Iowa Department of Natural Resources
Air Quality Construction Permit

Permit Holder

Firm: Blackhawk Foundry & Machine Company

Contact:

Larry M. Thomsen

(563) 323-3621

323 S. Clark St.
Davenport, IA 52807

Responsible Party:

James R. Grafton
President

(563) 323-3621

323 S. Clark St.
Davenport, IA 52807

Permitted Equipment

Emission Unit(s): Multiple emission units (See Condition 11 for the list)

Control Equipment: Wet Scrubber and Baghouse

Emission Point: 204

Equipment Location: 323 S. Clark St.
Davenport, IA 52807

Plant Number: 82-01-004

Permit No.	Proj. No.	Description	Date	Testing
84-A-055	84-064	Original permit (Superceded permit 75-A-197).	5/31/84	Yes
84-A-055-S1	01-734	Amended PM_{10} emission rate for SIP.	8/19/02	Yes

Under the Direction of the Director of
the Department of Natural Resources

PERMIT CONDITIONS

The owner or operator of the facility shall assure that the installation, operation, and maintenance of this equipment is in compliance with all of the following conditions.

1. Departmental Review

This permit is issued based on information submitted by the applicant. Any misinformation, false statements or misrepresentations by the applicant shall cause this permit to be void. In addition, the applicant may be subject to criminal penalties according to Iowa Code Section 455B.146A.

This permit is issued under the authority of 567 Iowa Administrative Code (IAC) 22.3. The proposed equipment has been evaluated for conformance with Iowa Code Chapter 455B; 567 IAC Chapters 20-31; and 40 CFR Parts 51, 52, 60, 61 and 63 and has the potential to comply.

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. The DNR assumes no liability, directly or indirectly, for any loss due to damage to persons or property caused by, resulting from, or arising out of the design, installation, maintenance or operation of the proposed equipment.

2. Transferability

As limited by 567 IAC 22.3(3)"f", this permit is not transferable from one location to another or from one piece of equipment to another, unless the equipment is portable. When portable equipment for which a permit has been issued is to be transferred from one location to another, the DNR shall be notified in writing at least thirty (30) days prior to transferring to the new location. The owner will be notified at least ten (10) days prior to the scheduled relocation if the relocation will cause a violation of the National Ambient Air Quality Standards. In such case, a supplemental permit shall be required prior to the initiation of construction of additional control equipment or equipment modifications needed to meet the standards.

This permit is for the construction and operation of the specific emission unit(s), control equipment and emission point as described in this permit and in the application for this permit. Any owner or operator of the specified emission unit(s), control equipment or emission point, including any person who becomes an owner or operator subsequent to the date on which this permit is issued, is responsible for compliance with the provisions of this permit. No person shall construct, install, reconstruct or alter this emission unit, control equipment or emission point without the required revisions to this permit.

3. Construction

This permit shall become void if construction on the proposed project has not been initiated within eighteen (18) months after the date of the issuance of this permit and completed within thirty-six (36) months after the date of the issuance of this permit.

It shall be the responsibility of the owner to ensure that construction conforms to the final plans and specifications as submitted and that adequate operation and maintenance is provided to ensure that no condition of air pollution is created. A supplement to this permit shall be obtained if the owner proposes changes to the final submitted plans and specifications.

4. Credible Evidence

As stated in 567 IAC 21.5 and also in 40 CFR Part 60.11(g), where applicable, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions specified in this permit or any provisions of 567 IAC Chapters 20 through 31.

5. Owner Responsibility

Issuance of this permit shall not relieve the owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan (SIP), and any other requirements of local, state, and federal law.

The owner or operator of any emission unit or control equipment shall maintain and operate the equipment and control equipment at all times in a manner consistent with good practice for minimizing emissions, as required by paragraph 567 IAC 24.2(1) *"Maintenance and Repair"*.

6. Disposal of Contaminants

The disposal of materials collected by the control equipment shall meet all applicable rules.

7. Excess Emissions

Excess emissions during a period of startup, shutdown, or cleaning of control equipment are not a violation of the emission standard if it is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions except when another regulation applicable to the unit or process provides otherwise. Cleaning of control equipment, which does not require the shutdown of process equipment, shall be limited to one six-minute period per one-hour period. An incident of excess emissions other than the above is a violation and may be subject to criminal penalties according to Iowa Code 455B.146A. If excess emissions are occurring, either the control equipment causing the excess shall be repaired in an expeditious manner, or the process generating the emissions shall be shutdown within a reasonable period of time, as specified in 567 IAC 24.1.

