

SUPPLEMENT to PERMIT No. 125-99  
High Grade Materials Company  
Dutton, Michigan  
August 27, 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  
August 27, 1999  
(8 Special Conditions)

1. The particulate emission from the three cement storage silos shall not exceed 0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis. This condition is necessary to assure compliance with Rules 301, 331, 702(a) and 901.
2. The particulate emission from the dry material batcher shall not exceed 0.10 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis. This condition is necessary to assure compliance with Rules 301, 331, 702(a) and 901.
3. The combined particulate emission rate from the three cement storage silos and the dry material batcher shall not exceed 0.76 pounds per hour nor 3.31 tons per year, based upon a 12-month rolling time period as determined at the end of each calendar month. This condition is necessary to assure compliance with Rules 331 and 702(a).
4. Visible emissions from the three cement storage silos and the dry material batcher shall not exceed a 6-minute average of 10% opacity, except as specified in Rule 301(1)(a).
5. The applicant shall not operate the any of the three cement storage silos or the dry material batcher unless the storage silo baghouse and the batcher baghouse are installed and operating properly. This condition is necessary to assure compliance with Rules 310, 331, 702(a) and 901.
6. The exhaust gases from the storage silo baghouse and the dry material batcher shall be discharged unobstructed vertically upwards to the ambient air from stacks having maximum diameters of 30 and 18 inches at exit points not less than 60 and 16 feet above ground level, respectively. This condition is necessary to assure compliance with Rule 901.
7. The applicant shall not operate any of the three storage silos or the dry material batcher unless the fugitive dust control plan specified in Appendix A has been implemented and is maintained. This condition is necessary to assure compliance with Rules 301 and 901.
8. The applicant shall not use as a raw material any asbestos tailing or asbestos containing waste materials in the concrete batch plant pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M.

## **Appendix A Fugitive Dust Plan**

### 1. Site Roadways / Plant Yard

- A. The dust on the site roadways / plant yard will be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Application will be on a semi-monthly basis or as needed.
- B. A record of all applications and sweeping shall be kept on file and made available upon request to the Air Quality Division (AQD).
- C. Speed of vehicles will be posted and limited to 10 mph and any material spillage on roads shall be removed immediately.

### 2. Plant

- A. A spray system will be utilized at strategic locations to reduce and control fugitive emissions as needed at those locations not included in special permit conditions.
- B. All transfer points will have minimal drop distances. The transfer point from the recirculating belt to the feed belt consists of an enclosed chute.

### 3. Storage Piles

- A. Stockpiling of all aggregate will be performed with whelled loaders and mechanical stackers to minimize drop distance and control potential dust problems.
- B. Stockpiles will be watered on an as-needed basis in order to meet the opacity limits included within the permit. A record of all watering shall be kept on file and be made available upon request to the AQD. Moisture content will be maintained at 4 percent to control fugitive dust.

### 4. Truck Traffic

Vehicles operating on-site shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading to a height less than six inches below the top of any side board, side panel or tail gate, otherwise the truck shall be tarped. Vehicles traveling off-site must be tarped.

### 5. AQD/MDEQ Inspection

The provisions and procedures of this plan are subject to adjustment if following an inspection and written notification the AQD finds the fugitive dust requirements and/or the permitted opacity limits are not being met.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
 AIR QUALITY DIVISION  
 PERMIT EVALUATION FORM

08/27/99

APPLICATION NO. YR.Suf.Sup# Permit\_Rvwr S. ZERVAS  
 125 99 0 Pmt ID No. 21338 Rev. Unit GMU Class 1  
 APPLICANT NAME HIGH GRADE MATERIALS CO INC Site Rvwr  
 State Reg. No. N6638 (New No. request date) 08/03/99

Site Owner: Co. Contact (616) 677-1271  
 Location of Source: GARY ROELOFS  
 6869 EAST PARIS AVE SE HIGH GRADE MATERIALS CO INC  
 DUTTON MI 49316 9266 SNOWSLAKE RD  
 GREENVILLE MI 48838

County KENT County No.41 District 1 Temp Site F Soil Remed F

Site Comments:

