

SUPPLEMENT to PERMIT No. 183-01

Quanex Corporation
MacSteel Division
Jackson, Michigan

August 9, 2001

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **[R 336.1201(1)]**
2. If the installation, reconstruction, relocation, or alteration of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the person to whom this permit was issued, or the designated authorized agent, shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install. **[R 336.1201(4)]**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R 336.1201(6)(b)]**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **[R 336.1201(8), Section 5510 of Act 451, PA 1994]**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R 336.1219]**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **[R 336.1901]**
7. The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. The notice shall be provided no later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the District Supervisor within ten days, with the information required in this rule. **[R 336.1912]**

8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of Act 451, PA 1994, and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **[R 336.1301]**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this permit to install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **[R 336.1370]**
13. Except as allowed by Rule 285 (a), (b), and (c), applicant shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R 336.1201(1)]**
14. The Department may require the applicant to conduct acceptable performance tests, at the applicant's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **[R 336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Flexible Group	Emission Unit	Emission Unit Description	Stack Identification	Reference No.
FG-Annealing Furnaces	EU-Annealing Furnace 1	60.2 MMBTU/HR natural gas/propane heat treat furnace.	SV-Annealing Furnace 1	1
	EU-Annealing Furnace 2	38.4 MMBTU/HR natural gas/propane heat treat furnace.	N/A	2

EU-Annealing Furnace 1

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirements
1.1	NOx	EU-Annealing Furnace 1	4.92 Pounds	Per 24-Hours Period	Special Condition No. 1.7	R336.1205, 40 CFR 52.21(c) and (d)
1.2	NOx	EU-Annealing Furnace 1	22 Tons	Per 12-month Rolling Time Period	Special Condition No. 1.8	R336.1205, 40 CFR 52.21(c) and (d)
1.3	CO	EU-Annealing Furnace 1	20 Tons	Per 12-month Rolling Time Period	Special Condition No. 1.8	R336.1205, 40 CFR 52.21(c) and (d)

Material Usage Limits

- 1.4 The applicant shall not combust more than 527 million cubic feet per year of natural gas in the EU-Annealing Furnace 1. **[R336.1205]**
- 1.5 The applicant shall not combust more than 0.06 million cubic feet per hour of natural gas in the EU-Annealing Furnace 1, based upon a 24-hour averaging period. **[R336.1205]**
- 1.6 The only fuels the applicant may burn in the EU-Annealing Furnace 1 are natural gas and propane. **[R336.1205, 40 CFR 52.21(c) and (d)]**

Recordkeeping/Reporting/Notification

- 1.7 Applicant shall determine the hourly amount of natural gas burned. The hourly natural gas usage rate shall be determined as an average over a 24-hour period. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the District Supervisor, Air Quality Division (AQD), the applicant shall use an emission factor of 82 pounds of nitrogen oxides (NOx) emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations for NOx shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1205]**

1.8 The applicant shall keep natural gas usage records, acceptable to the District Supervisor AQD indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EU-Annealing Furnace 1. Based upon these records, the applicant shall calculate the NOx and CO emissions from the EU-Annealing Furnace 1. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the District Supervisor AQD, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned and an emission factor of 76.1 pounds of CO emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1205]**

Stack/Vent Restrictions

1.9 The exhaust gases from EU-Annealing Furnace 1 shall be discharged unobstructed vertically upwards to the ambient air from a stack with the dimensions listed in the Table below.

Process Equipment	Stack & Vent ID	Maximum Stack Diameter (inches)	Minimum Stack Height Above Ground Level (feet)	Applicable Requirements
EU-Annealing Furnace 1	SV-001	80	84	R336.1201(3) 40 CFR 52.12 (c) & (d)

EU-Annealing Furnace 2

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Compliance Method	Applicable Requirements
2.1	NOx	EU-Annealing Furnace 2	3.12 Pounds	Per 24-Hours Period	Special Condition No. 2.7	R336.1205, 40 CFR 52.21(c) and (d)
2.2	NOx	EU-Annealing Furnace 2	13.9 Tons	Per 12-month Rolling Time Period	Special Condition No. 2.8	R336.1205, 40 CFR 52.21(c) and (d)
2.3	CO	EU-Annealing Furnace 2	15 Tons	Per 12-month Rolling Time Period	Special Condition No. 2.8	R336.1205, 40 CFR 52.21(c) and (d)

Material Usage Limits

- 2.4 The applicant shall not combust more than 336 million cubic feet per year of natural gas in the EU-Annealing Furnace 2. **[R336.1205]**
- 2.5 The applicant shall not combust more than 0.038 million cubic feet per hour of natural gas in the EU-Annealing Furnace 2, based upon a 24-hour averaging period. **[R336.1205]**
- 2.6 The only fuels the applicant may burn in the EU-Annealing Furnace 2 are natural gas and propane. **[R336.1205, 40 CFR 52.21(c) and (d)]**

Recordkeeping/Reporting/Notification

- 2.7 Applicant shall determine the hourly amount of natural gas burned. The hourly natural gas usage rate shall be determined as an average over a 24-hour period. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the District Supervisor AQD, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations for NOx shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1205]**
- 2.8 The applicant shall keep natural gas usage records, acceptable to the District Supervisor AQD, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EU-Annealing Furnace 2. Based upon these records, the applicant shall calculate the NOx and CO emissions from the EU-Annealing Furnace 2. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the District Supervisor AQD, the applicant shall use an emission factor of 82 pounds of NOx emitted per million cubic feet of gas burned and an emission factor of 76.1 pounds of CO emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **[R336.1205]**
- 2.9 None of the operations within the EU-Annealing Furnace 2 shall be directly vented to the outside atmosphere. **[R336.1225]**