



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

**Application No: 13-04024
Fac ID: 1318590419**

DATE: 10/27/2005

Horizons, Incorporated
David Cozzi
18531 South Miles Road
Warrensville Heights, OH 44128

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA



**Permit To Install
Terms and Conditions**

**Issue Date: 10/27/2005
Effective Date: 10/27/2005**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 13-04024

Application Number: 13-04024
Facility ID: 1318590419
Permit Fee: **\$100**
Name of Facility: Horizons, Incorporated
Person to Contact: David Cozzi
Address: 18531 South Miles Road
Warrensville Heights, OH 44128

Location of proposed air contaminant source(s) [emissions unit(s)]:
**18531 South Miles Road
Warrensville Heights, Ohio**

Description of proposed emissions unit(s):
Modification to add reference to OAC Rule 3745-21-09(F) -- K001.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	8.58

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property,
and/or Equipment

Applicable Rules/Requirements

OAC Rule 3745-21-09(F)

K001 - Aluminum and polyester (film/similar to paper) coating and cutting operation consisting of a 24" gravure coating line with a three (3) zone, 30-foot long drying oven controlled by a thermal incinerator when applying non-compliant coatings.

OAC Rule 3745-31-05(A)(3)

Modification

The terms and conditions of this permit supercede the terms and conditions of PTI 13-04024 originally issued on 2/20/2003 and the modification issued on 9/25/2003.

OAC Rule 3745-21-09(E)

40 CFR 60, Subpart TT

Applicable Emissions
Limitations/Control Measures

VOC Limit:

Process 1 (compliant): 8.58 TPY

Process 1 (non-compliant):
 0.1 TPY

Process 2 (compliant):
 6.08 TPY(5,472 kg/yr)

Process 2 (non-compliant):
 0.053 TPY(47.7 kg/yr)

The requirements of this rule include compliance with the requirements of OAC Rule 3745-21-09(F) and 40 CFR 60, Subpart TT.

See A.2.a. and A.2.e.

The emission limitation specified by this rule is less stringent than 40 CFR 60, Subpart TT.

2.9 lbs VOC/gal of coating, excluding water and exempt solvents.

4.8 lbs VOC/gal of solids when employing a control system (thermal incinerator)

See A.2.b., A.2.c and A.2.d. below

2. Additional Terms and Conditions

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- 2.a** There are two (2) processes identified in this permit and from this point shall be referred to as "Process 1" and "Process 2."
Process 1 is defined as the operation of the coating line (K001) coating polyester materials (described as film, most similar to paper coating) as regulated in OAC 3745-21-09(F).
Process 2 is defined as the operation of the coating line (K001) coating aluminum materials as regulated in OAC 3745-21-09(E) and Federal New Source Performance Standards, 40 CFR 60, Subpart TT.
- 2.b** During Process 2, per 40 CFR 60, Subpart TT, the permittee shall not cause to be discharged into the atmosphere more than 0.28 kilogram VOC per liter of coating solids applied for each calendar month during which the emissions unit does not use an emission control device.
- 2.c** During Process 2, Per 40 CFR 60, Subpart TT, the permittee shall not cause to be discharged into the atmosphere more than a value between 0.14 and 0.28 kg VOC/liter of coating solids applied for each calendar month when intermittently using an emission control device operated at the most recently demonstrated overall efficiency.
- 2.d** When the aluminum coating line is in operation and non-compliant coatings are used, Process 2, additional operational restrictions, monitoring and recordkeeping requirements, and reporting, testing and miscellaneous requirements apply to this emissions unit as identified below.
- 2.e** The annual emission limitations were established by assuming that each separate process could operate exclusively throughout the year. The allowable limits are not cumulative.

B. Operational Restrictions

1. The permittee shall operate the thermal incinerator to control emissions when applying non-compliant coatings .

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information each month that Process 1 is in operation when using compliant coatings:

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- a. The name and identification number of each coating employed;
 - b. The volume, in gallons, of each coating employed;
 - c. The VOC content of each coating, in pounds per gallon, as applied;
 - d. The VOC content of each coating excluding water and exempt solvents, in pounds per gallon, as applied;
 - e. The total VOC emissions from all coatings employed, in pounds [summation of (b*c) for each coating employed].
- 2.** In accordance with OAC rule 3745-21-09(B)(3)(j), the permittee shall collect and record the following information each month that Process 1 is in operation when using non-compliant coatings (thermal incinerator in use):
- a. The name and identification number of each coating used;
 - b. The mass of VOC per unit volume of coating solids, as applied, the volume solids content, as applied, and the volume, as applied, of each coating;
 - c. The maximum VOC content (mass of VOC per unit volume of coating solids, as applied) or the daily volume-weighted average VOC content (mass of VOC per unit volume of coating solids, as applied) of all the coatings;
 - d. The calculated, controlled VOC emission rate, in mass of VOC per unit volume of coating solids, as applied. The controlled VOC emission rate shall be calculated using:
 - i. Either the maximum VOC content or the daily volume-weighted VOC content recorded in accordance with paragraph (B)(3)(j)(iii) of OAC rule 3745-21-09; and
 - ii. The overall control efficiency for the control equipment as determined during the most recent emission test that demonstrated that the source was in compliance;
 - e. A log or record of operating time for the capture (collection) system, control