REASON FOR APPLICATION CONCRETE BATCH PLANT WITH 2 CEMENT BINS

INSTALLATION DATE: PROCESS EQUIPMENT 09/01/99 CONTROL EQUIPMENT 09/01/99

RELATED PERMIT(S) N/A - NONE VOIDS N/A - NONE

POLLUTANTS NETTED OUT FROM PSD REVIEW N/A - NONE

STATE/FED. AIR REG'S SOURCE IS SUBJECT TO? NSPS F, NESHAPS F, PSD F, Act 64 F

SIP Rule No.(s) 201, 301, 331 Other 901

OPT-OUT? F ENFORCEMENT? T

EPA NOTIFICATION REQUIRED? F DATE INFO SENT TO EPA? / /

OFFSETS PROVIDED? F IF YES, HOW MUCH AND FROM WHERE?  
 N/A - NONE

|            |          |               |          |            |          |            |     |
|------------|----------|---------------|----------|------------|----------|------------|-----|
| App_recvd  | 03/22/99 | Log_date      | 04/01/99 | Screened   | 03/24/99 | Adm_Cmplt  | / / |
| Assigned   | 04/01/99 | TecDetrmn     | 06/08/99 | Tec_Cmplt  | 06/08/99 | Site_Aprvd | / / |
| PTI_Aprvd  | 08/27/99 | PTI_Denied    | / /      | PTI_Void   | / /      |            |     |
| Total_days | 0        | Complete_days | 0        | Eval_days  | 0        |            |     |
| Pmt_ToTox  | / /      | Pmt_FrTox     | / /      | PmtToMod   | / /      | PmtFrMod   | / / |
| Add_Inf01  | 05/28/99 | Co_Rspons1    | 06/08/99 | Add_Info2  | / /      | Co_Rspons2 | / / |
| Draft_Pmt  | 08/03/99 | Co_Accept     | 08/10/99 | Scr_Letter | / /      | To_Dist    | / / |

Reviewed By: *Sgt M Zervas* Date: 27 AUG 99  
 Approved By: *Phil C. Mitchell* Date: 08/27/99

PERMIT NO. YR.Suf.Sup#  
 125 99 0

PERMIT No. Yr.Suf.Sup. ESTAB No.  
125 99 0 N6638

08/27/99

**DESCRIPTION OF SOURCE & RELATED CONTROL EQUIP./TECHNOLOGY**

Applicant seeks a PTI for a fixed concrete batch plant. The plant will be equipped with three cement silos. Each of the silos will be controlled by a common 1500 CFM baghouse. The plant also has a dry material weigh batcher controlled by a 180 CFM baghouse. Baghouse specifications are provided via vendor data in the permit file PTI 125-99.

The plant has a maximum hourly production capacity of 110 cubic yards and a maximum annual production capacity of 315,000 cubic yards, based on a rolling 12-month total.

The three cement silos are identical:

60 ft tall  
500 CFM airflow

The silos baghouse has the following characteristics:

1500 CFM airflow  
5 CFM/ft<sup>2</sup> air to cloth ratio (average of: 4 for fly ash and 6 for cement)  
7500 ft<sup>2</sup> surface area of the bags (250 ft<sup>2</sup>/bag x 30 bags)

The batcher vent baghouse has the following characteristics:

180 CFM airflow  
7.83 CFM/ft<sup>2</sup> air to cloth ratio (Specified as a maximum)  
322 ft<sup>2</sup> surface area of the bags (23 ft<sup>2</sup>/bag x 14 bags)

**DESCRIPTION OF ANY REQUIRED MONITORING: (CEMS, PROCESS, CONTROL EQUIP.)**

N/A - NONE

**CONTROL EQUIPMENT BYPASS, IF ANY, & REASON WHEN BYPASS OCCURS:**

N/A - NONE

**PROCESS/CONTROL WASTE AND DISPOSAL**

Consistent with applicable laws and regulations.

**GENERAL COMMENTS**

All emissions from this plant will be particulates. PM emissions will be both fugitive and stack-based resulting from general plant activities and the three silos and batcher vent, respectively.

Allowable stack emissions will be:

$1680 \text{ CFM} \times 60 \text{ min/hr} \times 0.075 \text{ lb/CF} \times 0.10 \text{ lb/1000 lb} = 0.756 \text{ lb/hr}$

$0.756 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 1 \text{ ton/2000 lb} = 3.31 \text{ tons/yr}$

All other emissions will be fugitive. Due to the anticipated low quantity of fugitive emissions and their intermittent nature, neither mass emission estimates nor air quality modeling were conducted.

**BASIS FOR RECOMMENDATION:**

Based on the analyses above and concurrence on draft permit conditions by Gary Roelofs of High Grade Materials and Theresa Walker of the Grand Rapids District Office during separate telephone conversations held on 10 AUG 99, this permit is approvable.



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125 99 0

ESTAB No.

