MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION

February 24, 2009

PERMIT TO INSTALL

No. 382-08

ISSUED TO

Pioneer HI-Bred International, Inc.

LOCATED AT

1365 S. Washington Street Constantine, Michigan 49042

IN THE COUNTY OF

Saint Joseph

STATE REGISTRATION NUMBER

B7549

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

| DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: 1/22/2009 | | | |
|---|------------|--|--|
| DATE PERMIT TO INSTALL APPROVED: 2/24/2009 | SIGNATURE: | | |
| DATE PERMIT VOIDED: | SIGNATURE: | | |
| DATE PERMIT REVOKED: | SIGNATURE: | | |

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

| Common Acronyms | | | Pollutant/Measurement Abbreviations | | |
|-----------------|---|------------------|-------------------------------------|--|--|
| AQD | Air Quality Division | BTU | British Thermal Unit | | |
| ANSI | American National Standards Institute | °C | Degrees Celsius | | |
| BACT | Best Available Control Technology | СО | Carbon Monoxide | | |
| CAA | Clean Air Act | dscf | Dry standard cubic foot | | |
| CEM | Continuous Emission Monitoring | dscm | Dry standard cubic meter | | |
| CFR | Code of Federal Regulations | °F | Degrees Fahrenheit | | |
| СОМ | Continuous Opacity Monitoring | gr | Grains | | |
| EPA | Environmental Protection Agency | Hg | Mercury | | |
| EU | Emission Unit | hr | Hour | | |
| FG | Flexible Group | H ₂ S | Hydrogen Sulfide | | |
| GACS | Gallon of Applied Coating Solids | hp | Horsepower | | |
| GC | General Condition | lb | Pound | | |
| HAP | Hazardous Air Pollutant | m | Meter | | |
| HVLP | High Volume Low Pressure * | mg | Milligram | | |
| ID | Identification | mm | Millimeter | | |
| LAER | Lowest Achievable Emission Rate | MM | Million | | |
| MACT | Maximum Achievable Control Technology | MW | Megawatts | | |
| MAERS | Michigan Air Emissions Reporting System | ng | Nanogram | | |
| MAP | Malfunction Abatement Plan | NO_x | Oxides of Nitrogen | | |
| MDEQ | Michigan Department of Environmental Quality | PM | Particulate Matter | | |
| MIOSHA | Michigan Occupational Safety & Health Administration | PM10 | PM less than 10 microns diameter | | |
| MSDS | Material Safety Data Sheet | PM2.5 | PM less than 2.5 microns diameter | | |
| NESHAP | National Emission Standard for Hazardous Air Pollutants | pph | Pound per hour | | |
| NSPS | New Source Performance Standards | ppm | Parts per million | | |
| NSR | New Source Review | ppmv | Parts per million by volume | | |
| PS | Performance Specification | ppmw | Parts per million by weight | | |
| PSD | Prevention of Significant Deterioration | psia | Pounds per square inch absolute | | |
| PTE | Permanent Total Enclosure | psig | Pounds per square inch gauge | | |
| PTI | Permit to Install | scf | Standard cubic feet | | |
| RACT | Reasonably Available Control Technology | sec | Seconds | | |
| ROP | Renewable Operating Permit | SO ₂ | Sulfur Dioxide | | |
| SC | Special Condition | THC | Total Hydrocarbons | | |
| SCR | Selective Catalytic Reduction | tpy | Tons per year | | |
| SRN | State Registration Number | μg | Microgram | | |
| TAC | Toxic Air Contaminant | VOC | Volatile Organic Compounds | | |
| TEQ | Toxicity Equivalence Quotient | yr | Year | | |
| VE | Visible Emissions | | | | |

^{*} For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

- 1. The process or process equipment covered by this permit shall not be reconstructed, relocated, 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, construction, reconstruction, relocation, or modification 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 permittee 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, construction, reconstruction, relocation, or modification 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 AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. (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 permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. 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 Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). (R 336.1912)
- 8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended 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 1994 PA 451, as amended 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, the permittee 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. The Department may require the permittee to conduct acceptable performance tests, at the permittee'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 SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| Emission Unit ID | Emission Unit Description (Process Equipment & Control Devices) | Installation Date / Modification Date | Flexible Group ID |
|--|---|---------------------------------------|-------------------|
| EU-Dryer04 Natural Gas Fired Seed Corn Dryer No. 4 | | 1989 | FG-Dryer04&05 |
| EU-Dryer05 Natural Gas Fired Seed Corn Dryer No. 5 | | 2008 | FG-Dryer04&05 |

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| Flexible Group ID | Flexible Group Description | Associated Emission Unit IDs | |
|-------------------|---|---------------------------------|--|
| FG-Dryer04&05 | G-Dryer04&05 Natural Gas Fired Seed Corn Dryer No. 4 and 5. | | |

The following conditions apply to: FG-Dryer04&05

<u>DESCRIPTION</u>: Natural gas fired seed corn Dryer No. 4 with rated capacity of 60 MMBtu/hr and natural gas fired seed corn Dryer No. 5 with rated capacity of 48 MMBtu/hr.

Emission Units: EU-Dryer04 and EU-Dryer05

POLLUTION CONTROL EQUIPMENT: NA

I. <u>EMISSION LIMITS</u>

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|----------------------|--|---|------------|-----------------------------------|--|
| 1. PM | 0.001 lbs per 1000 lbs of exhaust gases* | Test Protocol | EU-Dryer04 | General Condition No. 13 | R 336.1331 |
| 2. PM10 [!] | 2.8 pph | Test Protocol | EU-Dryer04 | General Condition No. 13 | R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d) |
| 3. PM10 [!] | 2.8 tpy | 12-month rolling time period as determined at the end of each calendar month | EU-Dryer04 | SC VI.3 | R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d) |

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| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Testing / Monitoring Method | Underlying Applicable Requirements |
|----------------------|--|---|------------|-----------------------------------|--|
| 4. PM | 0.001 lbs per 1000 lbs of exhaust gases* | Test Protocol | EU-Dryer05 | General Condition No. 13 | R 336.1331 |
| 5. PM10 [!] | 2.4 pph | Test Protocol | EU-Dryer05 | General Condition No. 13 | R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d) |
| 6. PM10 ¹ | 2.4 tpy | 12-month rolling time period as determined at the end of each calendar month | EU-Dryer05 | SC VI.3 | R 336.1205(1), R 336.2803, R 336.2804, 40 CFR 52.21 Subparts (c) & (d) |

^{*} Calculated on a dry gas basis

PM10[!] = Total Emissions (Non-Combustion + Combustion)

7. Visible emissions from each dryer of the FG-Dryer04&05 shall not exceed a six-minute average of 0 percent opacity. (R 336.1301, R 336.1331, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate each dryer of the FG-Dryer04&05 for more than 2,000 hours per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- 1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- 2. The permittee shall keep, in a satisfactory manner, a log of the operating hours for each dryer of the FG-Dryer04&05. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.2802, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

- 3. The permittee shall keep the following information on a monthly basis for each dryer of the FG-Dryer04&05:
 - a) PM10 emission calculations determining the monthly emission rate in tons per calendar month.
 - b) PM10 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.2802, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| Stack & Vent ID | Maximum Exhaust Diameter/ Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|-----------------|---|--|---------------------------------------|
| Multiple Ve | Multiple Vents Associated with the EU-Dryer04 | | |
| Multiple Ve | Multiple Vents Associated with the EU-Dryer05 | | |

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).