority for NESHAPS, which is hereby incorporated as part of this delegation; and (2) approval of equivalency for design, equipment, work practice, operational standard or combinations thereof pursuant to Section 112(e) of the Clean Air Act. The State is delegated authority for implementing such decisions made by the Administrator.

10. If the State of Ohio determines that for any reason, including budget reductions, it is unable to administer the program with respect to any new existing NESHAPS, the Director of the OEPA will notify the Regional Administrator. Upon such notification by the State, the primary enforcement responsibility for such standards will return to the USEPA.



Valdas V. Adamkus
Regional Administrator

June 1, 1988
Date

Appendix NESHAPS

The following sections of the NESHAPS are not delegated by the USEPA to the State for implementation and enforcement. These sections either require rulemaking in the Federal Register or require Federal overview in order to ensure national consistency.

- | | | |
|-----------------|---------------------|----------------|
| 1. Subpart A | 3. Subpart N | 5. Subpart V |
| 61.04(b) | 61.164(a)(2) | 61.242-1(c)(2) |
| 61.12(d)(1) | 61.164(a)(3) | 61.244 |
| 61.13(h)(1)(ii) | | |
| 61.16 | 4. Subpart O | |
| | 61.172(b)(2)(ii)(B) | |
| 2. Subpart E | 61.172(b)(2)(ii)(C) | |
| 61.53(c)(4)* | 61.174(a)(2) | |
| | 61.174(a)(3) | |
| 3. Subpart J | | |
| 61.112(c) | | |

* Restricted delegation applies only to development of list.

LIST OF NSPS CATEGORIES

40 CFR 60 SUBPART	SOURCE CATEGORY	DATE PROPOSED
D	Fossil Fuel Fired Steam Gen. after 08/17/71	08/17/71
Da	Electric Utility Steam Gen. after 09/18/78	09/19/78
Db	Industrial/Commercial/Institutional Steam Generating Units	06/19/84
Dc	Small Industrial/Commercial/Institutional Steam Generating Units after 06/09/89	06/09/89
E	Incinerators	08/17/91
Ea	Municipal Waste Combustors after 12/20/89	12/20/89
Eb	Municipal Waste Combustors after 09/20/94 PROPOSED	09/20/94
F	Portland Cement Plants	08/17/71
G	Nitric Acid Plants	08/17/71
H	Sulfuric Acid Plants	07/17/71
	- amended -	
I	Asphalt Concrete Plants	06/11/73
J	Petroleum Refineries	06/11/78-10/04/76
	- amended -	01/17/84
K	Storage Vessel for Petroleum Liquids Constr. after 06/11/73; Prior to 05/19/78	06/11/73
Ka	Storage Vessel for Petroleum Liquids Constr. after 05/18/78	05/18/73
Kb	V.O. Liquid Storage Vessel after 07/23/84	07/23/84
L	Secondary Lead Smelters	06/11/73
M	Secondary Brass, Bronze & Ingot Prod.	06/11/73
N	Basic Oxygen Process Furnaces (Iron and Steel Plants) - Primary Emissions	06/11/73
Na	Basic Oxygen Process Furnaces Steelmaking - Secondary Emissions	01/20/83
O	Sewage Treatment Plants	06/11/73
P	Primary Copper Smelters	10/16/74
Q	Primary Zinc Smelters	10/16/74
R	Primary Lead Smelters	10/16/74
S	Primary Aluminum Reduction Plts.	10/23/74
T	Phosphate Fert. Wet Phos. Acid	10/22/74
U	Phosphate Fert. Super Phos. Acid	10/22/74
V	Phos. Fert. Diammonium Phos. Acid	10/22/74
W	Phos. Fert. Triple Super Phos. Acid	10/22/74
X	Phos. Fert. Granular Tri. Sup. Phos. Acid Stg.	10/22/74
Y	Coal Preparation Plants	10/24/74
Z	Ferroalloy Production Facilities	10/21/74
AA	Steel Plants; Electric Arc Furnaces	10/21/74
AAa	Steel Plants Electric Arc Furn. & Argon-O ₂	08/17/83
BB	Kraft Pulp Mills	09/24/76
	- amended -	09/24/76
CC	Glass Manufacturing Plants	06/15/79
DD	Grain Elevators	08/03/78
EE	Industrial Surface Coating; Metal Furniture	11/28/80
FF	Stationary Internal Combustion Engines PROPOSED	07/23/79
GG	Stationary Gas Turbines	10/03/77
HH	Lime Manufacturing Plants	09/02/82
II	Sodium Carbonate	(Withdrawn)
JJ	Organic Solvent Cleaners/ Cold Cleaning Machines PROPOSED	Proposed withdrawal of 06/11/80 and New 09/09/94
KK	Lead-Acid Battery Manufacturing	01/14/80
LL	Metallic Minerals Pro. Plants	08/24/82
MM	Auto & L-DT Surface Coating Operations	08/09/82
NN	Phosphate Rock Processing Plants	09/21/79
OO	Perchloroethylene Drycleaners	11/25/80
PP	Ammonium Sulfate Manufacturing	02/04/80

QQ	Graphic Arts Ind. Publication Rotogravure	02/04/80
RR	Pressure Sensitive Tape & Label Surface	10/28/80
SS	Industrial Surface Coating; Appliances	12/24/80
TT	Metal Coil Surface Coating	01/05/81
UU	Asphalt Processing & Asphalt Roofing Mfg.	05/26/81
VV	VOC Fugitive Emission; Synthetic Organ. Chem. (SOCMI)	01/05/81
WW	Beverage Can Surface Coating	11/26/80
XX	Bulk Gasoline Terminals	12/17/80
ZZ	Industrial Boilers	
AAA	Residential Wood Heaters after 07/01/88 of 07/01/90	02/18/87
BBB	Rubber Products Ind., Tire Mfg.	01/20/83
CCC	Non-Fossil Fuel Fire Boilers	
DDD	Polymer Mfg. Industry (VOC) 09/30/87 or 01/10/89	09/30/87
EEE	By-Product Coke Oven Battery Stacks	(Not Developed)
FFF	Flexible Vinyl & Urethane Coating & Printing	01/18/83
GGG	Refinery Fugitive Emissions	01/04/83
HHH	Synthetic Fibers Mfg.	11/23/82
III	Synthetic Organic Chemical Mfg. Ind. Air Oxid.	10/21/83
JJJ	Petroleum Drycleaners	12/14/82
KKK	On-shore N.G. Process. Plts.; VOC Equip. Leaks	01/20/84
LLL	On-shore N.G. Process; SO ₂ Emissions	01/20/84
MMM	Coke Oven Wet Quenching	(Not Developed)
NNN	Synthetic Organic Chem. Mfg. Ind. Distillation Op.	01/20/84
OOO	Non-metallic Mineral Processing Plts.	08/31/83
PPP	Wool Fiberglass Insulation Mfg. Plts.	02/07/84
QQQ	VOC Emissions from Petroleum Refinery Wastewater Systems	05/04/87
RRR	SOCMI Reactor Processes after 06/29/90	06/29/90
SSS	Magnetic Tape Manufacturing Industry	01/22/86
TTT	Surface Coating of Plastic Parts of Business Machines	01/08/86
UUU	Calciners and Dryers in Mineral Industry	04/23/86
VVV	Polymeric Coating of Supporting Substrates Facilities	04/30/87
WWW	Municipal Solid Waste (MSW) Landfills PROPOSED	05/30/91
	Starch Production PROPOSED	09/08/94

Revised 12/5/95



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

Baith

1 JUN 1988 1988

REPLY TO THE ATTENTION OF:
 (5RA-14)

CERTIFIED MAIL RETURN
 RECEIPT REQUESTED

88 JUN -7 AM 8:20

Richard L. Shank, Ph.D
 Director
 Ohio Environmental Protection Agency
 P. O. Box 1049, 1800 WaterMark Drive
 Columbus, Ohio 43266-0149

Dear Dr. Shank:

This letter transmits to you the revised Delegation of Authority which allows the State of Ohio to implement and enforce the New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAPS). The revised delegation includes a list of NSPS and NESHAPS sections which cannot be delegated to the State because they involve regulation setting and amending actions that require notification in the Federal Register.

We have reviewed the pertinent procedures and supporting regulations of the State of Ohio, and have determined that the State has an adequate program for the implementation and enforcement of the NSPS and NESHAPS.

A notice announcing this delegation will be published in the Federal Register in the near future. This delegation becomes effective as of the date of this letter and, unless the United States Environmental Protection Agency receives written notice from the Ohio Environmental Protection Agency within ten days of the receipt of this letter, it will be deemed that the State has accepted all the terms and conditions of this delegation.

We trust that this amended delegation will provide for a more efficient NSPS and NESHAPS enforcement program in Ohio.

Sincerely yours,

Valdas V. Adamkus

Valdas V. Adamkus
 Regional Administrator

07 JUN 1988

DELEGATION OF AUTHORITY
NEW SOURCE PERFORMANCE STANDARDS

In accordance with Clean Air Act Section 111(c), and subject to the specific terms and conditions set forth below, the United States Environmental Protection Agency (USEPA) hereby delegates authority to the State of Ohio to implement and enforce the New Source Performance Standards (NSPS) as follows:

- A. Authority for all sources located or to be located in the State of Ohio subject to the NSPS promulgated in 40 CFR Part 60. This delegation includes all future standards promulgated for additional pollutants and source categories and all revisions and amendments to existing and future standards. The delegation of authority to enforce future standards, revisions, and amendments will be effective as of the date that such standards become applicable.
- B. This delegation of authority for NSPS supersedes the previous statewide delegations of August 4, 1976, November 5, 1979, August 27, 1980, August 9, 1982, and January 10, 1985, and is subject to the following terms and conditions:
 1. Upon approval of the Regional Administrator of Region V, the Director of the Ohio Environmental Protection Agency (OEPA) may subdelegate this authority to implement and enforce the NSPS to other air pollution control authorities in the State when such authorities have demonstrated that they have equivalent or more stringent programs in force.
 2. The State of Ohio will at no time grant a waiver of compliance with NSPS. The State of Ohio may grant variances from State standards which are more stringent than the NSPS, so long as the variances do not prevent compliance with the NSPS.
 3. The Federal regulations in 40 CFR Part 60, as amended, do not have provisions for granting waivers by class of testing requirements or variances, hence this delegation does not convey to the State of Ohio authority to grant waivers by class of testing requirements or variances from NSPS regulations. Ohio may waive a performance test or specify the use of a reference method with minor changes in methodology under 40 CFR 60.8(b) on a case-by-case basis, however, the State must inform USEPA of such actions within 30 days.
 4. The State of Ohio will utilize the methods specified in appendices and Subparts of 40 CFR Part 60 in performing source tests pursuant to the regulations.
 5. Enforcement of NSPS in the State of Ohio will be the primary responsibility of the State of Ohio. Enforcement shall be consistent with USEPA's "Timely and Appropriate" guidance. If, after appropriate discussion with the OEPA, the Regional Administrator determines that a

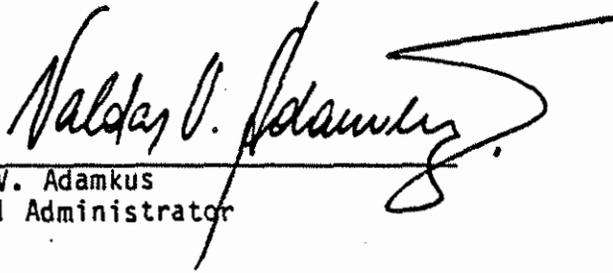
State procedure for implementing and enforcing the NSPS is not in compliance with Federal regulations (40 CFR Part 60), or is not being effectively carried out, this delegation will be revoked in whole or in part. Any such revocation shall be effective as of the date specified in a Notice of Revocation to the Director of the OEPA.

6. The OEPA and the USEPA Region V will develop a system of communication for the purpose of insuring that each office is informed on (a) the current compliance status of subject sources in the State of Ohio; (b) the interpretation of application regulations; (c) the description of sources and source inventory data; and (d) the decisions the State makes where the State is delegated certain discretionary authority in the following sections: 40 CFR 60.8(b)(4), 40 CFR 60.8(c), 40 CFR 60.46(b), and 40 CFR 60.46(d). The reporting and notification provisions in 40 CFR Part 60, requiring industry to make submissions to the USEPA, are met by sending such submissions to the OEPA. The OEPA will make available this information to the USEPA on a case-by-case basis.

OEPA's annual report, submitted to USEPA pursuant to 40 CFR Part 51, will include information relating to the status of sources subject to 40 CFR Part 60. Such information will include the name, address, type and size of each facility, date facility commenced operation, date of most recent stack test, compliance status of facility, enforcement actions initiated, surveillance action undertaken for each facility, and results of reports relating to emissions data.

7. Prior USEPA concurrence is to be obtained on any matter involving the interpretation of Section 111 of the Clean Air Act or 40 CFR Part 60 to the extent that implementation, administration, or enforcement of these sections have not been covered by determinations or guidance sent to the OEPA. All applicability determinations, including those submitted under 40 CFR 60.5, which have not been specifically treated in the Compendium of Applicability Determinations issued by USEPA are reserved for USEPA.
8. If the State of Ohio determines that a violation of a delegated NSPS exists, the OEPA shall, within 30-days of detection of the violation, notify USEPA, Region V of the nature of the violations together with a brief description of the State's efforts or strategy to secure compliance. Furthermore, if the State determines that it is unable to enforce a NSPS standard, the State shall immediately notify USEPA, Region V. This delegation in no way limits the Administrator's concurrent enforcement authority as provided in Section 111(c)(2) of the Clean Air Act.
9. In addition to any future provision which may be cited in forthcoming NSPS which cannot be delegated, the Administrator retains authority for the regulation setting and amending aspects of (1) those sections of the NSPS listed in the Appendix to this delegation of authority for NSPS, which is hereby incorporated as part of this delegation; (2) approval of equivalency for design, equipment, work practice, operational standard or combinations thereof pursuant to Section 111(h) of the Clean Air Act; and (3) for the granting of an innovative technology waiver pursuant to Section 111(j) of the Clean Air Act. The State is delegated authority for implementing such decisions made by the Administrator.

10. If the State of Ohio determines that for any reason, it is unable to administer the program with respect to any new or existing NSPS, the Director of the OEPA will notify the Regional Administrator. Upon such notification by the State, the primary enforcement responsibility for such standards will return to the USEPA.



