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Facility Name: **IMCO Recycling**

Application Number: **06-5727**

Date: **July 21, 1999**

### **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.

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### **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 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 &amp; 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 **IMCO Recycling** located in **Tuscarawas** 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>
P912		Reverberatory Aluminum
	P913	Furnace with Injected Lime
		Baghouse

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Reverberatory Aluminum Furnace with Injected Lime Baghouse	BAT <u>Determination</u>	Compliance with OEPA Air Toxics Policy	Applicable Federal & <u>OAC Rules</u>	
	Injected Lime Baghouse;	Compliance with OEPA Air Toxics Policy	3745-31-05	3745-17-07 3745-17-11
				40 CFR Part 63 Subpart RRR
			3745-17-07 3745-17-11	
			40 CFR Part 63 Subpart RRR	
			3745-31-05	
	Injected Lime Baghouse;			

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal &amp; OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
Permit Allowable Mass Emissions and/or Control/Usage Requirements	<p>AP-42 emission factors, shall not exceed 3.9 pounds per hour nor 17.1 tons per year.</p> <p>The requirements of these rules are less stringent than the BAT limit above.</p>	<p>The requirements of these rules are less stringent than the BAT limit above.</p>	<p>Currently proposed standard (see additional special terms and conditions).</p>	
Emissions of particulate matter shall not exceed 3.0 pounds per hour nor 13.2 tons per year.	<p>Currently proposed standard (see additional special terms and conditions).</p> <p>Emissions of particulate matter shall not exceed 3.0 pounds per hour nor 13.2 tons per year.</p>	<p>Emissions of particulate matter shall not exceed 3.0 pounds per hour nor 13.2 tons per year.</p>		
Visible emissions shall not exceed 10% for any six-minute average.	<p>Visible emissions shall not exceed 10% for any six-minute average.</p>			
Emissions of nitrogen oxides, based on	<p>Emissions of nitrogen oxides, based on AP-42 emission factors, shall not exceed 3.9 pounds per hour nor 17.1 tons per year.</p>			

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SUMMARY  
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM	26.4
NO <sub>x</sub>	34.2

**PERFORMANCE TEST REQUIREMENTS**

1. The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. Two copies of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine testing equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.
  - a. A completed Intent to Test form shall be submitted to the appropriate Ohio EPA District Office or Local Air Pollution Control Agency where the original permit application was filed. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
  - b. Two copies of the test results shall be submitted within 30 days after the completion of the performance

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test.

- c. Tests shall be performed for the following source(s) and pollutants(s):

**Source**

**Pollutant(s)**

**P912, P913**

**PM, HCl, HF**

**RECORD(S) RETENTION AND AVAILABILITY**

All records required by this Permit to Install shall be retained on file for a period of not less than three years unless otherwise indicated by Ohio Environmental Protection Agency. All records shall be made available to the Director, or any representative of the Director, for review during normal business hours.

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#### **REPORTING REQUIREMENTS**

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Southeast District Office, 2195 Front Street, Logan, OH 43138.**

#### **WASTE DISPOSAL**

The owner/operator shall comply with any applicable state and 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, Southeast District Office, 2195 Front Street, Logan, OH 43138.**

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.

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### **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**

#### **A. DEMINIMUS EMISSIONS UNITS**

There are ten natural gas fired burners associated with the operation of P912 and P913 which will be used for preheating, cleaning of crucibles, and casting. Five have a maximum input capacity of 0.75 million BTU per hour and five have a maximum input capacity of 2.5 million BTU per hour. According to AP-42 emission factors, each of these burners has a potential to emit, at maximum operation, of less than ten pounds per day and are therefore not included in this permit pursuant to OAC rule 3745-15-05.

#### **B. OPERATIONAL RESTRICTION**

Emissions units P912 and P913 shall be controlled with a properly operated and maintained fabric filter utilizing lime injection.

