

**Texas Commission on Environmental Quality
Air Permits Division**

New Source Review (NSR) Boilerplate Special Conditions

This information is maintained by the Combustion/Coatings NSR Section and is subject to change. Last update was made **October 2006**. These special conditions represent current NSR boilerplate guidelines and are provided for informational purposes only. The special conditions for any permit or amendment are subject to change through TCEQ case by case evaluation procedures [30 TAC 116.111(a)]. Please contact the appropriate Combustion/Coatings NSR Section management if there are questions related to the boilerplate guidelines.

Paint Manufacturing Operations

Permit No. XXXXX

1. This permit authorizes the operation of (type of coating) coating manufacturing facilities at (address), (county).

EMISSION LIMITATION

2. Except for those periods described in 30 Texas Administrative Code (30TAC) §§101.201 and 211, opacity of particulate matter emissions shall not exceed five percent. This determination shall be made first by observing for visible emissions. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point(s). If visible emissions are observed from the stacks, then opacity shall be determined by Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly.

OPERATIONAL CONDITIONS AND LIMITATIONS

3. Manufacturing operations shall not be conducted unless the dust collectors and building ventilation systems in the production areas are fully operational.

Preferred - when emission rate(s) are based on outlet grain loading.

4. The emissions of PM from the mixer/disperser tanks shall be captured and routed to a dust collection system with has a maximum outlet grain loading of equal to or less than 0.01 grain per dry standard cubic foot and with airflow of at least (specify) standard cubic feet per minute and pressure drop of no more than

(specify) inches water column. Planned maintenance on the dust collection system shall be performed only periods when the facility(ies) being controlled by the dust collection system are not in operation.

Alternate - when emission rate(s) are based on media usage and baghouse/dust collector efficiency.

4. The emissions of PM from the mixer/disperser tanks shall be exhausted through a dust collection system with a control efficiency of 99.9 percent and pressure drop of no more than (specify) inches water column. Planned maintenance on the dust collection system shall be performed only periods when the facility(ies) being controlled by the dust collection system are not in operation.
5. Mixer/disperser tanks shall be equipped with covers that shall be closed except for material additions or coating sample retrieval during mixing operations such that when in place, it maintains contact with the rim of the opening with a minimum opening for the disperser shaft.
6. When add-on controls for volatile organic compounds are required (VOC).

For Thermal Oxidizer:

The thermal oxidizer shall have a VOC control efficiency of 95 percent or greater and be equipped with a monitor that continuously measures and records the combustion chamber temperature. The temperature shall be maintained at a 3-hour average temperature established during testing that achieves the required destruction efficiency. The monitor shall be calibrated at least once annually and shall be accurate to ± 5 degrees Fahrenheit.

Case 1 - No oxidizer bypass

The emissions capture system shall have no oxidizer by-pass and an audio, visual, and olfactory (AVO) inspection of the capture system duct-work shall be performed monthly.

Case 2 - Oxidizer bypass

A flow indicator shall be installed that records and verifies zero flow at least once every 15 minutes immediately downstream of each valve that, if opened, would allow a vent stream to bypass the oxidizer and be emitted, either directly or indirectly to the atmosphere.

OR

Once per month, the valves shall be inspected to verify the position of the valves and the condition of the car seals that prevent flow out of the bypass.

For Catalytic Oxidizer:

The catalytic oxidizer shall have a VOC control efficiency of 95 percent or greater and be equipped with a monitor that continuously measures and records the combustion chamber/catalyst bed inlet and outlet temperatures. The temperatures shall be maintained at a 3-hour average temperature established during testing that achieves the required destruction efficiency. The monitors shall be calibrated at least once annually and shall be accurate to ± 5 degrees Fahrenheit.

Case 1 - No oxidizer bypass

The emissions capture system shall have no oxidizer by-pass and an audio, visual, and olfactory (AVO) inspection of the capture system duct-work shall be performed monthly.

Case 2 - Oxidizer bypass

A flow indicator shall be installed that records and verifies zero flow at least once every 15 minutes immediately downstream of each valve that, if opened, would allow a vent stream to bypass the oxidizer and be emitted, either directly or indirectly to the atmosphere.

