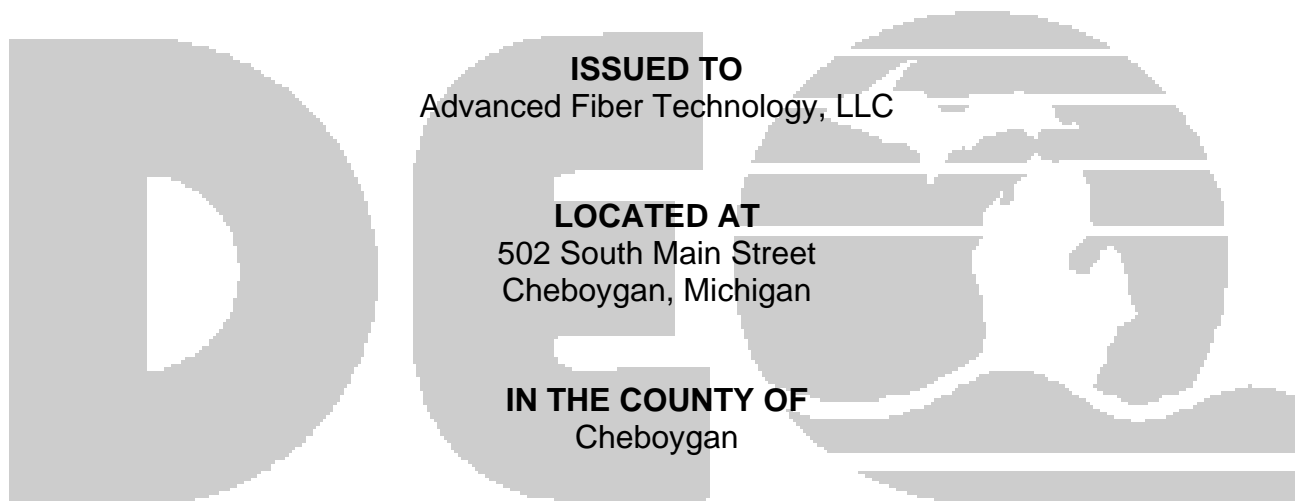


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

September 25, 2007

**PERMIT TO INSTALL  
247-07**



**ISSUED TO**  
Advanced Fiber Technology, LLC

**LOCATED AT**  
502 South Main Street  
Cheboygan, Michigan

**IN THE COUNTY OF**  
Cheboygan

**STATE REGISTRATION NUMBER**  
N7839

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: <b>September 7, 2007</b>	
DATE PERMIT TO INSTALL APPROVED: <b>September 25, 2007</b>	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	CO	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
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> 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 <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM-10	Particulate Matter less than 10 microns diameter
MSDS	Material Safety Data Sheet	pph	Pound per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	psia	Pounds per square inch absolute
PSD	Prevention of Significant Deterioration	psig	Pounds per square inch gauge
PTE	Permanent Total Enclosure	scf	Standard cubic feet
PTI	Permit to Install	sec	Seconds
RACT	Reasonably Available Control Technology	SO <sub>2</sub>	Sulfur Dioxide
ROP	Renewable Operating Permit	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient		
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 nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.
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 Identification**

<b>Emission Unit ID</b>	<b>Emission Unit Description</b>	<b>Stack Identification</b>
EUPROCESS	Self dumping totes will be dumped into main hopper. A bottom screw conveys the product to a pellet mill. The formed pellets are conveyed to the dryer. After drying the pellets, the product is sized by a blender and conveyed to a bagger.	NA
EUFURNACE	Natural gas fired furnace rated at 6MMBtu/hr heat input.	NA
EUDRYER	Witte Fluid Bed dryer. Exhaust gases from the EUFURNACE are directed to the EUDRYER. The EUDRYER is controlled by twin cyclone dust collectors.	SVDRYER

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 Identification**

<b>Flexible Group ID</b>	<b>Emission Units Included in Flexible Group</b>	<b>Stack Identification</b>
FGFACILITY	All process equipment such as EUPROCESS, EUFURNACE and EUDRYER at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

**The following conditions apply to: EUPROCESS**

**Description:** Self dumping totes will be dumped into main hopper. A bottom screw conveys the product to a pellet mill. The formed pellets are conveyed to the dryer. After drying the pellets, the product is sized by a blender and conveyed to a bagger.

**Emission Limits**

NA

**Visible Emission Limits**

1.1 There shall be no visible emissions from the EUPROCESS. **(R336.1301, R336.1901)**

**Material Usage Limits**

NA

**Process/Operational Limits**

NA

**Equipment**

NA

**Testing**

NA

**Monitoring**

NA

**Recordkeeping/Reporting/Notification**

NA

**Stack/Vent Restrictions**

NA

**The following conditions apply to: EUDRYER**

**Description:** Witte Fluid Bed dryer. Exhaust gases from the EUFURNACE are directed to the EUDRYER. The EUDRYER is controlled by twin cyclone dust collectors.