An incident of excess emissions shall be orally reported to the appropriate DNR field office within eight (8) hours of, or at the start of, the first working day following the onset of the incident. A written report of an incident of excess emissions shall be submitted as a follow-up to all required oral reports within seven (7) days of the onset of the upset condition.

8. Notification, Reporting and Recordkeeping

A. The owner shall furnish the DNR the following written notifications:
   1. The date construction, installation, or alteration is initiated postmarked within thirty (30) days following initiation of construction, installation, or alteration;
   2. The actual date of startup, postmarked within fifteen (15) days following the start of operation;
   3. The date of each compliance test required by Permit Condition 12, at least thirty (30) days before the anticipated compliance test date;
   4. The date of each pretest meeting, at least fifteen (15) days before the proposed meeting date. The owner shall request a proposed test plan protocol questionnaire at least sixty (60) days prior to each compliance test date. The completed questionnaire shall be received by the DNR at least fifteen (15) days before the pretest meeting date;

8. Notification, Reporting and Recordkeeping (Continued)

5. Transfer of equipment ownership, within 30 days of the occurrence;
6. Portable equipment relocation, at least thirty (30) days before equipment relocation.

B. The owner shall furnish DNR with the following reports:
1. Oral excess emissions reports, in accordance with 567 IAC 24.1;
2. Indicator opacity reports in accordance with Opacity Policy 3-b-08;
3. A written compliance demonstration report for each compliance testing event, whether successful or not, postmarked not later than forty-five (45) days after the completion of the test period unless other regulations provide for other notification requirements. In that case, the more stringent reporting requirement shall be met;
4. Operation of this emission unit(s) or control equipment outside of those limits specified in Permit Conditions 10 and 14 and according to the schedule set forth in 567 IAC 24.1.

C. The owner shall send correspondence regarding this permit to the following addresses:

Mr. David Phelps
Construction Permit Supervisor
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, IA 50322
Telephone: (515) 281-8189
Fax: (515) 242-5094

D. The owner shall send correspondence concerning stack testing to:

Stack Testing Coordinator
Air Quality Bureau
Iowa Department of Natural Resources
7900 Hickman Road, Suite 1
Urbandale, Iowa 50322
Telephone: (515) 242-6001
FAX: (515) 242-5127

E. The owner shall send reports and notifications to:

Mr. Chuck Corell Compliance Unit Supervisor Air Quality Bureau Iowa Department of Natural Resources 7900 Hickman Road, Suite 1 Urbandale, IA 50322 Telephone: (515) 281-8448 Fax: (515) 242-5127	DNR Field Office 6 1004 West Madison Washington, IA 52353 Telephone: (319) 653-2135 Fax: (319) 653-2856

F. All data, records, reports, documentation, construction plans, and calculations required under this permit shall be available at the plant during normal business hours for inspection and copying by federal, state, or local air pollution regulatory agencies and their authorized representatives, for a minimum of two (2) years from the date of recording.

9. Permit Violations

Knowingly committing a violation of this permit may carry a criminal penalty of up to $10,000 per day fine and 2 years in jail according to Iowa Code Section 455B.146A.

10. Emission Limits

Pollutant	Lb/Hr	Tons/Yr	Additional Limits	Reference (567 IAC)
PM_{10}	5.46[1, 2]	NA	NA	NAAQS

[1] Emission rate used with the annual melt production restriction in order to make this project a "synthetic minor" for Prevention of Significant Deterioration (PSD) purposes.
[2] Emission rate used in the facility-wide SIP (State Implementation Plan) maintenance plan dispersion modeling to demonstrate no exceedences of the National Ambient Air Quality Standards (NAAQS).

11. Emission Point Characteristics

The following emission units and their respective control equipment vent through EP 204:

Emission Unit Description	Control Equipment	Maximum Capacity
Cupola Ladle (EU 103a)	Baghouse	12 tons/hr
Pour Deck Ladle (EU 103b)	Baghouse	6 tons/hr
Sand Shakeout (EU 106)	Wet Scrubber	18 tons of castings/hr
Muller (EU 109)	Wet Scrubber	130 tons of sand/hr
Return Sand #1 (EU 112)	Wet Scrubber	130 tons of sand/hr
Sand Cooler (EU 113)	Wet Scrubber	130 tons of sand/hr
Sand Screen (EU 114)	Wet Scrubber	130 tons of sand/hr
Return Sand #2 (EU 128)	Wet Scrubber	130 tons of sand/hr

11. Emission Point Characteristics (Continued)

This emission point shall conform to the specifications listed below.

