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Facility Name: **Willowdale Compressor Corporation**

Application Number: **15-1348**

Date: **June 23, 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.

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.

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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 & 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 **Willowdale Compressor Corporation** located in **Stark** 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>
P001	412 HP, 3.44 MMBtu/hr, Internal combustion, Reciprocating, 4-cycle, High Compression Ratio, Natural Gas-Fired Engine w/Pre- Stratified Charge System; Used to Power a Compressor;
P001 cont'd	412 HP, 3.44 MMBtu/hr, Internal Combustion Reciprocating, 4-cycle, High Compression Ratio, Natural
P002	Caterpillar Engine #1 Model G398NA HCR
P002 cont'd	412 HP, 3.44 MMBtu/hr, Internal Combustion Reciprocating, 4-cycle, High Compression Ratio, Natural

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Ohio EPA Source <u>Number</u>	Source Identification <u>Number</u>	BAT <u>Determination</u>	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage <u>Requirements</u>
Gas-Fired Engine w/Pre-Stratified Charge System; Used to Power a Compressor; Caterpillar Engine #2 Model G398NA HCR				

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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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BAT
Determination

Use of Natural
 Gas as the
 Fuel
 (See
 Additional
 Special Terms
 and
 Conditions)

Use of Natural
 Gas as the Fuel
 (See Additional
 Special Terms
 and Conditions)

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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>
			Applicable Federal & <u>OAC Rules</u>	
	3745-17-07 (A) (1) (1-31-98)			
		3745-17-07 (A) (1) (1-31-98)		
	3745-17-11 (B) (5) (a) (1-31-98)			
		3745-17-11 (B) (5) (a) (1-31-98)		
	3745-31-05 (4-27-98)			
		3745-31-05 (4-27-98)		

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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>
	Permit Allowable Mass Emissions and/or Control/Usage Requirements	Carbon Monoxide: 2.72 pounds/hour; 11.9 tons/year	1.09 pounds/hour; 4.8 tons/year	
		Organic Compounds: 1.09 pounds/hour; 4.8 tons/year	particulates: 1.07 pounds PM/hour; 4.69 tons PM/year	
	Visible particulate emissions from this emissions unit's stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.	Particulates 1.07 pounds/hour; 4.69 tons/year		
	Particulate: 0.31 pound/MMBTU actual heat input; 1.07 pounds/hour; 4.69 tons/year	Particulate: 0.31 pound PM/MMBTU actual heat input; 1.07 pounds PM/hour; 4.69 tons PM/year		
	Nitrogen Oxides: 4.54 pounds/hour; 19.9 tons/year	Nitrogen Oxides: 4.54 pounds/hour; 19.9 tons/year		
		Carbon Monoxide: 2.72 pounds/hour; 11.9 tons/year		
		Organic Compounds:		

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SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
OC	9.6
PM	9.38
NO _x	39.8
CO	23.8

Note:

The information contained under the Summary of Emissions section of the Permit to Install is for informational purposes only and is not enforceable.

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.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Canton Air Pollution Control, 420 Market Avenue North, Canton, Ohio 44702-1544.**

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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 **Canton Air Pollution Control, 420 Market Avenue North, Canton, Ohio 44702-1544.**

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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ADDITIONAL SPECIAL TERMS AND CONDITIONS

I. Emissions Unit P001 - Caterpillar Engine #1

A. Operational Restrictions (P001)

1. The only fuel to be burned in this emissions unit shall be natural gas.
2. This engine shall be equipped with a Pre-Stratified Charge (PSC) system to reduce NO_x emissions.

B. Monitoring and/or Recordkeeping Requirements (P001)

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. Permittee shall check and record on a weekly basis the following information. On any week this emissions unit is not operated these checks do not have to be conducted. These checks shall be done while the unit is operating under normal conditions:
 - a. Verify that the Digital Tracking System (DTS) controller has power.
 - b. Observe action of the Air Dilution Control Valve (ADCV).
 - c. Check pressure output to ADCV.
 - d. Check the temperature (via touch) at the end of the air dilution straws (one per cylinder) for consistency.
3. 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 copies of all reports required by this permit. Such records may be maintained in computerized form.

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C. Reporting Requirements (P001)

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas is burned in this emissions unit. Each report shall be submitted to the Canton Local Air Agency within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each week in which this emissions unit operated when all of the checks identified in Condition B.2 above were not performed. Each report shall be submitted to the Canton Local Air Agency within 30 days after the deviation occur and shall identify the checks that were not performed.

D. Compliance Methods and Testing Requirements (P001)

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

a. Emission Limitation

Visible particulate emissions from this emissions unit's stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with procedures specified in OAC 3745-17-03 (B)(1) using the methods and procedures specified in USEPA Reference Method 9.

b. Emission Limitation

0.1 lb PM/MMBtu and 0.42 lb PM/hr

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Applicable Compliance Method:

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Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (4.2 MMBtu/hr) by the AP-42 Table 3.2-2 emission factor of 0.029 lb PM/MMBtu.

c. Emission Limitation

1.09 lbs OC/hr

Applicable Compliance Method:

Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (3.44 MMBtu/hr) by the manufacturer's emission factor of 0.317 lb OC/MMBtu.

d. Emission Limitation:

4.54 lbs NO_x/hr

Applicable Compliance Method:

Annual exhaust gas analysis

e. Emission Limitation:

2.72 lbs CO/hr

Applicable Compliance Method

Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (3.44 MMBtu/hr) by the manufacturer's emission factor of 0.79 lb CO/MMBtu.

f. Emission Limitation:

4.69 tons PM/yr, 4.8 tons OC/yr, 19.9 tons NO_x/yr and 11.9 tons CO/yr

Applicable Compliance Method:

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Multiply the hourly emission rate limit times 8,760 hours/year and then divide by 2,000 lbs/ton.