Valdas V. Adamkus
Regional Administrator

June 1, 1988
Date

Appendix NSPS

The following sections of the NSPS are not delegated by the USEPA to the State for implementation and enforcement. These sections either require rulemaking in the Federal Register or require Federal overview in order to ensure national consistency.

- | | | |
|--|--|-----------------------------|
| 1. Subpart A
60.8(b)(2)
60.8(b)(3)
60.11(e) | 5. Subpart DD
60.302(d)(3) | 9. Subpart GGG
60.592(c) |
| 2. Subpart Da
60.45a | 6. Subpart GG
60.332(a)(3)
60.335(a)(1)(ii) | 10. Subpart JJJ
60.623 |
| 3. Subpart Ka
60.114a | 7. Subpart VV
60.482-1(c)(2)
60.484 | |
| 4. Subpart S
60.135(b) | 8. Subpart WW
60.493(b)(2)(i)(A)*
60.496(a)(1) | |

- For last sentence only concerning values of Se and Sh

DELEGATION OF AUTHORITY

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

In accordance with Clean Air Act Section 112(d), and subject to the specific terms and conditions set forth below, the United States Environmental Protection Agency (USEPA) hereby delegates authority to the State of Ohio to implement and enforce the National Emission Standards for Hazardous Air Pollutants (NESHAPS) as follows:

- A. Authority for all sources located or to be located in the State of Ohio subject to the NESHAPS promulgated in 40 CFR Part 61 except Subparts B, H, I and K related to radionuclides. This delegation includes all future standards promulgated for additional pollutants and source categories and all revisions and amendments to existing and future standards. The delegation of authority to enforce future standards, revisions, and amendments will be effective as of the date that such standards become applicable.
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 1. Upon approval of the Regional Administrator of Region V, the Director of the Ohio Environmental Protection Agency (OEPA) may subdelegate this authority to implement and enforce the NESHAPS to other air pollution control authorities in the State when such authorities have demonstrated that they have equivalent or more stringent programs in force.
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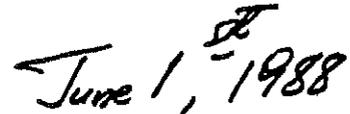
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Valdas V. Adamkus
Regional Administrator



Date

Appendix NESHAPS

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| 61.16 | 4. Subpart O | |
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| 2. Subpart E | 61.172(b)(2)(ii)(C) | |
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| | 61.174(a)(3) | |
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| 61.112(c) | | |

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G	Nitric Acid Plants	8/17/71	12/23/71
H	Sulfuric Acid Plants	7/17/71	12/23/71
	- amended -		9/29/83
I	Asphalt Concrete Plants	6/11/73	3/8/74
J	Petroleum Refiners	6/11/73 - 10/4/76	3/8/74
	- amended -	1/17/84	
K	Storage Vessel for Petroleum Liquids Constr. after 6/11/73; Prior to 5/19/78	6/11/73	3/8/74
Ka	Storage Vessel for Petroleum Liquids Constr. after 5/18/78	5/18/73	4/4/80
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O	Sewage Treatment Plants	6/11/73	3/8/74
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R	Primary Lead Smelters	10/16/74	1/15/76
S	Primary Aluminum Reduction Plts.	10/23/74	1/26/75
T	Phosphate Fert. Wet Phos. Acid	10/22/74	8/6/75
U	Phosphate Fert. Super Phos. Acid	10/22/74	8/6/75
V	Phos. Fert. Diammonium Phos. Acid	10/24/74	8/6/75
W	Phos. Fert. Triple Super Phos.	10/22/74	8/6/75
X	Phos. Fert. Granular Tri. Sup. Phos. Stg.	10/22/74	8/6/75
Y	Coal Preparation Plants	10/24/74	1/15/76
Z	Ferroalloy Production Facilities	10/21/74	5/4/76
AA	Steel Plants	10/21/74	9/23/75
AAa	Steel Plants; Electric Arc Furnaces	8/17/83	10/31/84
BB	Kraft Pulp Mills	9/24/76	2/23/78
	- amended -	9/24/76	7/20/83
CC	Glass Manufacturing Plants	6/15/79	10/7/80
DD	Grain Elevators	8/3/78	8/3/78
EE	Industrial Surface Coating; Metal Furniture	11/28/80	10/29/82
FF	Stationary Internal Combustion Engines	7/23/79	
GG	Stationary Gas Turbines	10/3/77	7/31/84
HH	Lime Manufacturing Plants	9/2/82	4/26/84
II	Sodium Carbonate	(Withdrawn 9/22/81)	
JJ	Organic Solvent Cleaners	6/11/80	
KK	Lead-Acid Battery Manufacturing	1/14/80	4/16/82
LL	Metallic Minerals	8/24/82	2/21/84
MM	Auto & L-DT Surface Coating Operations	8/9/82	2/4/83
NN	Phosphate Rock Processing Plants	9/21/79	4/16/82
OO	Perchloroethylene Drycleaners	11/25/80	
PP	Ammonium Sulfate Manufacturing	2/4/80	11/12/80

LIST OF NSPS CATEGORIES

40 CFR 60 SUBPART	SOURCE CATEGORY	DATE PROPOSED	DATE FINALIZED
QQ	Graphic Arts Ind. Publication Rotogravure	2/4/80	11/8/82
RR	Pressure Sensitive Tape & Label Surface	10/28/80	10/18/83
SS	Industrial Surface Coating; Appliances	12/24/80	10/27/82
TT	Metal Coil Surface Coating	1/5/81	11/1/82
UU	Asphalt Processing & Asphalt Roofing Mfg.	5/26/81	8/6/82
VV	Fugitive Emission; Synthetic Organ. Chem.	1/5/81	10/18/83
WW	Beverage Can Surface Coating	11/26/80	8/25/83
XX	Bulk Gasoline Terminals	12/17/80	8/18/83
ZZ	Industrial Boilers		
AAA	Volatile Organic Liquid Storage	7/23/84	
BBB	Rubber Products Ind.; Tire Mfg.	1/20/83	9/15/87
CCC	Non-Fossil Fuel Fire Boilers		
DDD	Volatile Organic Compound Emissions from Polymer Mfg. Industry	9/30/87	
FFF	Flexible Vinyl & Urethane Coating & Printing	1/18/83	6/29/84
GGG	Refinery Fugitive Emissions	1/4/83	5/30/84
HHH	Synthetic Fibers Mfg.	11/23/82	4/5/84
III	Synthetic Organic Chemical Ind. Air Oxide	10/21/83	
JJJ	Petroleum Drycleaners	12/14/82	9/21/84
KKK	On-shore N.G. Process. Plts.; VOC Equip. Leaks	1/20/84	6/24/85
LLL	On-shore N.G. Process.; SO ₂ Emissions	1/20/84	10/1/85
NNN	Synthetic Organic Chem. Mfg. Distillation Op.	1/20/84	1/2/86
OOO	Non-metallic Mineral Processing Plts.	8/31/83	8/1/85
PPP	Wool Fiberglass Insulation Mfg. Plts.	2/7/84	2/25/85
QQQ	VOC Emissions from Petroleum Refinery Wastewater Systems	5/4/87	11/23/88
SSS	Magnetic Tape Manufacturing Industry	1/22/86	10/3/88
TTT	Surface Coating of Plastic Parts of Business Machines	1/8/86	1/29/87
UUU	Calciners and Dryers in Mineral Industries	4/23/86	
VVV	Polmeric Coating of Supporting Substrates Facilities	4/30/87	

Woodward-Clyde 
Engineering & sciences applied to the earth & its environment

September 2, 1997

Mr. David Ullrich
Acting Regional Administrator
United States Environmental Protection Agency - Region V
77 West Jackson Blvd.
Chicago, IL 60604

Subject: Request for Determination
40 CFR 60 Subpart Kb

Dear Mr. Ullrich:

We have been retained by a client to determine the applicability of 40 CFR 60 Subpart Kb to an existing facility located in USEPA's Region V. Therefore, in accordance with 40 CFR 60.5, we are requesting determinations on the following.

1) What is a "modification" under 40 CFR 60 Subpart Kb?

A storage tank whose capacity is at least 40 m³ was installed at a facility prior to July 23, 1984. The operator would like to change the volatile organic liquid (VOL) stored in the tank to another VOL with a higher maximum true vapor pressure.

- Does this change in the VOL constitute a modification thereby subjecting the tank to the requirements of 40 CFR 60 Subpart Kb?
- What if the new VOL to be stored in the tank has a similar or lower vapor pressure, but because of an increase in throughput, the change will result in increased emissions?
- What if the tank is covered under a state origin permit (i.e., not federally enforceable) that does not specify what VOL is stored and, furthermore, the change will not result in an exceedance of the emission limit established by that permit?

Because there are two definitions of "modification" in the regulations we seek clarification on the applicability and/or relation between the following subparts:

- 40 CFR 60.14(e)(4) states that the use of an alternative fuel or raw material shall not be considered a modification if, "prior to the date any standard under this subpart becomes applicable to that source type, as provided by § 60.1, the existing facility was designed to accommodate that alternative use." This citation further states that a

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Mr. David Ullrich
Acting Regional Administrator
September 2, 1997
Page 2

facility shall be considered to be designed to accommodate an alternative fuel or raw material if "that use could be accomplished under the facility's construction specifications as amended prior to the change." Typically, a storage tank only needs cleaned prior to storing an alternative VOL and no design changes are required.

- 40 CFR 60.2 defines a modification as "any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted."

2) Is Acetone considered a VOL with respect to 40 CFR Subparts A and Kb?

On June 7, 1995, EPA published a notice in the Federal Register (60 FR 31633) that excludes acetone from the definition of volatile organic compound (VOC). The definition of VOL, as found in 40 CFR 60.111b, is "...any organic liquid which can emit volatile organic compounds into the atmosphere except those VOL's that emit only those compounds which the Administrator has determined do not contribute appreciably to the formation of ozone. These compounds are identified in EPA statements on ozone abatement policy for SIP revisions (42 FR 35314, 44 FR 32042, 45 FR 32424, and 45 FR 48941)." Acetone is not included in any of these citations.

*3) Are blending tanks subject to 40 CFR Subparts A and Kb?

These tanks are essentially of the same design as a storage tank. They use submerged or bottom fill and conservation vents and may or may not be equipped with a mechanical agitator. They are used to blend various chemicals and solvents for customer specified formulations. If a blend tank does not have a mechanical agitator, the material is generally recirculated in order to mix it. The material usually remains in the blend tank for less than 24 hours.

- Does EPA consider blend tanks with a capacity of at least 40 m³ subject to 40 CFR 60 Subpart Kb?
 - Is the presence or absence of a mechanical agitator relevant with respect to 40 CFR 60 Subpart Kb applicability?
- 4) If a floating roof is added to an existing storage tank does the Agency require that the permittee subtract the volume occupied by the tank's floating roof for purposes of calculating its capacity?
- Specifically, if a storage tank has a usable capacity greater than or equal to 151 m³ without an internal floating roof, but the usable capacity drops below 151 m³ after the

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Mr. David Ullrich
Acting Regional Administrator
September 2, 1997
Page 3

installation of an internal floating roof, which capacity should be considered the design capacity for purposes of 40 CFR 60 Subpart Kb?

We are requesting written clarification on these issues. We would also appreciate receiving copies of or citations to guidance documents, interpretative memoranda and all other reference material which serve as the basis for USEPA's responses. Please respond to the undersigned at the address provided below:

Woodward-Clyde Consultants
8383 Greenway Blvd. Suite 200
Middleton, WI 53562

We appreciate your assistance in clarifying these issues. If you have any questions, please feel free to call me at (608) 836-5040.

Sincerely,



Daniel R. Guido
Project Scientist

DRG:rvg



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

OCT 17 1997

(AE-17J)

Daniel R. Guido, Project Scientist
Woodward-Clyde Consultants
8383 Breenway Boulevard, Suite 200
Middleton, Wisconsin 53562

Dear Mr. Guido:

This is in response to your letter of September 2, 1997, requesting several applicability determinations regarding the Standards of Performance for Volatile Organic Liquid (VOL) Storage Vessels codified under 40 C.F.R. Part 60, Subpart Kb. Specifically you asked the following questions:

• Does a change in VOL or an increase in throughput make an existing storage vessel subject to 40 C.F.R. Part 60, Subpart Kb?

A modification under the New Source Performance Standards (NSPS) is determined by the requirements set forth in 40 C.F.R. § 60.14(e). Under these requirements, switching to a higher vapor pressure VOL will not by itself be considered a modification if the existing storage vessel was designed to accommodate the higher vapor pressure VOL prior to July 23, 1984. That is to say, if the existing storage vessel can store the material without having to undergo any physical changes, the United States Environmental Protection Agency (U.S. EPA) would not view this new use as a modification. Also, based on § 60.14(e), the increase of throughput will not be considered a modification, even if it results in an increase emissions of VOCs, in those cases where the existing storage vessel was originally designed with the capability to handle the increase throughput.

• What if the existing storage vessel is covered by a state permit which does not specify what VOL can be stored and the change will not result in an exceedance of the emission limit established by the permit?

State permits do not provide shielding from the NSPS. Therefore, if an existing source undergoes reconstruction or modification after July 23, 1984, then the storage vessel will become subject to 40 C.F.R. part 60, Subpart Kb.

• Is acetone considered a VOL with respect to 40 C.F.R. Subparts A and Kb.

U.S. EPA, for the reasons outlined in your letter, agrees with your determination that acetone is not a VOL.

- * • Does U.S. EPA consider blending tanks with capacity of at least 40 m³ subject to 40 C.F.R. - Subpart Kb?

40 C.F.R. § 60.110b does not differentiate storage vessels based on use. A similar question was posed to U.S. EPA during the public comment period for the proposed rule. One commenter (comment enclosed) requested that production vessels having an intermediate function, not raw material or product storage, be exempted from the proposed standards. For the reasons explained in the response to the above comment, the final standards did not provide an exemption based on the use of the storage tank. Therefore, it is U.S. EPA's interpretation that a blending tank of at least 40 m³ is subject to 40 C.F.R. Part 60, Subpart Kb.

- * • Is the presence or absence of a mechanical agitator relevant with respect to 40 C.F.R. Part 60, Subpart Kb applicability?

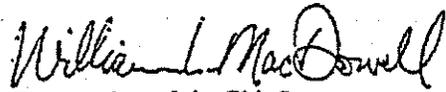
Pursuant to 40 C.F.R. § 60.110b, applicability is only based on the size of the storage vessels and the vapor pressure of the VOLs. It is U.S. EPA's interpretation that the presence of a mechanical agitator is only relevant when one considers the question of "modification". For example, if a product change requires blending, the installation of a mechanical agitator in the tank constitutes "physical change". Providing that there are emission increases associated with the product storage change, the tank will become subject to 40 C.F.R. Part 60 Subpart Kb because the tank is not considered capable of accommodating the alternative product without the installation of an agitator.