#### **C. AIR TOXIC POLICY CLARIFYING LANGUAGE**

1. This permit allows the use of materials specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitations specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-

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level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: hydrogen fluoride

TLV (ug/m3): 2600

Maximum Hourly Emission Rate (lbs/hr): 1.33

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 9.11

MAGLC (ug/m3): 61.90

Pollutant: hydrogen chloride

TLV (ug/m3): 7500

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11.39

MAGLC (ug/m3): 178.6

2. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":
  - a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table;
  - b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission

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- limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and
  - d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.
3. The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:
- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
  - b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and
  - c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.
4. For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

**D. BAGHOUSE OPERATIONAL RESTRICTION**

The pressure drop across the baghouse shall be maintained within the range established during the initial compliance test while the emissions unit is in operation. This pressure drop range may be modified as a result of subsequent stack testing.

**E. RECORDKEEPING REQUIREMENTS ASSOCIATED WITH THE AIR TOXIC POLICY REQUIREMENTS**

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1. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
  - a. background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and
  - b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

**F. BAGHOUSE PRESSURE DROP MONITORING AND RECORDKEEPING REQUIREMENT**

The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, 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 on a once per shift basis.

**G. BAGHOUSE PRESSURE DROP REPORTING REQUIREMENT**

The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

**H. REPORTING REQUIREMENTS**

1. The permittee shall submit required reports in the following manner:

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- a. Reports of any required monitoring and/or recordkeeping 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.)

**I. EMISSION TESTING REQUIREMENTS**

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing of P912 and P913 shall be conducted within 6 months of startup.
  - b. The emission testing of P912 and P913 shall be conducted to demonstrate compliance with the particulate matter emission limit, and for hydrogen fluoride and hydrogen chloride in order to verify compliance with the OEPA Air Toxics Policy.
  - c. The test methods employed to demonstrate compliance with the allowable mass emission rates shall be among those listed in 40 CFR Part 60, Appendix A for each tested pollutant. Alternative

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approved test methods may be used with prior approval from the Ohio EPA.

- d. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity and using worst case raw materials, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. If the emissions unit is not able to be tested at or near its maximum capacity within the first six months of operation, this testing will need to be repeated within 60 days after attaining that production schedule.

2. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal

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of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

**J. COMPLIANCE DETERMINATION FOR PARTICULATE MATTER**

Particulate emissions shall not exceed 3.0 pound per hour nor 13.2 tons per year.

Applicable Compliance Method

Compliance with the particulate matter emission limit of 3.0 pound per hour shall be determined based on emission testing conducted in accordance with OAC rule 3745-17-03. The ton per year emission limitation was derived by multiplying by 8760 hours per year and dividing by 2,000 pounds per tons.

**K. COMPLIANCE DETERMINATION FOR VISIBLE EMISSIONS OF PARTICULATE EMISSIONS**

10% opacity, as a six minute average.

Applicable Compliance Method:

OAC rule 3745-17-03(B) (1)

**L. COMPLIANCE DETERMINATION FOR NITROGEN OXIDES**

Nitrogen oxides emissions shall not exceed 3.9 pounds per hour nor 17.1 tons per year.

Applicable Compliance Method

The pound per hour emission limitation was derived by multiplying the maximum hourly natural gas usage capacity of 0.0381 MMCF by the appropriate emission factor of 100 # NOx/MMCF (AP-42, Fifth Edition, Supplement C, Table 1.4-1). The ton per year emission limitation was derived by multiplying the maximum hourly emissions by 8760 hours per year and dividing by 2,000 pounds per tons. Since these values reflect maximum capacity, no monitoring or recordkeeping is necessary to document the ongoing compliance status.

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**M. INITIAL NOTIFICATION REPORTING REQUIREMENT FOR MACT STANDARD**

1. Within 120 days after promulgation of the 40 CFR 63 Subpart RRR, 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.

**N. COMPLIANCE DEMONSTRATION REPORTING REQUIREMENT FOR MACT STANDARD**

1. Within 60 days following completion of the required compliance demonstration activity specified in the 40 CFR 63 Subpart RRR, 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;

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- 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 the 40 CFR 63 Subpart RRR for secondary aluminum,
- 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 the 40 CFR 63 Subpart RRR for secondary aluminum.