2. The permittee shall conduct, or have conducted, exhaust gas analysis for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted within 6 months after the issuance of this permit and annually thereafter, unless the requirement to conduct additional testing has been waived by the Canton Local Air Agency .
 - b. The emissions testing shall be conducted to demonstrate compliance with the combined allowable mass emission rate for nitrogen oxides of 4.54 lbs/hr.
 - c. The emissions test shall consist of an exhaust gas analysis conducted with an ECOM emissions analyzer or comparable device. This analysis shall be conducted in a manner approved by the Canton LAA.
 - d. This emissions unit shall be operated at maximum capacity during the emissions test.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton 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 Canton Local Air Agency's refusal to accept the results of the emission test(s).

Personnel from the Canton 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

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emissions unit and/or the performance of the
control equipment.

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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 Canton Local Air Agency within 30 days following completion of the test(s) unless a longer time period has been approved by the Canton Local Air Agency.

E. Miscellaneous Requirements (P001)

1. None

II. Emissions Unit P002 - Caterpillar Engine #2

A. Operational Restrictions (P002)

1. The only fuel to be burned in this emissions unit shall be natural gas.
2. This engine shall be equipped with a Pre-Stratified Charge (PSC) system to reduce NO_x emissions.

B. Monitoring and/or Recordkeeping Requirements (P002)

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. Permittee shall check and record on a weekly basis the following information. On any week this emissions unit is not operated these checks do not have to be conducted. These checks shall be done while the unit is operating under normal conditions:
 - a. Verify that the Digital Tracking System (DTS) controller has power.
 - b. Observe action of the Air Dilution Control Valve (ADCV).
 - c. Check pressure output to ADCV.

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- d. Check the temperature (via touch) at the end of the air dilution straws (one per cylinder) for consistency.

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3. 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 copies of all reports required by this permit. Such records may be maintained in computerized form.

C. Reporting Requirements (P002)

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas is burned in this emissions unit. Each report shall be submitted to the Canton Local Air Agency within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify each week in which this emissions unit operated when all of the checks identified in Condition B.2 above were not performed. Each report shall be submitted to the Canton Local Air Agency within 30 days after the deviation occur and shall identify the checks that were not performed.

D. Compliance Methods and Testing Requirements (P002)

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

a. Emission Limitation

Visible particulate emissions from this emissions unit's stack shall not exceed twenty percent opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method

Compliance shall be determined by visible emission evaluations performed in accordance with procedures specified in

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OAC 3745-17-03 (B)(1) using the methods
and procedures specified in USEPA
Reference Method 9.

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b. Emission Limitation

0.1 lb PM/MMBtu and 0.34 lb PM/hr

Applicable Compliance Method:

Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (3.44 MMBtu/hr) by the emission factor of 0.1 lb PM/MMBtu.

c. Emission Limitation

1.09 lbs OC/hr

Applicable Compliance Method:

Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (3.44 MMBtu/hr) by the manufacturer's emission factor of 0.317 lb OC/MMBtu.

d. Emission Limitation:

4.54 lbs NO_x/hr

Applicable Compliance Method:

Annual exhaust gas analysis

e. Emission Limitation:

2.72 lbs CO/hr

Applicable Compliance Method

Compliance shall be based upon multiplying the maximum hourly gas burning capacity of the emissions unit (3.44 MMBtu/hr) by the manufacturer's emission factor of 0.79 lb CO/MMBtu.

f. Emission Limitation:

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1.49 tons PM/yr, 4.8 tons OC/yr, 19.9 tons
NO_x/yr and 11.9 tons CO/yr

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Applicable Compliance Method:

Multiply the hourly emission rate limit times 8,760 hours/year and then divide by 2,000 lbs/ton.

2. The permittee shall conduct, or have conducted, exhaust gas analysis for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted within 6 months after the issuance of this permit and annually thereafter, unless the requirement to conduct additional testing has been waived by the Canton Local Air Agency .
 - b. The emissions testing shall be conducted to demonstrate compliance with the combined allowable mass emission rate for nitrogen oxides of 4.54 lbs/hr.
 - c. The emissions test shall consist of an exhaust gas analysis conducted with an ECOM emissions analyzer or comparable device. This analysis shall be conducted in a manner approved by the Canton LAA.
 - d. This emissions unit shall be operated at maximum capacity during the emissions test.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Canton 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 Canton Local Air Agency's refusal to accept the results of the emission test(s).

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Personnel from the Canton 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 Canton Local Air Agency within 30 days following completion of the test(s) unless a longer time period has been approved by the Canton Local Air Agency.

E. Miscellaneous Requirements (P002)

1. None