- If a storage tank has a usable capacity greater than or equal to 151 m³ without an internal floating roof, but the usable capacity drops below 151 m³ after the installation of an internal floating roof, which capacity should be considered the design capacity for purposes of 40 C.F.R. Part 60 Subpart Kb?

It is U.S. EPA's interpretation that for the purpose of 40 C.F.R. Part 60, Subpart Kb the design capacity of the tank described above, is the design capacity of the tank prior to the installation of the internal floating roof. 40 C.F.R. 60 §§60.110b(a), (b) and (c) identify "design capacity" and not "usable capacity" of the storage vessel to be the key parameter for considering applicability. Even though "design capacity" is not defined under 40 C.F.R. Part 60 Subpart Kb, it is U.S. EPA's interpretation that the "design capacity" is the nominal figure or nominal rating given to the storage vessel by the tank manufacturer. For example, if a brochure stated that a tank has a nominal capacity of 151 m³, for purposes of "design capacity" the tank would be considered a 151 m³ tank. Upon modification, if there is an increase in the emission rate of VOCs to the atmosphere, such a tank becomes subject to the control requirements of 40 C.F.R. § 60.112b. The volume occupied by the internal floating roof (needed to comply with 40 C.F.R. § 60.112b) can not be subtracted to bring the tank below the threshold of 40 C.F.R. Part 60, Subpart Kb.

If you have any questions regarding this determination, please call Spiros Bourgikos, of my staff, at (312) 836-6862.

Sincerely yours,

for 
George Czerniak, Chief
Air Enforcement and Compliance Assurance Branch

Enclosure

K6

VOLATILE ORGANIC LIQUID STORAGE VESSELS
(Including Petroleum Liquid Storage Vessels)

BACKGROUND INFORMATION FOR
PROMULGATED STANDARDS OF PERFORMANCE

Emission Standards and Engineering Division

U. S. Environmental Protection Agency
Office of Air and Radiation
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

JANUARY 1985

9. Trichlorotrifluoroethane;
10. Dichlorotetrafluoroethane; and
11. Chloropentafluoroethane.

Because these compounds do not significantly contribute to the formation of ozone, the Agency agrees that the control of vessels storing these compounds would not reduce ambient ozone levels and has, therefore, exempted vessels that store only these compounds from the final rule. Because this list of compounds will change from time to time as research continues, no list of exempt compounds is included in the final rule. Rather the approach that has been taken is to exempt each compound that has previously been declared negligibly photochemically reactive in previous Federal Register notices.

Regarding the request that a list of VOL's and/or VOC's be provided as part of the final standard, it should be noted that it is the Agency's position that all organic compounds are photochemically reactive and, therefore, potentially subject to this NSPS, until such time as they are declared negligibly photochemically reactive. In essence, the commenters are requesting that a list of all organic compounds except those determined to be negligibly photochemically reactive be provided as part of the final standards. The Agency sees no reason to add such a list to the final standards and feels that the provisions determining applicability of the NSPS are adequate without it. Therefore, no such list has been incorporated into the final rule.

~~Comment: One commenter (IV-D-23) requested that production and process vessels having an intermediate function, not raw material or product storage, be exempted from the proposed standards. The commenter said that estimates of working losses for these vessels were incorrectly based on "total throughput." The commenter said that "net throughput" is a more realistic measure of turnovers. The commenter stated that the control technology may not be cost effective for production and process vessels. The commenter recommended that EPA reevaluate the standards using net throughput.~~

Comment: One commenter (IV-D-23) requested that production and process vessels having an intermediate function, not raw material or product storage, be exempted from the proposed standards. The commenter said that estimates of working losses for these vessels were incorrectly based on "total throughput." The commenter said that "net throughput" is a more realistic measure of turnovers. The commenter stated that the control technology may not be cost effective for production and process vessels. The commenter recommended that EPA reevaluate the standards using net throughput.

Response: The EPA agrees that total throughput (tank volume divided into annual liquid throughput) may not accurately reflect the actual

change in liquid level (net throughput), which is an underlying mechanism of working losses. The commenter provides an example of a 75 m³ tank that would undergo 689 turnovers per year as measured by total throughput, but only 87 turnovers per year as measured by net throughput. For the specific tank cited by the commenter, working losses would be 10.5 Mg/yr as calculated with total throughput versus 3.2 Mg/yr as calculated with net throughput.

In evaluating this issue, the EPA first examined the cost effectiveness of controlling the sample tank cited by the commenter. Because the commenter did not fully specify the necessary tank parameters, the emission reduction obtained by BDT controls was evaluated for working losses, based on net throughput, and was assumed to be 90 percent. To be conservative, a welded steel deck with Teflon[®], liquid-mounted, primary seals was costed as the control technology. Tank diameter was assumed to be 4.5 m (15 ft) and product value was assumed to be \$360/Mg. The calculated cost effectiveness for controlling this tank is about \$930/Mg. In the case cited by the commenter, the cost effectiveness of controls is still reasonable even though the use of net throughput reduces estimated working losses to 30 percent of the losses based on total throughput.

In previous studies by the EPA, model plants were developed for storage associated with selected chemical process. Some of these models contain "constant level" tanks (tanks with high total throughputs but low net throughputs). These tanks were evaluated for control, and the results are presented in Table 2-7. The average cost effectiveness was found to be \$354/Mg. Although there are instances where the cost effectiveness value is very high, the average cost effectiveness of controlling constant level tanks is reasonable. These costs are also representative of production and process tanks that are operated typically as constant level tanks. Therefore, the final standards do not provide an exemption for constant level tanks.

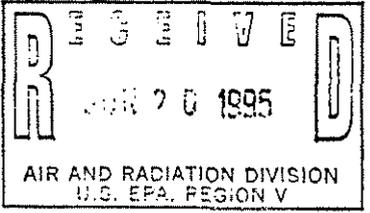
Misty

Route copy to Misty, Jim, and ~~Frank~~
CC to DO, LAM Service
(N1463)

NSR STAFF
CC, DO, & LAM

JUL 05 1995

S/C Directors,



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 16 1995

*RETURN
ORIGINAL
HARRIS*

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. William Deutschlander
ASTT Corp.
7 Solar Drive
New Providence, PA 17560

Dear Mr. Deutschlander,

This is in response to your letter of April 6, 1995, in which you requested clarification of the New Source Performance Standards, 40 C.F.R. Part 60 Subpart Kb, for a mechanical shoe primary seal. You indicate there are other types of mechanical shoe primary seals currently in use that are not continuous, but overlapping. In addition, you have found vertical shoe heights as short as fifteen (15) inches in newly installed seals.

In order to respond to your question, my staff reviewed: 40 C.F.R., Part 60, Subpart Kb; the Federal Register notices involving Subpart Kb; engineering information regarding overlapping mechanical shoe seals sent to the Environmental Protection Agency (EPA) at Research Triangle Park, North Carolina; the Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)-Background Information for Promulgated Standards Document; and information from the tests EPA relied upon when it developed this rule.

To answer your first question regarding overlapping mechanical shoe primary seals, 40 CFR 60.112b(a)(1)(ii)(C) states in pertinent part, "A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof." (Emphasis added.) The first emphasized phrase, "a metal sheet", means the mechanical shoe primary seal must consist of a single (one-piece) sheet of metal. The second emphasized word, "is", reinforces the point that the mechanical shoe primary seal is composed of a single metal sheet. Additional support for this reasoning originates from the test results used by EPA, which

were derived from a mechanical shoe seal that was comprised of a single metal sheet. Since an overlapping mechanical shoe seal system is not a single sheet of metal, but, instead, is comprised of several sheets of metal, it does not meet the requirements of 40 CFR 60.112b(a)(1)(ii)(C).

This determination does not preclude the use of alternative mechanical primary shoe seals. The Agency encourages innovation. There is, however, a formal process of review and evaluation that is described at 40 CFR §60.114a. In brief, the person who desires to establish an alternative means of emission limitation that will achieve, at minimum, the emission reduction required under 40 CFR 60.112a, must file an application with the EPA Administrator containing:

- (a) an actual emissions test that uses a full-sized or scale model storage vessel, that accurately collects and measures all VOC emissions from a given control device, and that accurately simulates wind and accounts for other emission variables, such as temperature and barometric pressure; and
- (b) an engineering evaluation that the EPA Administrator determines is an accurate method of determining equivalence.

With respect to the vertical shoe height issue, according to 40 CFR §60.113b(b)(4)(i)(A), one end of the mechanical shoe seal must extend into the stored liquid, and the other end must extend a minimum vertical distance of 61 cm (approximately 24 inches) above the stored liquid surface. A mechanical shoe seal that is less than 61 cm in vertical distance above the liquid surface is not in compliance with the New Source Performance Standards, Subpart Kb.

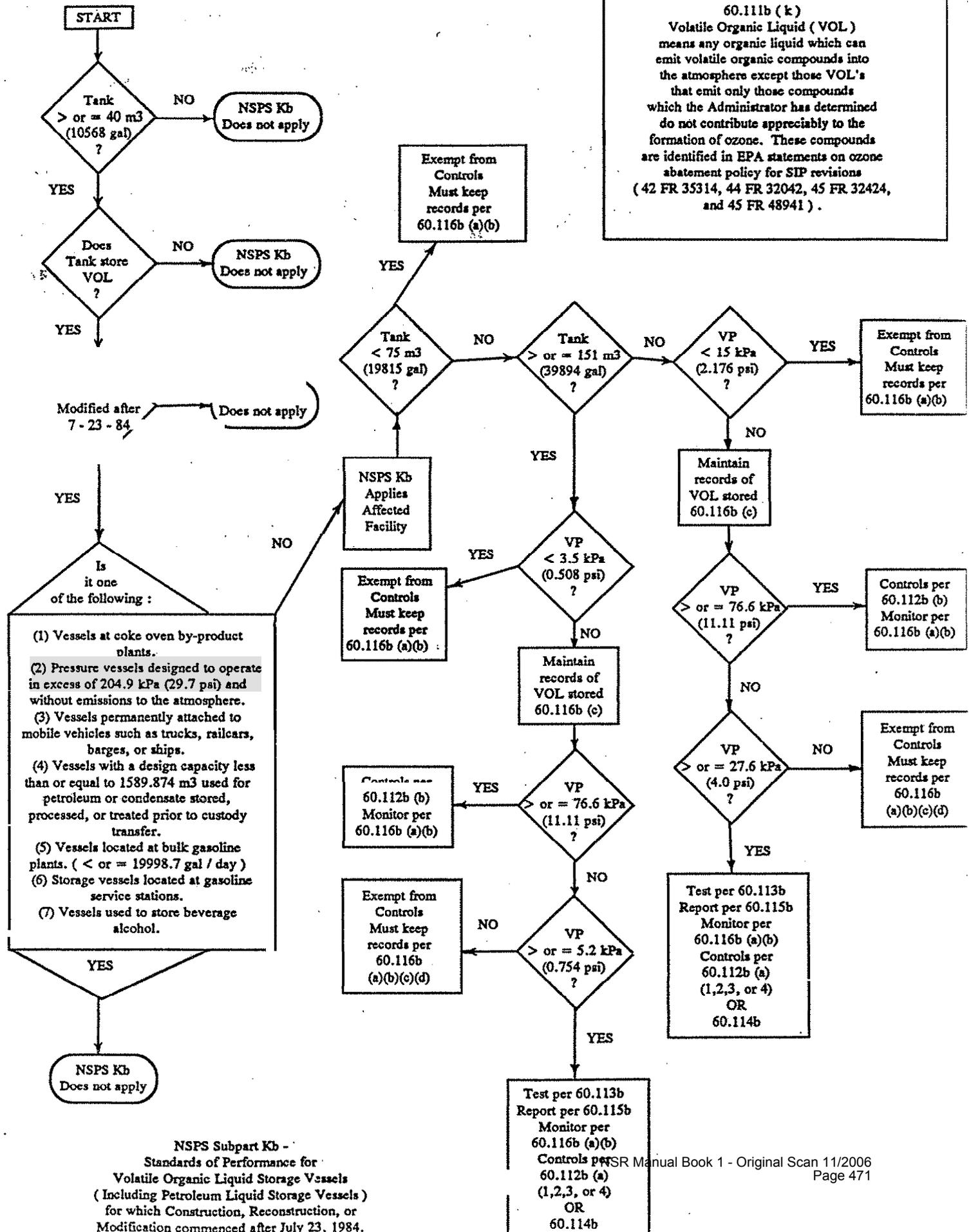
I trust this letter answers your concerns. If you have further questions, please contact Everett Bishop of my staff at 202-564-7032.

Sincerely,



John B. Rasnic, Director
Manufacturing, Energy and Transportation Division
Office of Compliance

bcc: Leslye M. Fraser, OGC
Kathie Stein, ORE/AED
Bruce Jordan, ESD, OAQPS
Susan Studlien, Acting Director, Air, Pesticides and Toxic
Management Division, Region I
Conrad Simon, Director, Air and Waste Management Division,
Region II
Elaine B. Wright, Director, Air, Radiation and Toxics
Division, Region III
Winston Smith, Director, Air, Pesticides and Toxic
Management Division, Region IV
David Kee, Director, Air and Radiation Division, Region V
Samuel J. Coleman, Director, Air, Pesticides and Toxics
Division, Region VI
William Spratlin, Director, Air and Toxics Division,
Region VII
Patricia Hull, Director, Air and Toxics Division,
Region VIII
David Howekemp, Director, Air and Toxics Division, Region IX
Philip G. Millam, Acting Director, Air and Toxics Division,
Region X



INTER-OFFICE COMMUNICATION

TO: Harold Strohmeier, NOVAA

DATE: 8/24/95

FROM: ^{TLH}Tammy Hilkins, DAPC

SUBJECT: NSPS Subpart GG fuel sampling & testing requirements.

I have checked again with both Region 5 and headquarters regarding your questions on Subpart GG. I tried to summarize each issue and USEPA's response below. If I missed anything, or if you have more questions, please don't hesitate to call.

ISSUE 1: CAN A FACILITY TEST AT ONLY ONE LOAD?

