Facility ID: 0125040570 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

Go to Part II for Emissions Unit P001
Go to Part II for Emissions Unit P002

Facility ID: 0125040570 Emissions Unit ID: P001 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

   (a) None.

2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

   (a) None.

A. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
hot dip zinc kettle with pickling, rinse, cleaning, acid dip, flux dip and chromate dip tanks	OAC rule 3745-31-05(A)(3) (PTI 01-6661)	Particulate emissions shall not exceed 3.4 pounds per hour and 14.83 tons per year. Zinc emissions shall not exceed 0.99 pounds per hour and 4.38 tons per year.
	OAC rule 3745-17-07	Visible emissions (VE) of particulate matter may not exceed 20% opacity as a 6-minute average.

2. **Additional Terms and Conditions**

   (a) The permittee shall eliminate visible PE through the employment of BAT at all times that steel is hot-dipped in the large kettle area, in accordance with the PTI application. These measures shall include, but not be limited to, the following:

   i. all visible emissions (VE) of particulate matter generated from fluxing, chromate and hot-dip galvanizing shall be exhausted through 6 roof fans operating at 27,000 cfm at 44 feet above the floor;

   ii. emissions from caustic cleaning, rinsing and acid pickling dip tanks may be vented through the main exhaust blower; and

   iii. fugitive VE from the hot-dip galvanizing area shall not be vented through natural draft openings at ground level, including access openings for equipment.
   The hourly and annual PE limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

B. **Operational Restrictions**

1. The permittee shall close any natural draft opening through which fugitive VE may be emitted as determined by observation of VE or by smoke tube. The permittee may employ smoke tubes to verify airflow is being pulled through natural draft openings at ground level into the hot-dip galvanizing area.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly operate ventilation equipment to ensure adequate dispersion of VE and maintain a record of the downtime of the ventilation equipment, when this steel is being hot dip galvanizing.

2. The permit to install for these emissions units in this permit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutants: zinc
   TLV (ug/m3):

Maximum Hourly Emission Rate (lbs/hr):
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):
MAGLC (ug/m3):

3. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used (typically for coatings or

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

4. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the ventilation equipment was not in operation, when steel was being hot-dip galvanized. These reports are due by the date described in Part 1- General Terms and Condition of this permit under section (A)(1).

E. **Testing Requirements**

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:
PE shall not exceed 3.4 lbs PM/hr.

Applicable Compliance Method:
If required, compliance may be demonstrated by calculation using emission factors of 0.58 lb PM/ton steel (1976, EPA-905/4-76-002 table 6.2) multiplied by 10 tons steel/hr multiplied by 16 lbs zinc/100 lbs PM (1960 Journal Air Pollution Control) multiplied by 1.07 for zinc pickup (1990 AGA) multiplied by 1.24 (zinc oxide) equal 1.23 lbs ZNO/hr.
Emissions Limitation:
PE shall not exceed 14.83 tons per year .

Applicable Compliance Method:
Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).
Emission Limitation:
Visible emissions (VE) of particulate matter may not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

F. **Miscellaneous Requirements**

1. None

Facility ID: 0125040570 Emissions Unit ID: P002 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

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1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the

exception of those listed below which are enforceable under state law only.

(a) None.

2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) None.

A. **Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
hot dip zinc kettle with pickling, rinse, cleaning, acid dip, flux dip and chromate dip tanks	OAC rule 3745-31-05(A)(3) (PTI 01-6661)	Particulate emissions shall not exceed 3.4 pounds per hour and 14.83 tons per year. Zinc emissions shall not exceed 0.99 pounds per hour and 4.38 tons per year.
	OAC rule 3745-17-07	Visible emissions (VE) of particulate matter may not exceed 20% opacity as a 6-minute average.

2. **Additional Terms and Conditions**

(a) The permittee shall eliminate visible PE through the employment of BAT at all times that steel is hot-dipped in the large kettle area, in accordance with the PTI application. These measures shall include, but not be limited to, the following:

i. all visible emissions (VE) of particulate matter generated from fluxing, chromate and hot-dip galvanizing shall be exhausted through 6 roof fans operating at 27,000 cfm at 44 feet above the floor;

ii. emissions from caustic cleaning, rinsing and acid pickling dip tanks may be vented through the main exhaust blower; and

iii. fugitive VE from the hot-dip galvanizing area shall not be vented through natural draft openings at ground level, including access openings for equipment.
The hourly and annual PE limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with these limits.

B. **Operational Restrictions**

1. The permittee shall close any natural draft opening through which fugitive VE may be emitted as determined by observation of VE or by smoke tube. The permittee may employ smoke tubes to verify airflow is being pulled through natural draft openings at ground level into the hot-dip galvanizing area.

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly operate ventilation equipment to ensure adequate dispersion of VE and maintain a record of the downtime of the ventilation equipment, when this steel is being hot dip galvanizing.

2. The permit to install for these emissions units in this permit was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutants: zinc
TLV (ug/m3):
Maximum Hourly Emission Rate (lbs/hr):
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):
MAGLC (ug/m3):

3. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

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b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

4. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not

consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. **Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods of time during which the ventilation equipment was not in operation, when steel was being hot-dip galvanized. These reports are due by the date described in Part 1- General Terms and Condition of this permit under section (A)(1).

E. **Testing Requirements**

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
Emissions Limitation:
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Applicable Compliance Method:
If required, compliance may be demonstrated by calculation using emission factors of 0.58 lb PM/ton steel (1976, EPA-905/4-76-002 table 6.2) multiplied by 10 tons steel/hr multiplied by 16 lbs zinc/100 lbs PM (1960 Journal Air Pollution Control) multiplied by 1.07 for zinc pickup (1990 AGA) multiplied by 1.24 (zinc oxide) equal 1.23 lbs ZNO/hr.
Emissions Limitation:
PE shall not exceed 14.83 tons per year .

Applicable Compliance Method:
Compliance with the annual limitation shall be assumed as long as compliance with the hourly limitation is maintained (the annual limitation was calculated by multiplying the hourly limitation by 8760, and then dividing by 2000).
Emission Limitation:
Visible emissions (VE) of particulate matter may not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:
If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

F. **Miscellaneous Requirements**

1. None