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Facility Name: **Ferro Corporation**

Application Number: **03-3089**

Date: **November 4, 1998**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(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 are inadequate or cannot meet applicable standards.

If the construction of the proposed source(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 Ohio Administrative Code (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

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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 applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement

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of operation.

SOURCE OPERATION 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 and regulations.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
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AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Ferro Corporation** located in **Williams** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>3745-17-11 (B) (2)</u>
P034 (mod)	0.40 TPH Colored thermoplastic pellets extruder with baghouse, Line 15; modification to increase the capacity of the unit	Use of a baghouse, and compliance with the terms and conditions of this permit	3745-31-05	

3745-17-07
(A)

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
	ton OC per year			
Permit Allowable Emissions and/or Control/Usage Requirements	Visible particulate emissions shall not exceed twenty percent opacity as a six-minute average, except as provided by rule *			
0.02 grain per day standard cubic foot (dscf) of exhaust gases (equates to 0.81 lb PE/hr & 3.55 tons PE per year)				
0.15 lb organic compound (OC) per hour & 0.23				

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- * The emissions limit based on this applicable rule is less stringent than the limit established pursuant to OAC rule 3745-31-05.

SUMMARY
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year*</u>
Particulate	3.55*
Emissio ns	0.23*
Organic Compounds	

- * The above modification has resulted in a 0.14 ton/yr OC emissions increase. There has been no increase in particulate emissions (PE) emissions because the allowable limit was based on the maximum outlet grain loading for the baghouse.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and

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federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA Northwest District Office, 347 North Dunbridge Road, Bowling Green, Ohio 43402.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

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.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

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Introduction:

The permittee has submitted a permit to install modification to increase the capacity of the colored thermoplastic pellets extruder with baghouse (emission unit number P034) from 0.15 tons per hour to 0.40 tons per hour.

A. Applicable Emission Limitations and/or Control Requirements

1. No additional emission limitations and/or control requirements other than those specified in the Air Emissions Summary.

B. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 1 to 6 inches of water while the emissions unit is in operation.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse once per day.
2. The permittee shall collect the following monthly records for resin usage in emissions unit P034:
 - a. identification of each resin processed;
 - b. pounds of each resin processed;
 - c. annual pounds of each resin processed for the year to date.; and,
 - d. the total monthly and annual (year to date) organic compound emissions for this emissions unit. The emissions shall be determined based on the following formulas:

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Total Organic Emissions (TOC) = \sum (pounds of each resin processed per month) * (EF)

Total Annual Organic Emissions = \sum (TOC) * (X months of operation)

X = year to date months of operation

Where EF is the appropriate emission factor for each resin processed. The factors are as follows:

- a. Polypropylene (homopolymer) - 33.4 lbs OC emitted/million lbs
 - b. Polypropylene (copolymer)) - 80.3 lbs OC emitted/million lbs
 - c. Polyethylene (low density) - 35.3 lbs OC emitted/million lbs
 - d. Polyethylene (linear low density) - 14.2 lbs OC emitted/million lbs
 - e. Polystyrene - 189 lbs OC emitted/million lb
 - f. Acrylonitrile Butadiene Styrene (ABS) - 189 lbs OC emitted/million lbs
 - g. Ethylene-Vinyl Acetate (EVA) - 123.4 lbs OC emitted/million lbs
 - h. Styrene Acrylonitrile (SAN) - 189 lbs OC emitted/million lbs
 - i. Polyethylene Terephalate (PET) - 35.3 lbs OC emitted/million lbs
4. 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,

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if a strip recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

D. Reporting Requirements

1. The permittee shall submit quarterly written reports for emissions unit P034 to the Ohio EPA Northwest District Office of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, 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 taken. 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.

E. Testing Requirements (Compliance Method Determinations)

1. Compliance with the emission limitation(s) in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.15 lbs OC/hr

Applicable Compliance Method: The hourly OC emission limitation is based on the emission units potential to emit*. Therefore, no hourly or monthly recordkeeping, deviation reporting, or compliance method calculations are required to demonstrate compliance with this limitation.

*The potential to emit for this emissions unit was based on a maximum process weight rate of 800 lbs/hr and a worst case organic compound emission factor of 189 lbs OC/10⁶ lbs of resin processed.

- b. Emission Limitation: 0.23 ton OC/yr

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Applicable Compliance Method: Compliance shall be based upon the recordkeeping specified in section 2.d.

- c. Emission Limitation: 0.02 grain/dscf (0.81 lb PE/hr) & 3.55 TPY

Applicable Compliance Method: The emission limits of 0.81 lb PE/hr & 3.55 TPY was determined by using the following calculation:

lb PE/hr = (0.02 grains/dscf) (1 lb/7000 grains) (Flow Rate of 4700 dry standard cubic feet per minute (DSCFM) for the baghouse) (60 mins/hr) & 8760 hours of operation for the year

If required, the permittee shall demonstrate compliance by testing in accordance with Method 5, 40 CFR Part 60, Appendix A.

- d. Emission Limitation: 20 percent opacity as a six minute average except as provided by rule.

Applicable Compliance Method: Compliance shall be determined in accordance with OAC rule 3745-17-03 (B) (1).

Note: No term or condition specifying a method for demonstrating compliance with any emission limitation or other requirement of this permit shall preclude the use by any person of any credible evidence to establish compliance with or a violation of this permit, the Clean Air Act, or any implementing regulations or rules promulgated thereunder.

F. Miscellaneous

- 1. None