08/27/99

EMISSIONS FROM EQUIPMENT COVERED BY THIS PERMIT

| Pol.<br>Codes | Expected |       | Allowable |       | Limits                        |
|---------------|----------|-------|-----------|-------|-------------------------------|
|               | PPH      | TPY   | PPH       | TPY   |                               |
| PM10          | 0.750    | 3.300 | 0.756     | 3.310 | 0.10 lb/1000 lb exhaust gases |
| SO2           | 0.000    | 0.000 | 0.000     | 0.000 |                               |
| CO            | 0.000    | 0.000 | 0.000     | 0.000 |                               |
| NO2           | 0.000    | 0.000 | 0.000     | 0.000 |                               |
| VOC           | 0.000    | 0.000 | 0.000     | 0.000 |                               |

ATTAINMENT STATUS PM10 CO O3  
Attainment X X X P - Primary S - Secondary A - All Standards  
Non Attainment U - Unclassified \* Close to Non Attainment

MAXIMUM ALLOWED OPERATING SCHEDULE  
HR/DAY 24 HR/WK HR/MO DAYS/WK DAYS/MO DAYS/YR 365 WKS/YR

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Equipment Description CEMENT PLANT BAGHOUSES  
 SCC 1 3-05-011-01 SCC 2 - - - 0 SCC 3 - - - 0  
 Cont. Code 18 Cont. Code 0 Cont. Code 0

STACK INFORMATION

| Good Engr. Practice |              |              |              |               | Stack Information |             |          |      |                  |
|---------------------|--------------|--------------|--------------|---------------|-------------------|-------------|----------|------|------------------|
| No.                 | Bldg Ht (ft) | Bldg Ln (ft) | Bldg Wd (ft) | Stack Ht (ft) | Total Ht (ft)     | Act Ht (ft) | Bldg Lin | Type | Diam or Dim (in) |
| 1                   | 0.0          | 0.0          | 0.0          | 0.0           | 60.0              | 0.0         | 1        | V    | 30.0             |
| 2                   | 0.0          | 0.0          | 0.0          | 0.0           | 16.0              | 0.0         | 1        | V    | 18.0             |

  

| Stack Exit Info. |         |           |         | Map Coordinates |            |          | Plume   |
|------------------|---------|-----------|---------|-----------------|------------|----------|---------|
| Vel(F/S)         | Temp(F) | Flow(CFM) | Dir Cap | Zone            | Horizontal | Vertical | Ht (ft) |
| 0.0              | 70.0    | 1500.0    | U F     |                 |            |          | 0.0     |
| 0.0              | 70.0    | 180.0     | U F     |                 |            |          | 0.0     |

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Agreement on the Conditions.

DISTRICT: PERSON Theresa Walker DATE 08/10/99  
ENFORCEMENT: PERSON DATE / /  
APPLICANT: PERSON Gary Roelofs DATE 08/10/99

COORDINATION REQUIRED:

(UNITS, DIVISIONS, AGENCIES, ETC.)

|              | PERSON         | DATE      | REQ      | RESPN |                     |
|--------------|----------------|-----------|----------|-------|---------------------|
|              | CONTACTED      | CONTACTED | DATE     |       | COMMENTS            |
| DISTRICT     | Theresa Walker | 08/10/99  | 08/10/99 |       | Draft Conditions OK |
| ENFORCEMENT  |                | / /       | / /      |       |                     |
| MODELING     |                | / /       | / /      |       |                     |
| STACK SAMPLE |                | / /       | / /      |       |                     |
| TOXICS       |                | / /       | / /      |       |                     |
| WMD          |                | / /       | / /      |       |                     |
| SWQ          |                | / /       | / /      |       |                     |
| ERD          |                | / /       | / /      |       |                     |
| L&W MNGT     |                | / /       | / /      |       |                     |
| GEO SURVEY   |                | / /       | / /      |       |                     |
| LAW ENFORCE  |                | / /       | / /      |       |                     |

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BACT REVIEW INFORMATION

SIC Code 3273 Max Design Capacity Units  
110.00 yd3/hr

CAS No. 000010-00-0  
Pollutant PM10 SCC 3-05-011-01

MACT F LAER F PSD BACT F 702 BACT T NESHAP F TBACT F NSPS F  
Limit 0.100 Units lb/1000 lb Basis

Control Code #1 18 Code #2 0 Code #3 0 Efficiency  
Control FABRIC FILTER - LOW TEMPERATURE 99.90 %

Comments:  
Two baghouses:  
1 - common to three cement storage silos (1500 CFM)  
1 - controls dry material weight batcher (180 CFM)