Yes, if a certified NO_x continuous emissions monitoring system (CEMS) is installed and certified as a permit requirement. Otherwise, section 60.335(a)(2) requires emission units subject to Subpart GG to test at 4 loads (30, 50, 75, & 100%) to demonstrate compliance with the standard for NO_x (Section 60.332.) Texas Eastern Gas Pipeline Company argued that "since the load on the turbine is dictated by natural gas demand, we will not have the flexibility to vary the load." USEPA contends that unless the emission unit is equipped with CEMS for NO_x, the entity must demonstrate compliance with section 60.332 by testing at the 4 loads. The demonstration does not just apply to sites with "wet" controls, but to all turbines to determine whether or not the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the NSPS, permit to install and applicable BAT requirements (180 ppm, 32.8lb./hr & 143.7 tons/yr allowable emission limitations) under the various load scenarios. To obtain a waiver for conducting the tests at the 4 loads, USEPA stated that the entity must apply for and obtain the waiver from USEPA prior to construction of the emission unit. They will not entertain a waiver request after its already up and running. USEPA indicated that if Ohio EPA proposed in a permit, language that can be considered legally enforceable (draft PTI) that made it clear what operating restrictions would be necessary to ensure that the emission unit does not operate at loads other than those tested during the performance testing and provide the justification for testing at less than the 4 load points, Region 5 and Headquarters would review the technical support justifying any relaxation from testing at 4 load points and make a determination on a case-by-case basis again, prior to the construction of a site. USEPA would also determine whether or not such site specific waivers require a SIP revision.

Ohio EPA does not have the authority to waive this requirement without the installation and certification of a NO_x CEMS.

ISSUE 2: CAN OEPA WAIVE THE FUEL SAMPLING AND ANALYSES REQUIREMENT FOR UNITS UTILIZING PIPELINE QUALITY NATURAL GAS?

No. Section 60.334(a)(2) requires the owner or operator to sample and analyze the sulfur and nitrogen content of the fuel being fired to the turbine on a daily basis. The NSPS does not waive the requirement for emission units utilizing pipeline quality natural gas but does allow Ohio EPA to approve custom schedules once the owner/operator submits enough daily sample results to substantiate the reasonableness of a less frequent sampling requirement. No custom schedules have been approved by USEPA with less than 6 months of daily analyses, in fact the USEPA policy memo regarding waiver requests for pipeline quality natural gas users require a years' worth of operating data to justify going to a once a month sampling frequency. Depending on how often the turbine operates, it could take more than a year to gather enough data to statistically support a request for a custom schedule.

However, Ohio EPA can grant an alternative to the daily sampling requirement for nitrogen if the facility utilizes a NO_x CEMS because a continuous measurement is more stringent than a daily sampling requirement. Reports required under section 60.334(c) would be based on the CEMS, rather than the daily sampling and analyses.

Ohio EPA cannot approve an alternative for daily sampling for sulfur based on CEMS because USEPA does not allow SO₂ CEMS to be used on pipeline quality natural gas (too low of a SO₂ ppm to measure accurately.) USEPA would recommend that the owner/operator submit a request to Ohio EPA for approval of a custom schedule. Once enough daily sampling has been conducted, the owner can provide the data to support its request and Ohio EPA can then justify a less frequent sampling basis, but cannot eliminate the fuel sampling, analyses and reporting requirements.

CONCLUSION:

The Texas Eastern Gas Pipeline Company violated the conditions of the PTI (#17-726) by failing to conduct emissions testing, monitoring, recordkeeping and reporting as required by the NSPS Subpart GG, permits to install at the Lewisville, Ohio station. If, as a company, they have not performed the daily nitrogen and sulfur sampling and analyses required by the NSPS, then they are also in violation of the permit to operate emission unit B002 at the Switzer, Ohio facility. The failure to conduct the daily sampling and reporting for the nitrogen and sulfur content has apparently been ongoing for the last several years. I suggest that NOVAA issue a notice of violation and ask for a compliance plan and schedule. NOVAA can then make recommendations to Ohio EPA for any follow-up in an enforcement action request. To avoid this situation in future permits, it may be prudent to spell out the specific NSPS testing, sampling and reporting requirements as part of the special terms and conditions so that the company knows what the requirements are by reading the permit, without having to look it up in the CFR.

cc: Tom Kalman, DAPC
Bruce Weinberg, DAPC
Don Cavote, CDO
Misty Parsons, DAPC

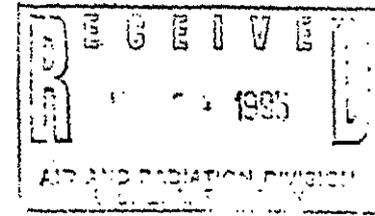
Mike Hopkins, DAPC
Julianne Kurdila, Legal
Ron Hancher, SEDO
Harry Sweitering, HAMCO



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

cc: J. BROWN
A. PARSONS
A. LLOYD
AIR QUALITY DIVISION
UNIT SUPERVISOR

KINNAN →
AUG 23 1995
MIKE A
S/C DIRECTOR



JUL 19 1995

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Nasir Ghani
Environmental Scientist
Tenneco Gas
1010 Milam Street
P.O. Box 2511
Houston, Texas 77252-2511

SUBJECT: Tenneco Gas, Request for Approval of a Custom Fuel
Monitoring Plan for Sulfur

Dear Mr. Ghani:

This is in response to your letter of June 2, 1995, requesting approval of a system-wide custom fuel sulfur monitoring plan for your natural gas transmission system. The Tenneco transmission system is a pipe line that transports natural gas from the Texas and Louisiana Gulf Coast to the Northeastern United States. The pipe line operates in six Environmental Protection Agency (EPA) Regions (I, II, III, IV, V, and VI) and within twelve (12) states within these Regions. According to your letter, the natural gas being transported typically has a sulfur content in the order of 0.02 to 0.002 % by weight. Many of the compressor engines located along the pipe line are subject to New Source Performance Standards (NSPS) in 40 CFR 60, Subpart GG. This Subpart requires the owner/operators of gas turbines to monitor the fuel sulfur and nitrogen content on a daily basis and to use an approved ASTM method.

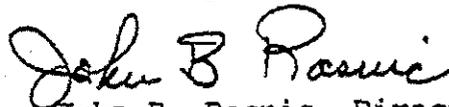
The NSPS for Stationary Gas Turbine allows for custom fuel monitoring plans for sulfur and nitrogen content as an alternative to daily monitoring. In order to minimize the burden and duplication of sampling the fuel sulfur content from turbines burning natural gas along the pipe line, you proposed an alternative monitoring plan that reduces the sampling frequency from daily to semi-annually in five locations. Tenneco has been waived from fuel bound nitrogen monitoring because of the low nitrogen content in pipe line quality natural gas.

We have reviewed a similar proposal with several of the Regions that are effected by the pipe line, and determined that your alternative monitoring plan as proposed is approved under the following condition:

The custom schedule for monitoring sulfur in the natural gas shall be based on guidelines contained in the August 14, 1987, memo that requires monitoring frequency to be no less stringent than two monthly samples for six months, followed by quarterly sampling, then semiannually. Before semiannual monitoring can be initiated, at least six months of data from twice monthly and quarterly monitoring must demonstrate little variability in sulfur content and compliance with \$60.333 for each monitoring event. The sulfur monitoring schedule and guidelines are outlined in the enclosure of the August 14 memo. (Enclosure).

If you have any questions concerning this matter, you can contact Ted Coopwood of my staff at (202) 564-7058.

Sincerely,



John B. Rasnic, Director
Manufacturing, Energy and Transportation Division
Office of Compliance

Enclosure

cc: Mirza P, Baig, Region IV
Jim Hagedorn, Region III
Jonathan E. York (6T-EC)
Zofia Kosim, ORE, AED
Terry Harrison, OAQPS (RTP)
Linda Murphy, Region I
Kenneth Eng, Region II
David Kee, Region V



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 1987

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Authority for Approval of Custom Fuel Monitoring Schedules Under NSPS Subpart GG

FROM: John B. Rasnic, Chief *John B Rasnic*
Compliance Monitoring Branch

TO: Air Compliance Branch Chiefs
Regions II, III, IV, V, VI and IX

Air Programs Branch Chiefs
Regions I-X

The NSPS for Stationary Gas Turbines (Subpart GG) at 40 CFR 60.334(b)(2) allows for the development of custom fuel monitoring schedules as an alternative to daily monitoring of the sulfur and nitrogen content of fuel fired in the turbines. Regional Offices have been forwarding custom fuel monitoring schedules to the Stationary Source Compliance Division (SSCD) for consideration since it was understood that authority for approval of these schedules was not delegated to the Regions. However, in consultation with the Emission Standards and Engineering Division, it has been determined that the Regional Offices do have the authority to approve Subpart GG custom fuel monitoring schedules. Therefore it is no longer necessary to forward these requests to Headquarters for approval.

Over the past few years, SSCD has issued over twenty custom schedules for sources using pipeline quality natural gas. In order to maintain national consistency, we recommend that any schedules Regional Offices issue for natural gas be no less stringent than the following: sulfur monitoring should

be bimonthly, followed by quarterly, then semiannual, given at least six months of data demonstrating little variability in sulfur content and compliance with §60.333 at each monitoring frequency; nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen and since the free nitrogen does not contribute appreciably to NO_x emissions. Please see the attached sample custom schedule for details.

Given the increasing trend in the use of pipeline quality natural gas, we are investigating the possibility of amending Subpart GG to allow for less frequent sulfur monitoring and a waiver of nitrogen monitoring requirements where natural gas is used.

Where sources using oil request custom fuel monitoring schedules, Regional Offices are encouraged to contact SSCD for consultation on the appropriate fuel monitoring schedule. However, Regions are not required to send the request itself to SSCD for approval.

If you have any questions, please contact Sally M. Farrell at FTS 382-2875.

Attachment

cc: John Crenshaw
George Walsh
Robert Ajax
Earl Salo

Enclosure

Conditions for Custom Fuel Sampling Schedule for Stationary Gas Turbines

1. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.
2. Sulfur Monitoring
 - a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2).
 - b. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
 - c. If after the monitoring required in item 2(b) above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.
 - d. Should any sulfur analysis as required in items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the State Air Control Board of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator must notify the State of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

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CANTON HEALTH DEPT.

FAX NO. 3304893335

P. 02



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGIONS
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 17 1998

REPLY TO THE ATTENTION OF:
(AE-17J)

Tracy Mills, Superintendent
City of Canton Water Pollution Control Center
3530 Central Avenue, Southeast
Canton, Ohio 44707

Dear Mr. Mills:

The United States Environmental Protection Agency (U.S. EPA) received your February 27, 1997, request for a waiver from certain reporting requirements in the new source performance standard (NSPS) for sewage sludge incinerators, 40 C.F.R. 60, Subpart O. The U.S. EPA has evaluated this request based upon information provided in letters from you or your consultant. The U.S. EPA has also gathered additional information through telephone conferences with you, the Canton Division of Air Pollution Control, and the Office of Enforcement and Compliance Assurance in the U.S. EPA Headquarters.

Before addressing the waiver request, the U.S. EPA must first address the applicability of the sewage sludge incinerator NSPS to the Canton WPCC's incinerators. In summary, the U.S. EPA has determined that the rehabilitation project did meet the definition of a modification, and the sewage sludge incinerators at the Canton WPCC are now subject to 40 C.F.R. 60, Subpart O. Because the authority to waive or modify reporting requirements under Section 111 of the Clean Air Act, 42 U.S.C. § 7411, has not been delegated to the Region 5 Administrator of the U.S. EPA, we have requested that the appropriate U.S. EPA Headquarters office issue a decision on whether a reporting requirement promulgated under Section 111 can be waived and, if so, on whether to grant or deny the Canton WPCC's request.

Applicability of the Sewage Sludge Incinerator NSPS

Prior to June 1973, the Canton WPCC constructed two multiple hearth sewage sludge incinerators. Each incinerator had the capacity to combust 1600 tons of sewage sludge per day. On June 11, 1973, the U.S. EPA proposed a NSPS for sewage sludge incinerators, and promulgated it on March 8, 1974. This NSPS applies to each incinerator that combusts wastes containing more than 10 percent sewage sludge (dry basis) produced by municipal sewage treatment plants, or each incinerator that charges more

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than 1000 kilograms per day municipal sewage sludge (dry basis). This NSPS applies to any facility constructed or modified after June 11, 1973. Between January 1995 and April 1997, the City of Canton conducted a rehabilitation project at the Canton WPC which, among other things, increased the production rate capacity to 2100 tons per unit per day. The capital cost for the rehabilitation project was \$2,890,084.53.

Pursuant to 40 C.F.R. § 60.14(a) provides that any physical or operational change to an existing facility, except as provided under paragraphs (e) and (f) of § 60.14, which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered to be a modification within the meaning of Section 111 of the Clean Air Act, 42 U.S.C. § 7411. Further, upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere. Pursuant to 40 C.F.R. § 60.14(e)(2), an increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility, shall not, by itself, be considered a modification. In other words, if the production rate increase results from a capital expenditure, then the production rate increase can by itself be considered to be a modification. Capital expenditure is defined in 40 C.F.R. § 60.2 to mean an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset repair allowance percentage" specified in the latest edition of the Internal Revenue Service Publication 534 and the existing facility's basis (i.e., the cost of the original facility).

The annual asset repair allowance percentage for water utilities is 1.5 percent. During a February 25, 1998, conversation with Charles Hall, of my staff, you reported that the solids handling contract, including the sewage sludge incinerators, for the pre-rehabilitation existing facility was \$4,302,292. The product of these two numbers is \$64,534.38. Because the production rate increase resulted from a capital expenditure which exceeded the product of the annual asset repair allowance percentage and the existing facility basis, the rehabilitation project is considered to be a modification. Therefore, the U.S. EPA concludes that the rehabilitation project constituted a modification of the existing facility, and the sewage sludge incinerators at the Canton WPC are subject to NSPS, Subpart O.

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Waiver Request

The Region 5 office of the U.S. EPA has requested the assistance of the Office of Enforcement and Compliance Assistance (OECA) to determine whether a reporting requirement promulgated under Section 111 can be waived and, if so, whether to grant or deny the Canton WPC's request. This office will forward OECA's decision to you.

If you have any questions regarding the applicability determination, please call Charles Hall, of my staff, at (312) 353-3443.

Sincerely yours,



David Kee, Director
Air and Radiation Division

**CANTON CITY HEALTH DEPARTMENT
 DIVISION OF AIR POLLUTION CONTROL
 420 MARKET AVENUE NORTH
 CANTON, OHIO 44702
 PHONE: (330) 489 - 3385
 FAX: (330) 489 - 3335**

FACSIMILE TRANSMITTAL

DATE: May 12, 1998

FOR THE ATTENTION OF: Misty Parsons

FIRM: Ohio EPA, DAPC, AQM&P

FAX NUMBER: 614 - 644 - 3681

REGARDING: Water Pollution Control Center

FROM: Jim Braun

This transmission consists of 4 pages including this page.