device, monitoring equipment, and the associated coating line;

- f. For the thermal incinerator, all three-hour periods of operation during which the average combustion temperature was more than fifty degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated that the source was in compliance;
- g. The name and identification number of each coating employed when using the incinerator;
- h. The volume, in gallons, of each coating employed when using the incinerator;
- i. The VOC content of each coating, in pounds per gallon, as applied when using the incinerator;
- j. The total VOC emissions from all coatings employed when using the incinerator, in pounds [summation of (h*i) for each coating employed multiplied by the incinerator efficiency determined from the most recent compliance test].

Items C.2.a through C.2.f above shall be use for the purpose of determining compliance with the emission limitation contained in Section E.1.b. Items C.2.g through C.2.j shall be used to determine compliance with the annual emission limitation contained in Section E.1.d.

- 3. The permittee shall collect and record the following information each month that Process 2 is in operation when using compliant coatings:
 - a. The name and identification number of each coating employed;
 - b. The volume, in gallons, of each coating employed;
 - c. The VOC content of each coating, in pounds per gallon, as applied;
 - d. The total VOC emissions from all coatings employed, in pounds [summation of (b*c) for each coating employed];
 - e. The density of each coating (Dc), as received, in kilograms per liter;
 - f. The density of each VOC-solvent added to coatings (Dd) in kilograms per liter;

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- g. The volume of each coating consumed (L_c), as received, in liters;
- h. the volume of each VOC-solvent added to coatings (L_d) in liters;
- i. The mass of VOC's used ($M_o + M_d$) during each calendar month;
- j. The proportion of VOC's in each coating (W_o), as received, in fraction by weight;
- k. The proportion of solids in each coating (V_s), as received, in fraction by volume;
- l. The volume of each coating consumed (L_c), as received, in liters;
- m. The volume-weighted average mass of VOC's used per unit volume of coating solids applied during the calendar month (G).

Items C.3.a through C.3.d above shall be used to determine compliance with the annual emission limitation contained in Section E.2.b. Items C.3.e through C.3.m above shall be determined in accordance with Section E.2.a for the purpose of determining compliance with the emission limitation contained in that section.

- 4. Maintain records of the following for each month that Process 2 is in operation when intermittently using a control device:
 - a. The total volume of coating solids applied without the control device in operation (L_{sn}) during each calendar month;
 - b. The total volume of coating solids applied with the control device in operation (L_{sc}) during each calendar month;
 - c. The mass of VOC's used without the control device in operation ($M_{on} + M_{dn}$) during each calendar month;
 - d. The volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied without the control device in operation (G_n) during each calendar month;
 - e. The mass of VOC's used with the control device in operation ($M_{oc} + M_{dc}$) during each calendar month;

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- f. The volume-weighted average of the total mass of VOC's used per unit volume of coating solids applied with the control device in operation (G_c) during each calendar month;
- g. The fraction (F) of total VOC's emitted by an affecting facility that enters the control device;
- h. The destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device;
- i. The overall reduction efficiency (R);
- j. The volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month;
- k. The emission limit (S) for each calendar month;
- l. The name and identification number of each coating employed when using the incinerator;
- m. The volume, in gallons, of each coating employed when using the incinerator;
- n. The VOC content of each coating, in pounds per gallon, as applied when using the incinerator;
- o. The total VOC emissions from all coatings employed when using the incinerator, in pounds [summation of ($m \cdot n$) for each coating employed multiplied by the incinerator efficiency determined from the most recent compliance test].

Items C.4.a through C.4.k above shall be determined in accordance with Section E.2.d for the purpose of determining compliance with the emission limitation contained in that section. Items C.4.l through C.4.o shall be used to determine compliance with the annual emission limitation contained in Section E.2.c.

5. Where compliance with the numerical limit specified in Section E.2.b. is achieved through the use of low VOC-content coatings without the use of emission control

Emissions Unit ID: K001

devices, the operator shall compute and record the average VOC content of coatings applied during each calendar month according to the equations provided within that Section.