OR

Once per month, the valves shall be inspected to verify the position of the valves and the condition of the car seals that prevent flow out of the bypass.

7. Case 1 - No emissions from maintenance:

Planned maintenance on the oxidizer(s) shall be performed only during periods when the facility(ies) being controlled by the oxidizer(s) are not in operation.

Case 2 - Increased emissions from maintenance:

Planned maintenance on the oxidizer(s) shall be limited to 100 hours per year on a rolling 12 consecutive month basis.

NOTE: Uncontrolled emission rates are listed separately from the controlled rates on the MAERT for the appropriate emission points and with footnote "uncontrolled emissions during maintenance".

8. MATERIAL USAGE FLEXIBILITY (Known Unit Impacts -Preferred):

In addition to the materials represented in the (permit/amendment/renewal) application dated (date) or the air contaminants in the site-wide modeling report dated (date), other materials/air contaminants that meet the following sub-conditions are allowed:

- A. The new materials shall serve the same basic function and the emissions shall be from the same location as the emissions from the current materials.
- B. All the ingredients of the new material are known, i.e. the weight percentages of the ingredients add to 100 percent or more.
- C. Any air contaminant ingredient in the new material:
 - (1) That is emitted at rates of less than 0.04 pound per hour (lb/hr) and whose short-term (30-minute) Effects Screening Level (ESL) is equal to or greater than $2 \mu\text{g}/\text{m}^3$, or
 - (2) That has a true vapor pressure at 68°F of less than 0.01 mm Hg and is not sprayed

Is exempt from sub-condition D, below.

- D. For all other new or increased air contaminants the following procedure shall be complete:
 - (1) Determine the emission rate (ER) of each air contaminant ingredient including emissions of the same air contaminant from currently authorized materials that may be emitted at the same time from each emission point.
 - (2) Multiply the emission rate of the air contaminant by the unit impact multiplier for each emission point from the following table to determine the off-property impact (Ground Level Concentration (GLC)) for each emission point.

| Emission Point | Unit Impact ($\mu\text{g}/\text{m}^3$ per lb/hr) |
|----------------|--|
| EPN | |
| EPN | |
| EPN | |
| EPN | |

NOTE: The blanks in the table are filled in by the permit writer.

- (3) Sum the impacts from each emission point/emission point group to determine a total off-property impact (Total GLC_{MAX}) for the new or increased air contaminant.
- (4) Compare the total off-property impact to the ESL for the air contaminant as follows:

$$\text{Total } GLC_{MAX} \leq ESL_{NEW}$$

Where:

Total GLC_{MAX} = the sum of the GLCs from each emission point.

ESL_{NEW} = short-term ESL of new ingredient air contaminant from the most current ESL list published by the TCEQ or as specifically derived by the TCEQ Toxicology Section. The ESL shall be obtained in writing prior to the use of the new or increased air contaminant.

- E. Short-term emission rates from new or increased air contaminants shall not cause any increases in air contaminant category annual emission rates as listed on the maximum allowable emission rates table (MAERT).

MATERIAL USAGE FLEXIBILITY (Unknown Unit Impacts - Alternate):

Materials other than those represented in the (permit/amendment/renewal) application dated (date) may be used if the following conditions are met:

- A. The materials are used for the same purpose and emissions are from the sources and emission points listed on the MAERT.
- B. All the ingredients of both the replaced and replacement material is known, i.e., the weight percentages of the ingredients in each material adds to 100 percent or more.
- C. This formula is satisfied:

$$\frac{(ER2a) + (ER2b) + (ER2n..)}{(ESL2a) (ESL2b) (ESL2n..)} < \frac{(ER1a) + (ER1b) + (ER1n..)}{(ESL1a) (ESL1b) (ESL1n..)}$$

Where:

ER1a-n = Emission Rates (ERs) of air contaminant ingredients in material being replaced.

ER2a-n = Maximum proposed ERs of air contaminant ingredients in replacement material.