Please notify us at (330) 489 - 3385 if you do not receive all the pages.

COMMENTS:

Ohio EPA
Division of Air Pollution Control

inter-office communication

to: (See distribution list.)
from: ^{Tim} Tim Fischer through ^{Tom} Tom Kalman and Jim Orlemann, Manager, Engineering Section
subject: Guidance regarding aggregate processing plants
date: July 9, 1999

The purpose of this IOC is to give guidance regarding emission calculations for storage piles and the permitting of aggregate processing plants in response to a request made during a permitting conference call on January 21, 1999. This guidance is being sent to each Ohio EPA DO/LAA that handles permitting issues because there is applicability on a State-wide basis.

It was asked that portable crushing and screening processes receive individual facility IDs (premise numbers) in order to aid in tracking these units during relocation from site to site, and conveyors be permitted under a common emission unit ID covering material handling but individually identified with inventory control numbers (these could be numbers used by the company to identify units for tracking purposes).

It is Ohio EPA's policy that portable plants should have permits prepared by the Ohio EPA DO/LAA where the home office is located. If the office is out of State, the Ohio EPA DO/LAA where the first operation begins pursuant to a PTI should prepare the permit. Each of these permits should identify all equipment (by company ID) covered by it. Alternatively, each Ohio EPA DO/LAA could assign its own ID codes for each piece of equipment (i.e., each conveyor, crusher, screen, etc.) if the company does not provide an adequate ID system.

If a company wishes to relocate a piece of equipment from one processing line to another processing line at a different site, a Notice of Intent To Relocate form should be submitted to the office where the current permits are filed (see Engineering Guide #44). A new Permit to Install ("PTI") would not be necessary as long as the source meets all the requirements of Ohio Administrative Code ("OAC") Rule 3745-31-03(A)(1)(p) concerning portable sources. In this case, the source and its ID would be added to the permit which covers the other sources in the current processing line. Likewise, it would be removed from the permit covering the sources in the former processing line. The Ohio EPA DO/LAA would have to determine any effect the relocation would have with respect to NSPS Subpart OOO or PTI rules. Any approach using individual facility ID (premise number) or individual emission unit ID numbers for each piece of equipment would make permitting too cumbersome and costly for Ohio EPA and the regulated community.

The purpose of the following section is to provide guidance regarding the calculation of emissions from storage piles. This should help to ensure consistency on a state-wide basis.

The following are examples which may be used as guides in calculating storage pile emissions. These examples are provided in response to a request made during the previously-mentioned conference call. The method used for calculating emissions due to wind erosion, as with all other storage pile emissions, should be taken from the most recent supplement to Compilation of Air Pollutant Emission Factors, AP-42 document ("AP-42"). However, it is understood that the AP-42 method for wind erosion potential is extremely cumbersome. Therefore, an alternate method is also given for use if lack of data or time constraints are a problem.

Calculation of tsp emissions from load-in for agricultural limestone storage piles.

Method used is from AP-42, section 13.2.4 "Aggregate Handling and Storage Piles." (1/95 ed.)

$$E = k(0.0032) \frac{U^{1.3}}{\frac{M^{1.4}}{2}} \quad (\text{pound [lb]/ton})$$

where:

- E = emission factor,
- k = particle size multiplier (dimensionless),
- U = mean wind speed (mph), and
- M = material moisture content (%).

For this example:

- k = 0.74 (assumed < 30 μm, from 13.2.4-3),
- U = 8.7 mph (Columbus, OH from storage pile permit app.), and
- M = 2.1 % (from Table 13.2.4-1).

$$E = 0.74(.0032) \frac{8.7^{1.3}}{\frac{2.1^{1.4}}{2}} = 0.0045 \text{ lb tsp/ton}$$

This emission factor is used along with production data to determine hourly, daily, or annual emissions. For example, if a plant produces 1000 TPH on a 8/5/50 (hours/days/weeks) schedule, the tsp emissions would be calculated as:

$$\begin{aligned} \text{hourly} &= 1000 \text{ TPH} * 0.0045 = 4.5 \text{ lbs/hr} \\ \text{daily} &= 4.5 \text{ lbs/hr} * 8 \text{ hrs.} = 36 \text{ lbs/day} \\ \text{annually} &= 36 \text{ lbs/day} * 250 \text{ days/year} = 4.5 \text{ TPY} \end{aligned}$$

Calculation of tsp emissions from wind erosion for agricultural limestone storage piles.

Method used is from AP-42, section 13.2.5 Industrial Wind Erosion. (1/95 ed.)

1. Determine threshold friction velocities for the material.

Threshold friction velocity of a material is the velocity that wind must achieve in order to cause a particle of the material to become airborne. The threshold friction velocity for a given material should be obtained through a field sieve test. The field test is used to determine the mode in the aggregate size distribution as explained in AP-42, page 13.2.5-4. (All references to AP-42 are to the 5th Edition.) From this, the threshold friction velocity can be determined from Table 13.2.5-1. In the absence of field data, Table 13.2.5-2 should be used per conversations with USEPA Region V.

Although this latter table lists materials related to the coal industry only, most aggregate materials are very similar to those in the table. For example, assume crushed limestone to be very similar to scoria (roadbed material) and use the correlating velocity. For this example, the threshold friction velocity for fine coal dust should be used in place of agricultural lime. The fact that it indicates that the dust is on a concrete pad can be ignored as this factor can be used for storage piles also, per Mary Ann Grelinger of Midwest Research Institute ("MRI").

2. Divide the exposed area into subareas of constant frequency of disturbance.

For this example assume the entire pile is disturbed daily, corresponding to a value of $N = 365$ (the aggregate is normally dropped onto the pile inhibiting most or all of the surface from forming a natural crust; thus, it is disturbed daily). Because of this, every day of the month will be examined when determining monthly erosion potentials. By comparison if the pile is disturbed every three days, then each month would be separated into three-day periods in which the highest wind values for each period would be examined.

3. Tabulate fastest mile values for each frequency of disturbance and correct them to an anemometer height of 10 m. Then convert fastest mile values to equivalent friction velocities, taking into account the nonuniform wind exposure of elevated surfaces.

Fastest mile values are no longer readily available. However, two-minute wind velocities can be used in their place because the average difference between the two is insignificant (per USEPA, Mary Ann Grelinger of MRI, and Bill Spires of this office). The attached Local Climatic Data ("LCD") table is an example of this data. Bill Spires can provide copies of the two-minute wind velocities for a given time period and location. Calculations are shown in the following table (column descriptions follow):

Table 1: Calculation of Friction Velocities

Day	2 minute value	2 minute value	2 minute value	U* = 0.1*(Us/Ur)*(2 min. value)		
	in mph (7m)	in mph (10m)	in m/s (10m)	Us/Ur=0.2	0.6	0.9
1	29	30	13.4	0.27	0.80	1.21
2	23	24	10.6	0.21	0.64	0.96
3	25	26	11.6	0.23	0.69	1.04
4	14	15	6.5	0.13	0.39	0.58
5	20	21	9.2	0.18	0.55	0.83
6	18	19	8.3	0.17	0.50	0.75
7	13	14	6.0	0.12	0.36	0.54
8	18	19	8.3	0.17	0.50	0.75
9	25	26	11.6	0.23	0.69	1.04
10	29	30	13.4	0.27	0.80	1.21
11	14	15	6.5	0.13	0.39	0.58
12	15	16	6.9	0.14	0.42	0.62
13	25	26	11.6	0.23	0.69	1.04
14	16	17	7.4	0.15	0.44	0.67
15	14	15	6.5	0.13	0.39	0.58
16	15	16	6.9	0.14	0.42	0.62
17	15	16	6.9	0.14	0.42	0.62
18	16	17	7.4	0.15	0.44	0.67
19	13	14	6.0	0.12	0.36	0.54
20	14	15	6.5	0.13	0.39	0.58
21	16	17	7.4	0.15	0.44	0.67
22	14	15	6.5	0.13	0.39	0.58
23	18	19	8.3	0.17	0.50	0.75
24	15	16	6.9	0.14	0.42	0.62
25	16	17	7.4	0.15	0.44	0.67
26	11	12	5.1	0.10	0.30	0.46
27	13	14	6.0	0.12	0.36	0.54
28	8	8	3.7	0.07	0.22	0.33
29	23	24	10.6	0.21	0.64	0.96
30	17	18	7.9	0.16	0.47	0.71
31	10	11	4.6	0.09	0.28	0.42

First and second columns: The first and second column data was obtained from the attached Local Climatological Data for Akron-Canton Airport.

Third column: Anemometer heights and meteorological assignments are listed in Engineering Guide #69. Because the two-minute velocity data was obtained from an anemometer that is 7 m above the ground, the following equation was used to convert to 10 m above the ground in the third column. (A conversion is necessary because the wind velocity changes as the height of the wind changes.)

$$U(10) = U(7) * [\ln(10/0.005) / \ln(N/0.005)]$$

where $N = 7$,

U = two-minute wind velocity (The roughness height is assumed to be 0.005 m.)

Fourth column: Conversion of two-minute wind velocities from mph to m/s.

Fifth, sixth, and seventh columns: Calculations of friction velocities at each standard U_s/U_r ¹ ratio using:

$$U^* = 0.1 * (U_s/U_r) * (\text{two-minute wind velocity})$$

¹(U_s/U_r = ratio of surface wind speed to approach wind speed. U_s/U_r ratios are specific to particular pile types and are listed in AP-42, section 13.2.5)

4. Calculate the erosion potential for each period between disturbance, treating each area of same U_s/U_r ratio as a separate source. Multiply the resulting emission factor by the size of each area and add the emissions that each area contributes.

The characteristics of the storage pile in this example are assumed to be similar to those of Pile A in AP-42, page 13.2.5-6. Table 13.2.5-3 provides percentages of pile surface area correlating to each U_s/U_r ratio. The threshold friction velocity for agricultural limestone is 0.54 m/s from Table 13.2.5-2. Because the friction velocity calculated for $U_s/U_r = 0.2$ never reaches 0.54, there will be no potential for erosion from this portion of the surface area. The calculations for erosion potential for the other portions of the surface area of the pile are provided in the following tables (column descriptions follow):

Table 2. Calculation of erosion potential for $U_s/U_r = 0.6$ for the month of January

Day	U^* (m/s)	U_t	$U^* - U_t$	P (g/m ²)	Area (m ²)	Erosion Pot. in g ($k \cdot P \cdot A$)
1	0.8	0.54	0.26	10.42	389.3	4056.51
2	0.64	0.54	0.1	3.08	389.3	1199.04
3	0.69	0.54	0.15	5.06	389.3	1969.86
5	0.55	0.54	0.01	0.26	389.3	101.22
9	0.69	0.54	0.15	5.06	389.3	1969.86
10	0.8	0.54	0.26	10.42	389.3	4056.51
12	0.69	0.54	0.15	5.06	389.3	1969.86
29	0.64	0.54	0.1	3.08	389.3	1199.04

Total for $U_s/U_r = 0.6$ in January = 16,521.90 g

Table 3. Calculation of erosion potential for $U_s/U_r = 0.9$ for the month of January

Day	$U^*(m/s)$	U_t	U^*-U_t	$P(g/m^2)$	Area (m^2)	Erosion Pot. in g ($k \cdot P \cdot A$)
1	1.21	0.54	0.67	42.79	97.3	4163.46
2	0.96	0.54	0.42	20.73	97.3	2017.02
3	1.04	0.54	0.5	27.0	97.3	2627.10
4	0.58	0.54	0.04	1.09	97.3	106.06
5	0.83	0.54	0.29	12.13	97.3	1180.24
6	0.75	0.54	0.21	7.81	97.3	759.92
8	0.75	0.54	0.21	7.81	97.3	759.92
9	1.04	0.54	0.5	27.0	97.3	2627.10
10	1.21	0.54	0.67	42.79	97.3	4163.46
11	0.58	0.54	0.04	1.09	97.3	106.06
12	0.62	0.54	0.08	2.37	97.3	230.60
13	1.04	0.54	0.5	27.0	97.3	2627.10
14	0.67	0.54	0.13	4.23	97.3	411.58
15	0.58	0.54	0.04	1.09	97.3	106.06
16	0.62	0.54	0.08	2.37	97.3	230.60
17	0.62	0.54	0.08	2.37	97.3	230.60
18	0.67	0.54	0.13	4.23	97.3	411.58
20	0.58	0.54	0.04	1.09	97.3	106.06
21	0.67	0.54	0.13	4.23	97.3	411.58
22	0.58	0.54	0.04	1.09	97.3	106.06
23	0.75	0.54	0.21	7.81	97.3	759.92
24	0.62	0.54	0.08	2.37	97.3	230.60
25	0.67	0.54	0.13	4.23	97.3	411.58
29	0.96	0.54	0.42	20.73	97.3	2017.02
30	0.71	0.54	0.17	5.93	97.3	576.98

Total for $U_s/U_r = 0.9$ for January = 27,378.26 g

The total erosion potential for January is the sum of Tables 2 and 3 (16,521.90 g and 27,378.26 g, respectively). This is 43,900.16 g or 96.70 lbs.

First column: Days in January with a potential for wind erosion in corresponding U_s/U_r area.

Second column: Friction velocity calculated in Table 1.

Third column: Threshold friction velocity from Table 13.2.5-2 in AP-42.

Fourth column: Friction velocity minus threshold friction velocity.

Fifth column: P (erosion potential) = $58(U^* - U_t)^2 + 25(U^* - U_t)$

Sixth column: Surface area corresponding to U_s/U_r .

$$\text{Total surface area} = \pi * r * (\text{Sqrt}(r^2 + h^2)) = 811 \text{ m}^2$$

[where $h = 7.6 \text{ m (25 ft)}$, $r = 15.2 \text{ m (50 ft)}$]

The surface area for $U_s/U_r = 0.9$ is 12 % of the total surface area, while the surface area for $U_s/U_r = 0.6$ is 48 % of the total surface area (Table 13.2.5-3)

Seventh column: Calculation of the erosion potential for the given area = $k * P * A$, where k (particle size multiplier) = 1.0 for $30 \mu\text{m}$ from AP-42, page 13.2.5-3.