6. Where compliance with the limit specified in Section E.2.e. is achieved through the intermittent use of emission control devices, the operator shall compute and record the average VOC content of coatings applied during each calendar month according to the equations provided within that Section.
7. For the operation of the thermal incinerator, the permittee shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with the limits for use of non-compliant coatings (thermal incinerator in use) . This device shall have an accuracy of ± 2.5 °C. or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. Each operator shall also record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in any thermal incinerator used to control emissions from an affected facility remains more than 28 °C (50 °F) below the temperature at which compliance with the limits in Section A.2.c above was demonstrated during the most recent measurement of incinerator efficiency required by 40 CFR Part 60.8. The records required by 40 CFR Part 60.7 shall identify each such occurrence and its duration.

D. Reporting Requirements

1. The following are reporting requirements regarding Process 1:
 - a. The permittee shall notify the Cleveland Division of Air Quality (CDAQ) in writing of any monthly record showing the use of coatings in excess of 2.9 pounds of VOC per gallon (uncontrolled). This notification shall include a copy of such record and shall be sent to CDAQ within 30 days following the end of the calendar month.
 - b. In accordance with OAC rule 3745-21-09(B)(3)(k), the permittee shall notify CDAQ in writing of any daily record showing that the calculated, controlled VOC emission rate exceeds the 4.8 pounds of VOC per gallon of solids limitation when operating the thermal incinerator. A copy of such record shall be sent to CDAQ within forty-five days after the exceedance occurs.
 - c. In accordance with OAC rule 3745-21-09(B)(3)(m), the permittee shall submit to CDAQ in writing quarterly summaries of the records required by Sections C.2.e

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and C.2.f of this permit. These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

- d. The permittee shall notify CDAQ in writing if the calculated yearly VOC emission rate from K001 exceeds the allowable yearly emissions limitation of 8.58 tons (for compliant coatings) or 0.1 ton (for non-compliant coatings controlled by thermal incinerator). The notification shall include a copy of such record and shall be sent to CDAQ within 45 days after the exceedance occurs.
- 2.** The following are reporting requirements regarding Process 2:
- a. The permittee shall notify CDAQ in writing of any monthly record showing the discharge into the atmosphere of more than 0.28 kg VOC/liter of coating solids. This requirement does not include the specified non-compliant coating used in conjuncture with the emission control device (incinerator). This notification shall include a copy of such record and shall be sent to CDAQ within 30 days following the end of the calendar month.
 - b. Where compliance with the numerical limits specified in Section A.2.c is achieved through the use of low VOC-content coatings without emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, the permittee shall include in the initial compliance report required by 40 CFR Part 60.8 the weighted average of the VOC content of coatings used during a period of one calendar month.
 - c. Where compliance with Section A.2.c is achieved through the intermittent use of a control device, the initial compliance report shall include separate values of the weighted average VOC content of coatings used with and without the control device in operation.
 - d. Where compliance with Section A.2.c is achieved through the use of an emission control device that destroys VOC's, the permittee shall include the following data in the initial compliance report required by 40 CFR Part 60.8:
 - (i) The overall VOC destruction rate used to attain compliance with Section A.2.c and the calculated emission limit used to attain compliance with Section A.2.c; and,

- (ii) The combustion temperature of the thermal incinerator used to attain compliance with Section A.2.c.
- e. Following the initial performance test, the permittee shall identify, record, and submit a written report to the CDAQ every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids is greater than the limit specified under Sections E.2.b and E.2.e. These reports shall be sent to CDAQ by April 30, July 31, October 31 and January 31 of each year and shall reflect the previous calendar quarter. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to CDAQ (semiannually) by July 31 and January 31 of each calendar year.
- f. The permittee shall also submit reports at the frequency specified in 40 CFR Part 60.7(c) when the incinerator temperature drops below the operating temperature as defined under Section C.7. If no such periods occur, the permittee shall state this in the report.
- g. The permittee shall notify CDAQ in writing if the calculated yearly VOC emission rate from K001 exceeds the allowable yearly emissions limitation of 6.08 tons (for compliant coatings) or 0.053 ton (for non-compliant coatings controlled by thermal incinerator). The notification shall include a copy of such record and shall be sent to CDAQ within 45 days after the exceedance occurs.