Parameter	Value
Stack Height, (ft, from the ground)	75
Discharge Style	Unobstructed vertical
Stack Opening, (inches, dia.)	56
Exhaust Temperature (^{0}F)	130
Exhaust Flowrate (scfm)	81,000

It shall be the owner's responsibility to ensure that construction conforms with the emission point characteristics stated above. If it is determined that any of the emission point characteristics are different than stated above, the owner must notify the Department and obtain a permit amendment, if required.

12. Initial Performance Testing Requirements

Pollutant	Testing Required	Test Method
PM_{10}	Yes	40 CFR 51, Appendix M, 201A with 202

If specified above, the owner shall verify compliance with the emission limitations contained in Permit Condition 10 within sixty (60) days after achieving maximum production rate and no later than one hundred eighty (180) days after the initial startup date of the proposed equipment. The unit(s) being sampled should be operated in a normal manner at it maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which this unit(s) will be operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that this unit(s) has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether this unit(s) is in compliance.

Each emissions compliance test must be approved by the DNR. Unless otherwise specified by the DNR, each test shall consist of three separate runs. The duration of each run shall be established by the DNR at the pretest meeting. The arithmetic mean of three acceptable test runs shall apply for compliance, unless otherwise indicated by the DNR. The test methods to be used are those stated above unless otherwise approved by the DNR.

12. Initial Performance Testing Requirements (Continued)

A pretest meeting shall be held at a mutually agreeable site no less than fifteen (15) days prior to the date of each test. Representatives from the DNR shall attend this meeting, along with the owner and the testing firm, if any. It shall be the responsibility of the owner to coordinate and schedule the pretest meeting. The owner shall be responsible for the installation and maintenance of test ports. The DNR shall reserve the right to impose additional, different, or more detailed testing requirements.

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13. NSPS and NESHAP Applicability

None of the emission units in this permit are subject to the New Source Performance Standards (NSPS) or the National Emission Standards for Hazardous Air Pollutants (NESHAP) at this time.

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14. Operating Limits

Operating limits for these emissions unit shall be:

A. The combined throughput of EU 103a (Cupola Ladle) and EU 103b (Pour Deck Ladle) shall not exceed 40,500 tons of ductile iron treated per twelve (12) month rolling period.

B. The hours of operation shall not exceed 4,992 hours per twelve (12) month rolling period for each of the following emission units: EU 106 (Sand Shakeout), EU 109 (Muller), EU 112 (Return Sand #1), EU 113 (Sand Cooler), EU 114 (Sand Screen), and EU 128 (Return Sand #2).

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15. Operating Condition Monitoring

All records as required by this permit shall be kept on-site for a minimum of two (2) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. These records shall show the following:

A. For the first twelve (12) months operation, determine the cumulative combined melted metal throughput for EU 103a & 103b for each month of operation.

B. After the first twelve (12) months of operation determine the annual combined melted metal throughput for EU 103a & 103b on a rolling-12-month total for each month of operation.

C. For the first twelve (12) months operation, determine the cumulative hours of operation for each of the following emission units for each month of operation: EU 106, EU 109, EU 112, EU 113, EU 114, and EU 128.

D. After the first twelve (12) months of operation determine the annual hours of operation for each of the following emission units on a rolling-12-month total for each month of operation: EU 106, EU 109, EU 112, EU 113, EU 114, and EU 128.

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16. Continuous Emission Monitoring

Continuous emission monitoring is not required by this permit at this time.

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17. Descriptions of Terms and Acronyms

acfm	Actual cubic foot per minute
Applicant	The owner, company official or authorized agent
CFR	Code of Federal Regulations
Department	Iowa Department of Natural Resources
DNR	Iowa Department of Natural Resources
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous Air Pollutant(s)
IAC	Iowa Administrative Code
MMBtu	One million British thermal units
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide, a criteria pollutant measured as NO_x
Owner	The owner or authorized representative
Permit	This document including permit conditions and all submitted application materials
PM_{10}	Particulate Matter equal to or less than 10 microns in aerodynamic diameter
scfm	Standard cubic foot per minute
SIP	State Implementation Plan
SO_2	Sulfur Dioxide, the measured surrogate for SO_x
SO_x	Sulfur Oxides, a criteria pollutant
VOC	Volatile Organic Compound

END OF PERMIT CONDITIONS