The above process is then repeated for the remaining eleven months of the year. The erosion potential for all twelve months is summed to obtain the annual emissions. For example:

January - 96.70 lb.	February - 115.04 lb.
March - 100.04 lb.	April - 100.04 lb.
May - 116.70 lb.	June - 170.06 lb.
July - 71.70 lb.	August - 86.70 lb.
September - 76.70 lb.	October - 110.04 lb.
November - 91.70 lb.	December - 93.36 lb.

This yields a total of 1,228.78 lbs tsp/year for the subject pile.

Alternate calculation of tsp emissions from wind erosion potential for agricultural limestone storage piles.

Method used is from USEPA's Control of Open Fugitive Dust Sources September 1988. (RACM document should not be used as a reference for this type of calculation since methods or equations contained in it may be out of date.)

$$E = 1.7 * (s/1.5) * [(365-p)/235] * (f/15) \text{ (lb/day/acre)}$$

where:

E = total suspended particulate emission factor,

s = silt content of the stored material, weight percent (see Table 4-1 of Control of Open Fugitive Dust Sources),

p = number of days with > 0.01 inches of precipitation per year (see Figure 3-1 of Control of Open Fugitive Dust Sources), and

f = percentage of time wind speed exceeds 12 mph (This information is most appropriately obtained from on-site monitoring. However, it can be obtained from the National Weather Service in Asheville, North Carolina. If these options are not possible or practical, a standard value of 30% may be assumed).

For this example:

s = 3.9%, p = 140 days, and f = 30% (assumed).

$E = 1.7 * (3.9/1.5) * [(365-140)/235] * (30/15) =$

8.5 lbs tsp/day/acre

The surface area is $811 \text{ m}^2 = 8,730 \text{ ft}^2 = 0.2 \text{ acre}$. Thus, $8.5 \text{ lbs/acre/day} * 0.2 \text{ acre} = 1.7 \text{ lbs tsp/day}$. This is 620.5 lbs tsp annually.

Mineral Extraction

Emission factors for the various types of sources involved in mineral extraction can be found in the following documents:

Overburden removal	AP-42 section 13.2.3 (1/95 ed.)
Drilling (wet)	AP-42 section 11.19.2 (1/95 ed.)
Truck loading	AP-42 section 11.19.2 (1/95 ed.)
Haul roads (unpaved roadways)	AP-42 section 13.2.2 (9/98 supplement to 1/95 ed.)
Truck dumping	AP-42 section 11.19.2 (1/95 ed.)
Crushing	AP-42 section 11.19.2 (1/95 ed.)
Transfer and conveying	AP-42 section 11.19.2 (1/95 ed.)
Storage piles	(Refer to the above portions of this IOC.)

Waste disposal

Operations involved include many of the above (i.e, truck loading and dumping). Therefore, the same emission factors can be used.

Reclamation

AP-42 section 13.2.3 (1/95 ed.)

Distribution list:

Lynn Malcolm, Akron RAQMD
Dan Aleman, Canton APCD
Ed Fasko, Cleveland DE
Curt Marshall, RAPCA
Karen Granata, Toledo DES
Steve Giles, Portsmouth HD
Harry Schwietering, HAMCO
Fred Klingelhafer, SEDO
Isaac Robinson, CDO
Don Waltermeyer, NWDO
Phil Hinrichs, SWDO
Dennis Bush, NEDO

xc: Tom Kalman
Jim Orlemann
Mike Mansour
Mike Hopkins
Bruce Weinberg

JANUARY 1998

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

AKRON, OH

AKRON-CANTON AIRPORT (CAK)

Lat: 40°55' N Long: 81°26' W Elev (Ground): 1208 Feet

Time Zone: EASTERN WBAN: 14895 ISSN #:0198-3881



JANUARY 1998 AKRON, OH

DATE	TEMPERATURE °F			DEG DAYS BASE 65°			WEATHER	SNOW/ICE ON GND (IN)			PRECIPITATION (INCHES)			PRESSURE (INCHES OF HG)		WIND			SPEED = MPH DIR = TENS OF DEGREES				
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE	WET BULB		HEATING	COOLING	0700 LST	1300 LST	2400 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT	SPEED	DIR	AVERAGE	DIR	MAXIMUM	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
01	34	7*	21	-5	14	21	44	0	SN	1		T	T	28.90	30.29	16.1	21	16.2	36	23	29	21	01
02	48	31	40	14	26	35	25	0	RA	0		T	T	28.87	30.23	15.0	21	15.3	29	22	23	21	02
03	54	43	49	23	38	44	16	0	RA	0		0.0	0.01	28.84	30.18	16.2	21	16.3	36*	22	25	23	03
04	56	44	50	24	47	49	15	0	RA BR	0		0.0	0.02	28.92	30.25	7.8	19	8.2	17	22	14	22	04
05	61*	44	53	27	47	50	12	0	RA BR	0		0.0	0.07	28.82	30.15	10.6	18	10.8	23	18	20	18	05
06	57	53	55*	29	54	54	10	0	RA BR	0		0.0	0.02	28.72	30.03	4.2	20	7.7	22	21	18	20	06
07	59	45	52	27	55	55	13	0	RA FG+ BR	0		0.0	1.04	28.49	29.79	4.3	12	6.9	15	03	13	03	07
08	48	37	43	18	42	42	22	0	TSRA RA FG+ BR	0		0.0	0.50	28.20	29.51	4.1	0.1	5.4	21	01	18	02	08
09	48	33	41	16	35	37	24	0	TSRA RA SN BR	0		T	0.76	28.37	29.69	12.5	24	13.5	31	25	25	25	09
10	39	27	33	8	24	30	32	0	RA SN BR	0		0.1	0.01	28.73	30.08	14.7	24	15.1	33	26	29*	23	10
11	34	20	27	2	13	22	38	0	RA	0		0.0	0.00	28.84	30.20	6.0	27	7.3	16	27	14	26	11
12	44	19	32	7	26	31	33	0	RA SN BR	1		0.0	0.16	28.75	30.11	7.8	15	9.4	18	15	19	12	12
13	47	16	32	7	21	25	33	0	RA SN BR	1		1.2	0.00	28.85	30.21	11.4	28	13.0	29	28	25	28	13
14	26	10	18*	-7	12	18	47	0	RA DZ FZRA FG+ BR	1		0.0	0.00	28.97	30.36	6.1	10	7.3	20	08	16	08	14
15	36	26	31	-6	30	32	34	0	RA DZ FZRA FG+ BR	0		0.0	0.04	28.56	29.91	1.7	19	7.4	16	18	14	17	15
16	31	27	29	4	27	28	36	0	FZDZ BR	0		0.0	T	28.50	29.85	8.2	36	8.6	18	01	15	01	16
17	31	28	30	6	28	29	35	0	RA FZRA FZDZ SN BR	0		0.4	0.05	28.52	29.87	3.5	24	6.2	18	28	15	27	17
18	29	17	23	-1	23	25	42	0	RA FZDZ SN BR	0		1.1	0.09	28.66	30.02	7.6	26	8.6	18	29	16	23	18
19	31	13	22	-2	20	22	43	0	SN BR	1		0.3	0.01	28.67	30.04	5.2	27	5.8	15	27	13	27	19
20	31	18	25	-1	22	24	40	0	SN BR	2		1.0	0.10	28.80	30.17	4.7	29	6.4	16	29	14	28	20
21	28	15	22	-2	18	22	43	0	SN FZRA SN BR	1		T	T	28.88	30.25	7.4	10	7.6	17	06	16	08	21
22	34	25	30	6	28	30	35	0	RA FZRA SN BR	1		0.1	0.15	28.78	30.14	7.8	09	8.0	17	09	14	09	22
23	42	30	36	12	34	34	29	0	RA DZ BR	0		0.0	0.25	28.59	29.93	3.7	20	10.7	22	14	18	27	23
24	31	28	30	6	27	28	35	0	FZDZ SN BR	0		T	T	28.62	29.98	6.4	30	7.1	17	28	15	30	24
25	30	22	26	2	23	26	39	0	SN BR	0		T	T	28.81	30.17	5.2	26	7.0	17	23	16	30	25
26	38	26	32	8	27	30	33	0	SN	0		T	T	28.90	30.26	4.6	15	6.8	13	16	11	18	26
27	45	28	37	13	29	33	28	0	BR	0		0.0	0.00	28.77	30.13	6.3	12	7.2	14	16	13	17	27
28	45	25	35	11	31	33	30	0	BR FZDZ SN BR	0		0.0	0.00	28.61	29.96	0.6	0.4	4.2	9	28	8	29	28
29	41	30	36	11	34	35	29	0	RA FZDZ SN BR	0		0.1	0.04	28.44	29.78	8.1	22	11.5	30	26	23	27	29
30	32	30	31	6	28	30	34	0	RA FZRA FZDZ SN BR	0		0.1	0.01	28.61	29.95	10.1	30	10.2	22	30	17	31	30
31	34	24	29	4	25	28	36	0	SN	0		T	T	28.77	30.13	2.6	23	5.0	13	22	10	27	31
TOTALS	40.1	27.1	33.6	29.3	32.3	31.1	0.0	0.0	MONTHLY AVERAGES	4.4	3.73	28.70	30.05	3.8	22	9.1	MONTHLY AVERAGES						

DEPARTURE FROM NORMAL: 1.53 DATE: 07-08
 GREATEST 24-HR PRECIPITATION: 1.2 DATE: 13
 GREATEST 24-HR SNOWFALL: 2 DATE: 20
 GREATEST SNOW DEPTH: 0
 DEGREE DAYS: MONTHLY TOTAL DEPARTURE: 965 MONTHLY TOTAL DEPARTURE: -281 MONTHLY TOTAL DEPARTURE: 3438
 SEASON TO DATE TOTAL DEPARTURE: -76
 HEATING: COOLING: 18
 PRECIPITATION: ≥ 0.01 INCH: 18
 PRECIPITATION: ≥ 0.10 INCH: 8
 SNOWFALL: ≥ 1.0 INCH: 3



S/L Director,
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JIM O.
Meyer JA
5

OCT 23 1997

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Applicability of NSPS OOO to Affected Facilities in the Nonmetallic Mineral Processing Industry

FROM: John B. Rasnic, Director *John B Rasnic*
Manufacturing, Energy, and Transportation Division
Office of Compliance

TO: Addressees

The purpose of this memorandum is to clarify several New Source Performance Standards (NSPS), Standards of Performance for Nonmetallic Mineral Processing Plants, Subpart OOO applicability issues raised by the National Stone Association (NSA). The following are responses to the 13 issues for which NSA requested clarification.

1. *Are grizzlies classified as screens and therefore subject to NSPS OOO?*

Section 60.672 (d) states that “[t]ruck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.” Therefore, grizzlies which serve as screening operations for truck dumping facilities are exempt from the standard. Grizzlies which are not associated with truck dumping are subject to the rule.

2. *If an aggregate plant does not have a crusher, (i.e., is a screening facility only) is it subject to Subpart OOO?*

Subpart OOO does not apply to stand-alone screening operations at plants without crushers or grinders.

3. *At what point does a plant begin?*

There has been conflicting guidance regarding this issue, and the Agency is currently planning a Federal Register notice clarifying the subject. Section 60.670 (a) lists the affected facilities in fixed or portable nonmetallic mineral processing plants. This list includes each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station. The clear intent of the regulation is that

all of the facilities listed in § 60.670 (a) are subject to Subpart OOO. In a 1991 Regulatory and Inspection Manual for Nonmetallic Mineral Processing Plants, it was stated that "Subpart OOO facilities begin at the first crushing or grinding operation at the plant." This statement is incorrect. While Subpart OOO affected operations typically have crushers or grinding mills located at or near the beginning of the nonmetallic mineral processing line, this is not always the case (e.g., some plants may convey, screen or otherwise process materials without first utilizing a crusher located in the plant). As long as crushing or grinding occurs anywhere at a non-metallic mineral processing plant, any facility listed in § 60.670 (a) is subject to Subpart OOO regardless of its location within the plant. EPA expects that plants that have not considered facilities prior to the first crushing or grinding operation as affected facilities, will now ensure that those affected facilities will meet all of the applicable regulatory requirements. In light of the conflicting guidance that has existed regarding this issue, EPA will enforce this interpretation prospectively.

4. *Are recycled asphalt pavement plants subject to Subpart OOO? Concrete? Glass? Brick?*

Plants which recycle material such as asphalt concrete, concrete or brick are subject to Subpart OOO if they are using affected facilities listed in § 60.670 (a) to crush or grind any nonmetallic mineral. Glass is not considered a nonmetallic mineral, and therefore its recycling would not be subject.

5. *Are feed hoppers, hoppers under screens, or surge bins located over crushers considered to be "storage bins" and subject to the rule? At what point do you read the bin, at the discharge or at the loading point?*

Feed hoppers and hoppers under screens are typically used to collect and convey material to the next process. When these units are used in this fashion, they would not be considered storage bins. However, if these units are used to temporarily store material, they would be considered "storage bins" as defined in § 60.671. Where applicable, Method 9 readings should be conducted at both discharge and loading points.

only if used to store material are they subject.

6. *Once a piece of equipment is classified as exempt under the "like-for-like" provisions, is that equipment always exempt wherever it is moved? What about portable plants?*

If an existing facility is simply relocated it does not become subject to the regulation. However, if during the relocation the facility undergoes a physical or operational change that results in an emissions increase, the facility would be modified and become subject to the rule. If an existing portable plant undergoes a "modification" as defined in 40 CFR § 60.2, it would become an affected facility.

7. *Are open truck/rail car loading facilities subject to the rule?*

Subpart OOO does not apply to open truck or railcar loading facilities.

8. *When grading a visible emissions (VE) test, should a consecutive 6 minute average, or a rolling average, be used?*

A consecutive 6 minute average should be used.

9. *Can a regulatory agency (Regional, state, or local) be given the authority to waive test requirements of affected facilities that do not produce any visible emissions due to the saturated nature of the material being mined?*

§ 60.8 allows for performance tests to be waived if the owner or operator can demonstrate by other means that the affected facility is in compliance with the standard. The EPA Regional offices have been delegated the authority to waive performance tests. In addition, some Regions have delegated this authority to State agencies. The issue regarding the mining of saturated materials has been addressed in the revision to Subpart OOO.

10. *Are cyclones, log washers, classifiers, sand screws, cement silos, and chutes considered to be affected facilities under the rule?*

Cyclones, log washers, classifiers, sand screws, cement silos and chutes are not considered affected facilities.