ESL1/2a-n = short-term screening level in $\mu\text{g}/\text{m}^3$ per lb/hr of air contaminants in replaced/replacement materials as specified in the current publication of the Texas Commission on Environmental Quality (TCEQ) Effects Screening Level (ESL) list or as derived by the TCEQ Toxicology Section on request.

- D. This condition allows for changes in products and formulations, but does not allow for any increase in annual emissions from any emission point listed on the MAERT.

RECORD KEEPING

9. General Condition No. 7 regarding information and data to be maintained on file is supplemented as follows and shall be used to demonstrate compliance with Special Condition No(s). *, *, and * and the MAERT:
- A. Environmental Data Sheets or Material Safety Data Sheets for materials in use.
 - B. Actual (daily/weekly/monthly) hours of operations, (daily/weekly/monthly) material usage.
 - C. A monthly record of the air contaminant emissions from Emission Points (specify) (EPNs) in lb/hr as a (daily/weekly/monthly) average and in tons per year (TPY) for the rolling 12 previous months.
 - D. A monthly record of individual and total hazardous air pollutant emissions in TPY for the rolling 12 previous months.
 - E. If using the Outlet Grain Loading method for PM emissions:

Vendor data of the baghouse(s) and the dust collector(s) with estimated outlet grain loading and pressure drop working range for EPNs (specify).
 - F. (Daily/Weekly/Monthly) records of pressure drop readings for the baghouse(s) and the dust collector(s).
 - G. Records of addition/replacement of air contaminants showing how Special Condition No. (specify) is satisfied and when the addition/replacement occurred.
 - H. Field records of quarterly opacity observations as prescribed in 40 CFR 60, Appendix A, Test Method (9 and/or 22, as applicable).

- I. (As applicable) Records of oxidizer 4-hour average temperatures.
- J. (As applicable) Records of AVO inspections.
- K. (As applicable) Bypass zero flow recordings or valve inspections.

The records required by this permit may be maintained in hard copy or electronic format.

*As applicable; there may be any number of added records required in order to verify compliance with requirements of various industry specific or add-on control special conditions.

POLLUTION PREVENTION

- 10. All spills shall be cleaned up immediately.
- 11. All volatile waste shall be stored in sealed containers until removed from the site in accordance with applicable regulations.
- 12. Towels, rags, or other absorbent materials used for cleanup shall be placed into sealed containers immediately after use and shall be kept in storage until properly removed from the site.
- 13. All fillers, additives, and other powdery materials shall be handled in such a manner as to minimize dust emissions. Material collected in the dust collector shall be stored in closed containers until removed from the site by a licensed transporter or disposal service.

TESTING (for thermal oxidizers)

- 14. Initial: One-time sampling of the (specify) capture and add-on control systems shall be conducted to:
 - A. Ensure all emissions from the (specify) are captured and (specify) percent of (specify) emissions are destroyed.
 - B. Measure total organic compound concentration from the thermal oxidizer (EPN #) to verify that the hourly emission rate does not exceed that specified on the MAERT.
 - C. Specific requirements are as follows:

- (1) Submit proposed methods to accomplish the sampling required by Special Condition No. # A and B for approval to the Air Permits Division Director and TCEQ (specify) Regional Office, with a copy to the TCEQ Compliance Support Division in Austin within 30 days after reaching normal operating conditions of the (specify) and the thermal oxidizer.
- (2) Once the methods are approved, schedule a pretest meeting with TCEQ (specify) Regional Office at least 45 days in advance of sampling. The purpose of the meeting is to review the test details to include sampling and measuring procedures to be used, the forms required for recording the pertinent data, and the format and content of the test report as outlined in Chapter 14, TCEQ Sampling Procedures Manual.
- (3) Sampling shall be completed no later than six months after submission of proposed sampling plans (paragraph (1) above).
- (4) A sampling report, which shall document the enclosure capture and thermal oxidizer destruction efficiencies and the resultant organic compound emission rate from the oxidizer in lbs/hr, shall be prepared and distributed within 30 days after completion of sampling to the TCEQ (specify) Regional Office, TCEQ Austin Compliance Support Division, and TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division.