E. Testing Requirements

1. Compliance with the emissions limitation in Section A.1. of these terms conditions shall be determined for Process 1 in accordance with the following methods:
 - a. Coating VOC Limitation:

2.90 lbs VOC/gal of coating, excluding water and exempt solvents - for compliant coating and not using emission controls

Applicable Compliance Method:

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Compliance with the limitations shall be based upon record keeping requirements specified in Section C.1.

b. Coating VOC Limitation:

4.8 lbs VOC/gal of solids - for non-compliant coating and using emission controls

Applicable Compliance Method:

Compliance with the limitations shall be based upon record keeping requirements specified in Section C.2.

c. Emission Limitation:

8.58 tons VOC/year, Process 1 (compliant coatings)

(the above limit is based on assuming Process 1 operates exclusively throughout the year - for compliant coating and not using emission controls)

Applicable Compliance Method:

Compliance with the limitations shall be demonstrated by the record keeping requirements specified in Section C.1. The annual emissions shall be determined by summing the monthly emissions determined from Section C.1.e for the calendar year and dividing by 2000 pounds per ton.

d. Emission Limitation:

0.1 ton VOC/year, Process 1 (non-compliant coatings)

(the above limit is based on assuming Process 1 operates exclusively throughout the year - for non-compliant coating and using emission controls)

Applicable Compliance Method:

Compliance with the limitations shall be demonstrated by the record keeping requirements specified in Section C.2. The annual emissions shall be determined by summing the monthly emissions determined from Section C.2.j for

the calendar year and dividing by 2000 pounds per ton.

2. Compliance with the emissions limitation in Section A.1. of these terms and conditions shall be determined for Process 2 in accordance with the following methods:

a. Emission Limitation:

Not greater than 0.28 kg VOC/liter (2.36 lbs VOC/gal) of coating solids applied for each calendar month when not using emission controls

Applicable Compliance Method:

The permittee shall use the following procedures for the emissions unit when not using a capture system and control device to comply with the emissions limits specified above. The permittee shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating using Method 24. CDAQ may require the permittee who uses formulation data supplied by the manufacturer of the coatings to determine the VOC content of coatings using Method 24 or an equivalent or alternative method. The permittee shall determine the volume of coating and the mass of VOC-solvent added to coatings from company records on a monthly basis.

- (i) If each individual coating used by the facility has a VOC content, as received, that is equal to or less than 0.28 kg/liter of coating solids, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application. Otherwise, compliance shall be determined as shown below in E.2.b.ii - E.2.b.iv.
- (ii) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied during each month. The weighted average of the total mass of VOC's used per unit volume of

coating solids applied each calendar month is determined by the following procedures:

- (a) Calculate the mass of VOC's used ($M_o + M_d$) during each calendar

month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

where:

n is the number of different coatings used during the calendar month;

m is the number of different VOC solvents added to coatings used during the calendar month;

D_c = density of each coating, as received (kilograms per liter);

D_d = density of each VOC-solvent added to coatings (kilograms per liter);

L_c = the volume of each coating consumed, as received (liters);

L_d = the volume of each VOC-solvent added to coatings (liters);

M_d = the mass of VOC-solvent added to coatings (kilograms);

M_o = the mass of VOC's in coatings consumed, as received (kilograms); and,

W_o = the proportion of VOC's in each coating, as received (fraction by weight).

- (b) Calculate the total volume of coating solids used (L_s) in each calendar month by the following equation:

$$L_s = \sum_{i=1}^n V_{si} L_{ci}$$

where:

n is the number of different coatings used during the calendar month;

V_s = the proportion of solids in each coating, as received (fraction by volume); and,

L_c = the volume of each coating consumed, as received (liters).

- (c) Calculate the volume-weighted average mass of VOC's used per

unit volume of coating solids applied (G) during the calendar month by the following equation:

$$G = \frac{M_o + M_d}{L_s}$$

- (iii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during the calendar month by the following equation:

$$N = G$$

- (iv) Where the volume-weighted average mass of VOC's discharged to the atmosphere per unit volume of coating solids applied (N) is equal to or less than 0.28 kg/liter, the affected facility is in compliance.

b. Emission Limitation:

6.08 tons VOC/year (5,472 kg VOC/yr)

(the above limit is based on assuming Process 2 operates exclusively throughout the year - for compliant coating and not using emission controls)

Applicable Compliance Method:

Compliance with the limitations shall be demonstrated by the record keeping and reporting requirements specified in Section C.3. The annual emissions shall be determined by summing the monthly emissions determined from Section C.3.d for the calendar year and dividing by 2000 pounds per ton.

c. Emission Limitation:

0.053 ton VOC/year (47.7 kg VOC/yr)

(the above limit is based on assuming Process 2 operates exclusively throughout the year - for non-compliant coating and using emission controls)

Applicable Compliance Method:

Compliance with the limitations shall be based upon record keeping requirements specified in Section C.4. The annual emissions shall be determined by summing the monthly emissions determined from Section C.4.q for the calendar year and dividing by 2000 pounds per ton.

d. Emission Limitation:

Not greater than a value between 0.14 and 0.28 kg VOC/liter of solids applied for each calendar month for this emissions unit when intermittently using an emission control device operated at the most recently demonstrated overall efficiency.