11. *Are transfer points from crushers and screens to belt conveyors considered to be transfer points that require testing, or are belt-to-belt transfer points the only points required to be tested?*

Transfer points from crushers and screens to belt conveyors and belt-to-belt transfer points require testing. Transfer points from a belt to a stockpile are not subject to Subpart OOO.

12. *Is changing a wet screen to a dry screen considered a modification? Dry screen to a wet screen?*

Changing from a wet screen to a dry screen, or a dry screen to a wet screen, would be considered a physical or operational change. If the change resulted in an increase in emissions, it would be considered a "modification" as defined in § 60.2.

13. *In regards to a hot mix asphalt plant connected to an aggregate plant, at which point does the applicability to Subpart 000 end and Subpart I begin? What about a concrete plant or cement plant connected to an aggregate plant?*

Applicability for Subpart 000 at an aggregate plant would end at the first affected storage silo or bin at a hot mix asphalt facility, where 40 CFR Part 60, Subpart I would then apply. The same answer applies to cement plants subject to 40 CFR Part 60, Subpart F.

If you have any questions regarding these issues, please contact Scott Throwe of my staff at (202) 564-7013.

Addressees:

Linda Murphy, Director
Office of Ecosystem Protection, Region I

Kathleen Callahan, Director
Division of Environmental Planning and Protection, Region II

Judith Katz, Director
Air Protection Division, Region III

Winston Smith, Director
Air, Pesticides and Toxics Management Division, Region IV

David Kee, Director
Air and Radiation Division, Region V

Al Davis, Director
Multimedia Planning and Permitting Division, Region VI

William Spratlin, Director
Air, RCRA, and Toxics Division, Region VII

Dick Long, Director
Air program, Region VIII

David Howekamp, Director
Air and Toxics Division, Region IX

Anita Frankel, Director
Office of Air Quality, Region X



State of Ohio Environmental Protection Agency

Misty

REET ADDRESS:

800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

I N T E R O F F I C E C O M M U N I C A T I O N

DATE: October 5, 1995

TO: District Offices and Local Air Agencies

FROM: *AL* Alan Lloyd through Mike Hopkins - Manager, Air Quality
 Modeling and Planning Section

SUBJECT: Applicability Determination Pertaining to 40 CFR Part
 60, Subpart 000 (Standards of Performance for Nonmetallic
 Mineral Processing Plants)

Recently, a facility proposed to install a 400 ton/hour portable sand and gravel washing and screening plant.

A draft permit was issued by the Agency for the above mentioned plant based on the contents of the application and the applicability requirements listed in 40 CFR Part 60.670 which indicated that the plant was subject to 40 CFR Part 60, Subpart 000 (Standards of Performance for Nonmetallic Mineral Processing Plants). After reviewing the contents of the draft permit, the applicant submitted documentation which indicated that the plant was not subject to 40 CFR Part 60, Subpart 000.

Background

The Agency, after reviewing the air permit application, determined that the **screening operation** associated with the 400 ton/hour portable sand and gravel washing and screening plant was subject to 40 CFR Part 60, Subpart 000 based upon the language in the applicability section of 40 CFR Part 60.670(a). This section states that except as provided in paragraphs (b), (c) and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable non-metallic mineral processing plants: each crusher, grinding mill, **screening operation**, bucket elevator, belt conveyor, bagging operation storage bin, enclosed truck or railcar loading station.

Since the application indicated that the 400 ton/hour portable sand and gravel plant would be conducting **screening operations** as defined in 60.671 and the plant met the other applicable requirements listed in 40 CFR Part 60, Subpart 000, the Agency

Applicability Determination Pertaining to
40 CFR Part 60, Subpart 000

Page no. 2

issued a draft permit based upon past procedures which required the Agency to issue draft permits for air contaminant sources that are subject to federal regulations, i.e., in this case, Standards of Performance for Nonmetallic Mineral Processing Plants.

Since the time that the agency issued the draft permit, the applicant submitted the following re-typed determinations (the original determinations were faxed a number of times and therefore unlegible, so they are re-typed so that you can read the contents of the determinations) from USEPA (we have also verbally confirmed the validity of the concepts contained in these determinations with Region V) stating that if an Nonmetallic Mineral Processing Plant that **only conducts screening and washing operations and not crushing operations**, would not be subject to 40 CFR Part 60, Subpart 000.

Therefore, if the field offices review an air permit application that indicates that an air contaminant source might be subject to 40 CFR Part 60, Subpart 000 based upon the applicability section, i.e., **conducting only screening operations**, then it is the Agency's position that the air contaminant source is not subject to 40 CFR Part 60, Subpart 000.

If you have any questions concerning this, please call Alan Lloyd of my staff at (614) 644-3613.

The Re-typed Determinations Submitted by the above Mentioned Applicant

August 3, 1986

U.S. Environmental Protection Agency (EPA)
Region IV
340 Courtland Street, N.E.
Atlanta, Georgia

4APT-AES

John W. Walton, P.E.
Chief
Division of Air Pollution Control
Tennessee Department of Environment and Conservation
410 Church Street
Nashville, Tennessee

Applicability Determination Pertaining to
40 CFR Part 60, Subpart 000

Page no. 3

Subject: Determination of Applicability of a Recycled Asphalt
Crusher Begin Subject to 40 CFR Part 60, Subpart 000
(Standards of Performance for Nonmetallic Mineral
Processing Plants)

Dear Mr. Walton:

We have received your June 13, 1995, letter requesting that the U.S. Environmental Protection Agency (EPA) provide you with an official determination concerning the applicability of Subpart 000 to asphalt recycle crushers. After a careful evaluation of the information provided by the Tennessee Department of Environment and Conservation (TDEC), we have concluded that if there is a reduction in the size of nonmetallic minerals during crushing of recycled asphalt, then the facility is subject to Subpart 000. However, if an asphalt crusher only breaks asphalt bonds and does not crush or grind nonmetallic minerals in the asphalt matrix, it is not subject to Subpart 000.

According to the information enclosed in your June 13, 1995, letter, in two previous determinations, EPA Region 5 has concluded that asphalt recycle crushers are subject to Subpart 000. However, in a verbal guidance provided to TDEC, Region 4 had indicated that asphalt recycle crushers may not be subject to Subpart 000 if the processing lines are solely dedicated to the recycling of finished products. This guidance was provided to your staff on the basis of determinations made by Region 4 in which we had concluded that glass and brick recycling operations are not subject to Subpart 000, and the basis for these determinations are that glass and brick are not nonmetallic minerals. Consequently, you have expressed concerns that the written EPA Region 5 determinations appear to contradict the verbal guidance previously provided to your staff by Region 4.

TDEC believes that an asphalt recycle crusher does not crush nonmetallic minerals. According to your letter, asphalt recycle crushers break up the asphalt material that binds the crushed stone together and do not further crush the stone in the mixture.

In order to resolve this issue, EPA Region 4 staff recently inspected a recycled asphalt facility and observed a Portac, model 345 crusher in operation. During the inspection it was observed that nonmetallic mineral chunks of two to three inches in the recycled asphalt were being crushed to a finished product size of less than half an inch. Based upon our inspection of this facility, it was clear that the size of the nonmetallic mineral contained in the recycled asphalt was being reduced by crushing. Therefore, we believe that applicability of Subpart 000 to recycled asphalt crushers depends upon whether nonmetallic minerals in the

Applicability Determination Pertaining to
40 CFR Part 60, Subpart 000

Page no. 4

asphalt matrix are ground or crushed in the facility. If nonmetallic minerals are crushed or ground, the facility would be subject to Subpart 000.

You also wanted to know whether machines that strip asphalt from roads for recycling are subject to Subpart 000. In our opinion, machines that strip asphalt from roads for recycling purposes are not subject to Subpart 000 since the primary purpose of the stripper is to remove large pieces of asphalt from the roads. Any crushing or grinding that occurs during stripping is minimal or incidental.

If you have any questions regarding the determination provided in this letter, please contact Mr. Haig of my staff at (404) 347-5014, extension 4147.

Sincerely,

James A. Harper
Chief
Air Enforcement Branch
Air, Pesticides & Toxics
Management Division

11/29/93

Applicability Determination Index Download Report

Subpart 000

Control number: NR14

October 3, 1986

Mr. Carl Vogt
Wayne County Health Department
Air Pollution Control Division
2211 East Jefferson Street
Detroit, MI 48207

Dear Mr. Vogt:

Applicability Determination Pertaining to
40 CFR Part 60, Subpart 000

Page no. 5

This letter is pursuant to your request as to the applicability of 40 CFR part 60, Subpart 000: Standards of Performance for Non-Metallic Mineral Processing Plants.

Subpart 000, Section 60.670(a) defines the applicability and designation of affected facilities.

Except as provided in paragraphs (b), (c) and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable non-metallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation storage bin, enclosed truck or railcar loading station.

The regulation goes on to define each of the above terms. Specifically, non-metallic mineral processing plant is defined as "any combination of equipment that is used to crush or grind any non-metallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing non-metallic minerals except as provided in Sections 60.670(b) and (c)".

The complete process at hand involves pneumatically conveying crushed lime into lime storage silos and exhausting the displaced air through a small baghouse. In addition, there is no equipment or combination of equipment used to crush or grind any non-metallic mineral at this plant. Therefore, it can be determined that the plant is not classified as a non-metallic mineral processing plant and consequently, 40 CFR Part 60, Subpart 000 is not applicable to this lime storage silo facility.

Sincerely,

Larry F. Kertcher, Chief
Air Compliance Branch (5AC-26), Region V2

a:\subpart.000

National Stone Association

1415 Elliot Place, N.W. • Washington, D.C. 20007-2599 • 202/342-1100

July 8, 1994

Mr. Robert Hodanski, Chief
 Air Pollution Control
 Ohio EPA
 P.O. Box 1049
 Columbus, Ohio 43266-0149

CC: ALL DISTRICT & LOCAL
 AIR UNIT SUPERVISORS

JIM BRAUN
 MISSY PARSONS
 ALAN LLOYD
 JIM ORLMANN

Dear Mr. Hodanski:

The National Stone Association has been working with the U.S. Environmental Protection Agency for the last three years in a cooperative project to develop high-quality emission factors for the crushed stone industry.

The National Stone Association (NSA) is the national trade association representing the many interests of the crushed stone industry and whose over 500 members account for approximately 80 percent of the annual United States production of crushed stone.

Enclosed for your information is a copy of the new 11.19.2 CRUSHED STONE PROCESSING Section which will be included in the new fifth edition of AP-42 scheduled for publication this fall. This new AP-42 section, which is now available on EPA's Air Chief Bulletin Board, contains the new emission factors developed from test data from the cooperative testing program.

The focus of the testing program has been on PM_{10} , since that is the National Ambient Air Quality Standard, and the parameter which has a health-effects basis. However, I understand that the State of New Jersey will be using TSP (PM_{30}) to estimate emissions.

To estimate TSP emission factors, we recommend an approach based on the particle size multipliers in the current edition of AP-42. An estimate of the TSP (PM_{30}) emission factors can be obtained by multiplying the new PM_{10} emission factors by 2.11 (The average of the ratio of the PM_{30} to PM_{10} particle size multipliers in Section 11.2.1 Fugitive Dust and Section 11.2.3 Aggregate Handling and Storage Piles of the current AP-42 - see attached).

You will note that footnote c of Tables 11.9.2-1 and 11.9.2-2 contains a suggestion that TSP emissions can be estimated by multiplying the filterable PM emission factor by 0.80. We think that a better approach is to use the new PM_{10} emission factors as the basis for the estimation because they are based on high-quality, A-rated measured data. As the footnote states, there are no data available to support the approach based on filterable PM. Further, the TSP estimates based on 80% of filterable PM range from -35% to +2364% of the TSP estimates based on 2.11 x the new PM_{10} emission factors.

We expect to continue the testing program in the future and anticipate that it will produce data which can be used to refine the TSP emission factors.

Please call if you have questions or if we can provide additional information.

Sincerely,



William C. Ford, P.E.
 Vice President Environmental Programs

cc: Bob Wilkinson, Ohio Aggregates Assn



Ratio of Particle Size Multipliers

$$\frac{PM_{30}}{PM_{10}} = \frac{0.73}{0.36} = 2.03$$

$$\frac{PM_{30}}{PM_{10}} = \frac{0.77}{0.37} = 2.08$$

$$\frac{PM_{30}}{PM_{10}} = \frac{0.80}{0.36} = 2.22$$

$$\frac{6.33}{3} = 2.11$$

Adding aggregate material to a storage pile or removing it usually involves dropping the material onto a receiving surface. Truck dumping on the pile or loading out from the pile to a truck with a front end loader are examples of batch drop operations. Adding material to the pile by a conveyor stacker is an example of a continuous drop operation.

The quantity of particulate emissions generated by a batch drop operation, per ton of material transferred, may be estimated, with a rating of C, using the following empirical expression²:

$$E = k(0.00090) \frac{\left(\frac{s}{5}\right) \left(\frac{U}{2.2}\right) \left(\frac{H}{1.5}\right)}{\left(\frac{M}{2}\right)^2 \left(\frac{Y}{4.6}\right)^{0.33}} \quad (\text{kg/Mg}) \quad (1)$$

$$E = k(0.0018) \frac{\left(\frac{s}{5}\right) \left(\frac{U}{5}\right) \left(\frac{H}{5}\right)}{\left(\frac{M}{2}\right)^2 \left(\frac{Y}{6}\right)^{0.33}} \quad (\text{lb/ton})$$

where: E = emission factor
 k = particle size multiplier (dimensionless)
 s = material silt content (%)
 U = mean wind speed, m/s (mph)
 H = drop height, m (ft)
 M = material moisture content (%)
 Y = dumping device capacity, m³ (yd³)

The particle size multiplier (k) for Equation 1 varies with aerodynamic particle size, shown in Table 11.2.3-2.

TABLE 11.2.3-2. AERODYNAMIC PARTICLE SIZE MULTIPLIER (k) FOR EQUATIONS 1 AND 2

Equation	< 30 μm	< 15 μm	< 10 μm	< 5 μm	< 2.5 μm
Batch drop	0.73	0.48	0.36	0.23	0.13
Continuous drop	0.77	0.49	0.37	0.21	0.11

The quantity of particulate emissions generated by a continuous drop operation, per ton of material transferred, may be estimated, with a rating of C, using the following empirical expression³:

11.19.2 CRUSHED STONE PROCESSING

11.19.2.1 Process Description^{1,2}

Major rock types processed by the rock and crushed stone industry include limestone, granite, dolomite, traprock, sandstone, quartz, and quartzite. Minor types include calcareous marl, marble, shell, and slate. Industry classifications vary considerably and, in many cases, do not reflect actual geological definitions.

