

SUPPLEMENT TO PERMIT NO. 704-91A
Kent Foundry Co., Inc.
Greenville, Michigan
September 2, 1999

GENERAL CONDITIONS

1. Rule 201(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.
2. Rule 201(4) - 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, P.O. 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.
3. Rule 201(6)(a) - If this Permit to Install is issued for a process or process equipment located at a stationary source that is subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, trial operation is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install and until the appropriate terms and conditions of this Permit to Install have been incorporated into the Renewable Operating Permit. Upon incorporation of the appropriate terms and conditions into the Renewable Operating Permit, this Permit to Install shall become void.
4. Rules 201(6)(b) - 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.
5. Rule 201(8) and Section 5510 of Act 451, P.A. 1994 - 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 Departments' rules or the Clean Air Act.
6. Rule 219 - 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.
7. Rule 901 - 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.
 8. Rule 912 - 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 not 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 10 days, with the information required in this rule.
 9. 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, P.A. 1994 or the Clean Air Act.
 10. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
 11. Operation of this equipment may be subject to other requirements of Part 55 of Act 451, P.A. 1994, and the rules promulgated thereunder.
 12. Rule 301 - 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.
 - a) A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% 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.
 13. Rule 370 - 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).

14. Rule 285 - 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.
15. 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.

SPECIAL CONDITIONS
(24 Special Conditions)
September 2, 1999

Process A

1. The particulate emission from the two electric induction furnaces with fume rings, including the melting, inoculation, pouring and cooling process steps, and the core making process, including sand heating and mixing, the core oven, and the oil sand operation, hereinafter Process A, shall not exceed 0.01 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
2. The particulate emission rate from Process A shall not exceed 1.39 pounds per hour nor 6.05 tons per year. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
3. Applicant shall limit the total metal charge rate to the two electric induction furnaces to 6,000 tons per year, based on a 12-month rolling time period as determined at the end of each calendar month. Monthly furnace charge rates shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. This condition is necessary to assure compliance with the provisions of Rule 205(1) and Rule 225.
4. The volatile organic compound emissions from Process A shall not exceed 26.5 pounds per hour nor 47.7 tons per year. The volatile organic compound emissions rate from Process A is 2.53 pounds of volatile organic compounds per ton of sand using the OCMA Weight Loss Method developed by the Ohio Cast Metals Association. This condition is necessary to assure compliance with Rule 225.
5. Applicant shall limit the use of sand for molding operations to 3,140 tons per month, and 37,680 tons per year. This condition is necessary to assure compliance with the requirements of Rule 205(1).

6. Applicant shall limit the use of sand binder compounds for molding operations to the rates listed in the following table:

Binder Compound	Limitation, pounds per hour	Limitation, tons per year
Resin, Part A	94.2	203.5
Resin, Part B	75.6	145.9
Catalyst	9.5	20.4

This condition is necessary to assure compliance with the requirements of Rule 205(1) and Rule 225.

7. Monthly usage rates of sand, binding agents, release agents, and mold coating materials shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. This condition is necessary to assure compliance with Rule 205(1).
8. Applicant shall not operate Process A unless the fume collection rings, exhaust collection hoods described in Air Use Permit to Install Application No. 704-91A and the fabric filter collector (baghouse No. 1) are installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
9. Applicant shall not operate Process A unless the broken bag detector system is installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
10. The exhaust gases from Process A shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 35 inches at an exit point not less than 60 feet above ground level. This condition is necessary to assure compliance with the requirements of Rule 201(3).

Process B

11. The particulate emission from the sand reclaiming process consisting of a Wheelabrator-Frye 96" table sand blaster and a Wheelabrator-Frye sand reclaimer module, belts, elevators, hoppers and silos, hereinafter Process B, shall not exceed 0.01 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
12. The particulate emission rate from Process B shall not exceed 1.0 pounds per hour nor 4.30 tons per year. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.

13. Applicant shall not operate Process B unless the fabric filter collector (baghouse No. 2) is installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
14. Applicant shall not operate Process B unless unless the broken bag detector system is installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
15. The exhaust gases from Process B shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 35 inches at an exit point not less than 60 feet above ground level. This condition is necessary to assure compliance with the requirements of Rule 201(3).

Process C

16. The particulate emission from the grinding and finishing process, including a stationary grinding station consisting of two pedestal grinders and one chop saw, hereinafter Process C, shall not exceed 0.01 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
17. The particulate emission rate from Process C shall not exceed 0.28 pounds per hour nor 1.21 tons per year. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
18. Applicant shall not operate Process C unless the fabric filter collector (baghouse No. 3) is installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
19. Applicant shall not operate Process C unless unless the broken bag detector system is installed and operating properly. This condition is necessary to assure compliance with the emission limits which have been established pursuant to Rule 331.
20. The exhaust gases from Process C shall be discharged unobstructed vertically upwards to the ambient air from a stack with a maximum diameter of 24 inches at an exit point not less than 50 feet above ground level. This condition is necessary to assure compliance with the requirements of Rule 201(3).

All Processes

21. Visible emissions from each baghouse stack shall not exceed 5% opacity. This condition is necessary to assure compliance with the emission limits for particulate matter which have been established pursuant to Rule 331.
22. The volatile organic compound limitation in Special Condition No. 4 in conjunction with the sand binder compounds described in the permit application shall also maintain the combined emissions of Hazardous Air Pollutants (HAPS) from Processes A, B, and C below 9 tons per rolling twelve-month period for each individual HAP and below 22 tons per rolling twelve-month period for all HAPS combined. This condition is necessary to assure compliance with Rule 225.
23. Applicant shall report any product formulation changes and/or compositional changes in any agents (binding agents, mold release agents, and mold coating agents) and shall receive written approval from the Air Quality Division for any product which has been altered or any deviation from the products reviewed during issuance of this Permit to Install prior to its use in production. This condition does not apply to testing of products for possible use in production provided that the duration of such testing does not exceed five days in any month for any product. This condition is necessary to assure compliance with the emission limits established pursuant to Rule 225.
24. After a determination by and written notification from the Chief, Air Quality Division, that emissions from the applicant's foundry operations are causing an unreasonable interference with the common public right to live free from foul or noxious odors, the applicant shall immediately cease the foundry operations until the cause of the odors can be corrected to the satisfaction of the Chief, Air Quality Division, or the Michigan Air Pollution Control Commission. The notification shall include the reasons for this determination. The applicant shall not restart the foundry operations until the Chief, Air Quality Division, or the Michigan Air Pollution Control Commission has approved the restart in writing. Information submitted by the applicant indicating the odors have been eliminated shall be evaluated by the Air Quality Division as expeditiously as possible. The order of the Chief, Air Quality Division, shall not continue in effect beyond the next scheduled or special Commission meeting unless the applicant agrees to a different period in writing. The applicant may request the chairman of the Commission to schedule a special meeting consistent with the Open Meetings Act (1976, P.A. 267) to consider this cessation order. At that meeting, the Commission may continue, modify or rescind the cessation order. This condition is necessary to assure compliance with Rule 901.