Applicable Compliance Method:

The permittee shall use the following procedures when intermittently using a capture system and a control device to comply with the emission limit specified above.

- (i) Calculate the total volume of coating solids applied without the control device in operation (L_{sn}) during each calendar month using the following equation:

$$L_{sn} = \sum_{i=1}^n V_{si} L_{ci}$$

Where:

n is the number of coatings used during the calendar month without the control device in operation.

- (ii) Calculate the total volume of coating solids applied with the control device in operation (L_{sc}) during each calendar month using the following equation:

$$L_{sc} = \sum_{i=1}^n V_{si} L_{ci}$$

Where:

n is the number of coatings used during the calendar month with the control device in operation.

- (iii) Calculate the mass of VOC's used without the control device in operation ($M_{on} + M_{dn}$) during each calendar month using the following equation:

$$M_{on} + M_{dn} = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

Where:

n is the number of different coatings used without the control device in operation during the calendar month; and,

m is the number of different VOC-solvents added to coatings used without the control device in operation during the calendar month.

- (iv) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied without the control device in operation (G_n) during each calendar month using the following equation:

$$G_n = \frac{M_{on} + M_{dn}}{L_{sn}}$$

- (v) Calculate the mass of VOC's used with the control device in operation ($M_{oc} + M_{dc}$) during each calendar month for each affected facility using the following equation:

$$M_{oc} + M_{dc} = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj}$$

Where:

n is the number of different coatings used with the control device in operation during the calendar month; and,

m is the number of different VOC-solvents added to coatings used with the control device in operation during the calendar month.

- (vi) Calculate the volume-weighted average of the total mass of VOC's used per unit volume of coating solids applied with the control device in operation (G_c) during each calendar month for each affected facility using the following equation:

$$G_c = \frac{(M_{oc} + M_{dc})}{L_{sc}}$$

- (vii) Determine the fraction (F) of total VOC's emitted by an affecting facility that enters the control device using the following equation:

$$F = \frac{\sum_{i=1}^I C_{bi} Q_{bi}}{\sum_{i=1}^I C_{bi} Q_{bi} + \sum_{j=1}^p C_{fj} Q_{fj}}$$

Where:

I is the number of gas streams entering the control device;

p is the number of gas streams emitted directly to the atmosphere;

C_b is the VOC concentration in each gas stream entering the control device (parts per million by volume, as carbon);

C_f is the VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon); and

Q_b is the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour).

- (viii) Determine the destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^n Q_{bi} C_{bi} - \sum_{j=1}^m Q_{aj} C_{aj}}{\sum_{i=1}^n Q_{bi} C_{bi}}$$

$$\sum_{i=1}^n Q_{bi} C_{bi}$$

n is the number of gas streams entering the control device;
 m is the number of gas streams leaving the control device and entering the atmosphere.

Ca is the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon); and

Qa is the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour)

- (ix) Determine the overall reduction efficiency (R) using the following equation:

$$R = EF$$

- (x) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month for each affected facility using the following equation:

$$N = \frac{G_n L_{sn} + G_c L_{sc} (1 - R)}{L_{sn} + L_{sc}}$$

- (xi) Calculate the emission limit (S) for each calendar month using the following equation:

$$S = \frac{0.28 L_{sn} + 0.1 G_c L_{sc}}{L_{sn} + L_{sc}}$$

or

$$S = \frac{0.28 L_{sn} + 0.14 L_{sc}}{L_{sn} + L_{sc}}$$

whichever is greater.

- (xii) If the volume-weighted average mass of VOC's emitted to the atmosphere

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for each calendar month (N) is less than or equal to the calculated emission limit (S) for the calendar month, the facility is in compliance. Each monthly calculation is a performance test.

3. To determine the VOC content of each coating used in both Process 1 and Process 2, USEPA Method 24 (40 CFR 60, Appendix A), or data provided by the formulator of the coating, shall be used for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance of affected facilities, the results of the Method 24 analysis shall be adjusted as described in Section 4.4 of Method 24.

4. USEPA Method 25 (40 CFR 60, Appendix A) shall be used to determine compliance with 40 CFR Part 60.462, if required, both for measuring the VOC concentration in each gas stream entering and leaving the control device on each stack equipped with an emission control device and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere.

F. Miscellaneous Requirements

None