Rock and crushed stone products generally are loosened by drilling and blasting, then are loaded by power shovel or front-end loader into large haul trucks that transport the material to the processing operations. Techniques used for extraction vary with the nature and location of the deposit. Processing operations may include crushing, screening, size classification, material handling, and storage operations. All of these processes can be significant sources of PM and PM-10 emissions if uncontrolled.

Quarried stone normally is delivered to the processing plant by truck and is dumped into a hoppers feeder, usually a vibrating grizzly type, or onto screens, as illustrated in Figure 11.19.2-1. The feeder or screens separate large boulders from finer rocks that do not require primary crushing, thus reducing the load to the primary crusher. Jaw, impactor, or gyratory crushers are usually used for initial reduction. The crusher product, normally 7.5 to 30 centimeters (3 to 12 inches) in diameter, and the grizzly throughs (undersize material) are discharged onto a belt conveyor and usually are conveyed to a surge pile for temporary storage, or are sold as coarse aggregates.

The stone from the surge pile is conveyed to a vibrating inclined screen called the scalping screen. This unit separates oversized rock from the smaller stone. The undersize material from the scalping screen is considered to be a product stream and is transported to a storage pile and sold as base material. The stone that is too large to pass through the top deck of the scalping screen is processed in the secondary crusher. Cone crushers are commonly used for secondary crushing (although impact crushers are sometimes used), which typically reduces material to about 2.5 to 10 centimeters (1 to 4 inches). The material (throughs) from the second level of the screen bypasses the secondary crusher because it is sufficiently small for the last crushing step. The output from the secondary crusher and the throughs from the secondary screen are transported by conveyor to the tertiary circuit, which includes a sizing screen and a tertiary crusher.

Tertiary crushing is usually performed using cone crushers or other types of impactor crushers. Oversize material from the top deck of the sizing screen is fed to the tertiary crusher. The tertiary crusher output, which is typically about 0.50 to 2.5 centimeters (3/16th to 1 inch), is returned to the sizing screen. Various product streams with different size gradations are separated in the screening operation. The products are conveyed or trucked directly to finished product bins, open area stockpiles, or to other processing systems such as washing, air separators, and screens and classifiers (for the production of manufactured sand).

Some stone crushing plants produce manufactured sand. This is a small-sized rock product with a maximum size of 0.50 centimeters (3/16th inch). Crushed stone from the tertiary sizing screen is sized in a vibrating inclined screen (fines screen) with relatively small mesh sizes. Oversized material is processed in a cone crusher or a hammermill (fines crusher) adjusted to produce small diameter material. The output is then returned to the fines screen for resizing.

In certain cases, stone washing is required to meet particular end product specifications or demands, as with concrete aggregate processing. Crushed and broken stone normally is not milled but is screened and shipped to the consumer after secondary or tertiary crushing.

11.19.2.2 Emissions And Controls^{1-4,7-8}

Emissions of PM and PM-10 occur from a number of operations in stone quarrying and processing. A substantial portion of these emissions consists of heavy particles that may settle out within the plant. As in other operations, crushed stone emission sources may be categorized as either process sources or fugitive dust sources. Process sources include those for which emissions are amenable to capture and subsequent control. Fugitive dust sources generally involve the reentrainment of settled dust by wind or machine movement. Emissions from process sources should be considered fugitive unless the sources are vented to a baghouse or are contained in an enclosure with a forced-air vent or stack. Factors affecting emissions from either source category include the stone size distribution and surface moisture content of the stone processed; the process throughput rate; the type of equipment and operating practices used; and topographical and climatic factors.

Of geographic and seasonal factors, the primary variables affecting uncontrolled PM emissions are wind and material moisture content. Wind parameters vary with geographical location, season, and weather. It can be expected that the level of emissions from unenclosed sources (principally fugitive dust sources) will be greater during periods of high winds. The material moisture content also varies with geographic location, season, and weather. Therefore, the levels of uncontrolled emissions from both process emission sources and fugitive dust sources generally will be greater in arid regions of the country than in temperate ones, and greater during the summer months because of a higher evaporation rate.

The moisture content of the material processed can have a substantial effect on emissions. This effect is evident throughout the processing operations. Surface wetness causes fine particles to agglomerate on, or to adhere to, the faces of larger stones, with a resulting dust suppression effect. However, as new fine particles are created by crushing and attrition, and as the moisture content is reduced by evaporation, this suppressive effect diminishes and may disappear. Plants that use wet suppression systems (spray nozzles) to maintain relatively high material moisture contents can effectively control PM emissions throughout the process. Depending on the geographic and climatic conditions, the moisture content of mined rock may range from nearly zero to several percent. Because moisture content is usually expressed on a basis of overall weight percent, the actual moisture amount per unit area will vary with the size of the rock being handled. On a constant mass-fraction basis, the per-unit area moisture content varies inversely with the diameter of the rock. Therefore, the suppressive effect of the moisture depends on both the absolute mass water content and the size of the rock product. Typically, wet material contains 1.5 to 4 percent water or more.

A variety of material, equipment, and operating factors can influence emissions from crushing. These factors include (1) stone type, (2) feed size and distribution, (3) moisture content, (4) throughput rate, (5) crusher type, (6) size reduction ratio, and (7) fines content. Insufficient data are available to present a matrix of rock crushing emission factors detailing the above classifications and variables. Available data indicate that PM-10 emissions from limestone and granite processing operations are similar. Therefore, the emission factors developed from the emission data gathered at limestone and granite processing facilities are considered to be representative of typical crushed stone processing operations. Emission factors for filterable PM and PM-10 emissions from crushed stone processing operations are presented in Tables 11.19-1 (Metric units) and -2 (English units).

Emission factor estimates for stone quarry blasting operations are not presented here because of the sparsity and unreliability of available test data. While a procedure for estimating blasting emissions is presented in Section 11.24, Western Surface Coal Mines, that procedure should not be applied to stone quarries because of dissimilarities in blasting techniques, material blasted, and size of blast areas. Milling of fines is not included in this section as this operation is normally associated with nonconstruction aggregate end uses and will be covered elsewhere when information is adequate. Emission factors for fugitive dust sources, including paved and unpaved roads, materials handling and transfer, and wind erosion of storage piles, can be determined using the predictive emission factor equations presented in AP-42 Section 13.2.

Table 11.19.2-1 (Metric Units).
EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS*

Source ^b	Filterable PM ^c	EMISSION FACTOR RATING	PM-10	EMISSION FACTOR RATING
Screening (SCC 3-05-020-02,-03)	0.073 ^d	E	0.0076 ^e	C
Screening with wet suppression (SCC 3-05-020-02-03)	0.0042 ^d	E	0.00042 ^e	C
Primary crushing (SCC 3-05-020-01)	0.00015 ^f	E	ND	
Secondary crushing (SCC 3-05-020-02)	*	E	*	E
Tertiary crushing (SCC 3-05-020-03)	0.018 ^g	E	0.0012 ^g	C
Primary crushing with wet suppression (SCC 3-05-020-01)	ND		ND	
Secondary crushing with wet suppression (SCC 3-05-020-02)	*	E	*	E
Tertiary crushing with wet suppression (SCC 3-05-020-03)	0.00019 ^h	E	0.00029 ^h	C
Fines crushing ^k (SCC 3-05-020-05)	0.36	E	0.0075	E
Fines crushing with wet suppression ^k (SCC 3-05-020-05)	0.067	E	0.0010	E
Fines screening ^k (SCC 3-05-020-21)	0.15	E	0.036	E
Fines screening with wet suppression ^k (SCC 3-05-020-21)	0.0013	E	0.0011	E
Conveyor transfer point ^m (SCC 3-05-020-06)	0.013	E	0.00072	D
Conveyor transfer point with wet suppression ^m (SCC 3-05-020-06)	6.9x10 ⁻⁵	E	2.4x10 ⁻⁵	D
Wet drilling: unfragmented stone ⁿ (SCC 3-05-020-10)	ND		4.0x10 ⁻⁵	E
Truck loading: fragmented stone ⁿ (SCC 3-05-020-31)	ND		8.0x10 ⁻⁶	E
Truck loading--conveyor: crushed stone ^p (SCC 3-05-020-32)	ND		5.0x10 ⁻⁵	E

*Emission factors represent uncontrolled emissions unless noted. Emission factors in kg/Mg of material throughput.
SCC = Source Classification Code. ND = no data available.

^bSources controlled with wet suppression maintain a material moisture content \geq 1.5 percent. Sources that process material with a moisture content of < 1.5 percent are considered to be uncontrolled.

^cBased on information provided in AP-42 Section 13.2.1, total suspended particulate (TSP) emissions can be estimated by multiplying the filterable PM emission factor by 0.80. However, no data are available to support this approximation, and the calculated TSP emission factors are not suitable for rating or inclusion in AP-42.

^dReferences 6, 11, 15-16.

^eReferences 9, 11, 15-16.

^fReference 1.

^gNo data available, but emission factors for tertiary crushing can be used as an upper limit for secondary crushing

^hReferences 11, 15-16.

ⁱReferences 10-11, 15-16.

^jReference 12.

^kReferences 13-14.

^lReference 3.

^mReference 4.

Table 11.19.2-2 (English Units).
EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS*

Source ^b	Filterable PM ^c	EMISSION FACTOR RATING	PM-10	EMISSION FACTOR RATING
Screening (SCC 3-05-020-02,-03)	0.15 ^d	E	0.015 ^e	C
Screening with wet suppression (SCC 3-05-020-02-03)	0.0084 ^f	E	0.00084 ^f	C
Primary crushing (SCC 3-05-020-01)	0.00070 ^g	E	ND	
Secondary crushing (SCC 3-05-020-02)	*	E	*	E
Tertiary crushing (SCC 3-05-020-03)	0.036 ^h	E	0.0024 ^h	C
Primary crushing with wet suppression (SCC 3-05-020-01)	ND		ND	
Secondary crushing with wet suppression (SCC 3-05-020-02)	*	E	*	E
Tertiary crushing with wet suppression (SCC 3-05-020-03)	0.0016 ^h	E	0.00059 ^h	C
Fines crushing ⁱ (SCC 3-05-020-05)	0.72	E	0.015	E
Fines crushing with wet suppression ⁱ (SCC 3-05-020-05)	0.13	E	0.0020	E
Fines screening ⁱ (SCC 3-05-020-21)	0.30	E	0.071	E
Fines screening with wet suppression ⁱ (SCC 3-05-020-21)	0.0036	E	0.0021	E
Conveyor transfer point ⁱⁱ (SCC 3-05-020-06)	0.026	E	0.0014	E
Conveyor transfer point with wet suppression ⁱⁱⁱ (SCC 3-05-020-06)	0.00014	E	4.8x10 ⁻⁵	D
Wet drilling: unfragmented stone ^{iv} (SCC 3-05-020-10)	ND		8.0x10 ⁻⁵	E
Truck unloading: fragmented stone ^v (SCC 3-05-020-31)	ND		1.6x10 ⁻⁵	E
Truck loading—conveyor: crushed stone ^v (SCC 3-05-020-32)	ND		0.00010	E

*Emission factors represent uncontrolled emissions unless noted. Emission factors in lb/ton of material throughput.
SCC = Source Classification Code. ND = no data available.

^bSources controlled with wet suppression maintain a material moisture content ≥ 1.5 percent. Sources that process material with a moisture content of < 1.5 percent are considered to be uncontrolled.

^cBased on information provided in AP-42 Section 13.2.1, total suspended particulate (TSP) emissions can be estimated by multiplying the filterable PM emission factor by 0.80. However, no data are available to support this approximation, and the calculated TSP emission factors are not suitable for rating or inclusion in AP-42.

^dReferences 6, 11, 15-16.

^eReferences 9, 11, 15-16.

^fReference 1.

^gNo data available, but emission factors for tertiary crushing can be used as an upper limit for secondary crushing.

^hReferences 11, 15-16.

ⁱReferences 10-11, 15-16.

^jReference 12.

^kReferences 13-14.

^lReference 3.

^mReference 4.

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OEPA inter-office communication

to: Distribution date: September 9, 1996
from: Mike Hopkins, AOM&P, and Jim Orlemann, Engineering, DAPC
subject: PM emissions from spray booths and ovens, and PTI preparation

As some of you know, an official determination has been made by our legal staff concerning particulate emissions from spray booths. This issue has been raised by Title V PTO applicants and during an enforcement case settlement. Attached is a copy of the e-mail from Jim Orlemann that explains this determination. Below are our comments pertaining to PTI preparation.

Paint Spray Booths

Typically, spray booths have some amount of particulate or paint droplets that are not captured or controlled by filters or a water wash used to capture the over spray. This results in the source technically being subject to rules 3745-17-07 and 17-11. In future PTIs, the following should be done:

Cite applicable particulate rules under the Air Emission Summary.

Calculate the PM emissions based upon the solids content of the paint and the transfer efficiency (TE), which indicates the % of solids reaching the part, to get the solids lost (1 - TE), and the uncontrolled mass rate of emissions. Then take into account the reduction in PM made by the control system to set the PTI allowable. Use the best information available to you to determine the appropriate transfer efficiency. One source is the 40 CFR Part 60 NSPS requirements (60.313, 60.392 or 60.452) for those type of sources.

When Figure II applies and is more stringent than Table I, the controlled mass rate of emissions should be compared to the Figure II allowable to determine if the unit complies with 17-11. If Table I applies and is more stringent than Figure II, the unit's controlled emissions should be compared to that allowed by Table I to determine compliance. For Table I, the maximum process weight rate of the unit should be used (paint employed) to define the allowable.

The attached e-mail states that dry filters or water wash normally will be required to comply with 17-11. We believe that these controls represent BAT for these sources, since one or the other is commonly used in spray booths.

Ovens

Direct-fired ovens using natural gas normally would not be subject to 17-07 or 17-11. In some rare situations, e.g., involving the use of powder coatings, there may be visible emissions from the oven. The visible emissions may be due to solid particles or condensed organic compounds. In such cases, 17-07 and 17-11 would be applicable to the oven. The PWR_{max} should be based upon the total amount of coatings on the materials passing through the oven, and the allowable emission rate normally would be defined by Table I.

Direct-fired ovens, 17-07 and 17-10 should be determined from 17-10, which would be 0.020 lb/mmBtu.

September 9, 1996

PM emissions IOC

e 2

Please share this information with all permitting staff. If you have any questions, please contact us at (614) 644-2270. Thank you.

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