**Emission Limits**

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirement
2.1a	PM	0.01 lb/10 <sup>3</sup> lb <sup>1</sup>	Test Protocol	EUDRYER	GC 13	R336.1331
2.1b	PM-10	0.9 pph	Test Protocol	EUDRYER	GC 13	40 CFR 52.21 (c) & (d), R336.2803, R336.2804
2.1c	Cl	1.16 pph	Test Protocol	EUDRYER	GC 13	R336.1225
2.1d	HCl	1.19 pph	Test Protocol	EUDRYER	GC 13	R336.1225
<sup>1</sup> Exhaust gases at 50% excess air on a wet basis						

**Visible Emission Limits**

2.2 Visible emissions from the EUDRYER shall not exceed a six-minute average of 20 percent opacity, except for 1 6-minute average per hour of not more than 27% opacity. **[R336.1301]**

**Material Usage Limits**

2.3 The chlorine content, of the wet sludge fed to EUDRYER, shall not exceed 1920 ppm by weight. **[R336.1225, R336.1702, R336.1901]**

**Process/Operational Limits**

2.3 The permittee shall only fire natural gas fuel into the EUBURNER of the EUDRYER. **[R336.1205(3), R336.1225]**

2.4 The permittee shall not process through the EUDRYER more than 56 tons of wet sludge per day nor produce 14 tons of finished dry products per day. **[R336.1205(3), R336.1225, R336.1702, R 336.1901]**

2.5 The temperature at the inlet of the EUDRYER shall not exceed 330 degrees Fahrenheit. An alarm shall sound and a visual signal shall flash when the temperature approaches 330 degrees Fahrenheit. **[R336.1205(3),R336.1225, R336.1702, R336.1901]**

- 2.6 The minimum pressure drop across the multiclone shall be based on the manufacturers recommended minimum pressure drop. **[R336.1331, R336.1910, 40 CFR 52.21(c) and (d), R336.2803, R336.2804]**

### **Equipment**

- 2.7 The permittee shall not operate EUDRYER unless a temperature device capable of continuously measuring the temperature at the inlet of the dryer and equipped with a high temperature audible alarm and visual signal are installed, maintained and operated in a satisfactory manner. **[R336.1702, R336.1910, 40 CFR 52.21(c) and (d), R336.2803, R336.2804]**
- 2.8 The permittee shall not operate EUDRYER unless a multiclone is installed, maintained and operated in a satisfactory manner, for EUDRYER. **[R336.1331, R336.1910, 40 CFR 52.21(c) and (d), R336.2803, R336.2804]**
- 2.9 The permittee shall not operate EUDRYER unless a gauge is installed, maintained, calibrated and operated in a satisfactory manner capable of measuring the pressure drop across the multiclone. **[R336.1331, R336.1910, 40 CFR 52.21(c) and (d), R336.2803, R336.2804]**

### **Testing**

NA

### **Monitoring**

- 2.10 On and after trial operation, the permittee shall monitor, in a satisfactory manner, the chlorine content of the wet sludge fed to EUDRYER, on a monthly basis. **[R336.1205(3), R336.1225, R336.1331, R336.1702, R336.1901]**
- 2.11 On and after trial operation, the permittee shall monitor, in a satisfactory manner, the wet sludge, by weight, fed to EUDRYER, on a daily basis. **[R336.1205(3), R336.1225, R336.1331, R336.1702, R336.1901]**
- 2.12 The permittee shall monitor, in a satisfactory manner, the tons of finished dry product, by weight, on a daily basis. The finished dry product shall be determined by dividing the daily finished dry product by the daily actual operating hours. The permittee shall demonstrate compliance with the daily average by weigh scale; mass balance all applicable sources or other method as approved by the AQD District Supervisor. **[R336.1205(3), R336.1225, R336.1331, R336.1702, R336.1901]**
- 2.13 The permittee shall continuously monitor and record the temperature at the inlet of the EUDRYER in a manner acceptable to the AQD District Supervisor. **[R336.1702, R336.1901, R336.1911]**
- 2.14 On and after trial operation, the permittee shall monitor the pressure drop across the multiclone for EUDRYER for every operating hour in a manner acceptable to the AQD District Supervisor. **[R336.1331, R336.1911]**

### **Recordkeeping/Reporting/Notification**

- 2.15 The permittee shall keep, in a satisfactory manner, sampling records of the chlorine content of the wet sludge fed to EUDRYER on a monthly basis. The permittee shall keep all records on file



at the facility for a period of at least five years and make them available to the Department upon request. **[R336.1331]**

- 2.16 The permittee shall record, in a satisfactory manner, the hourly amount of wet sludge, by weight, on a daily basis fed into the EUDRYER. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **[R336.1205]**
- 2.17 The permittee shall keep, in a satisfactory manner, daily records of the amount of tons of finished dry product, on a daily basis through EUDRYER. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **[R336.1205, R336.1225, R336.1702, R336.1901]**
- 2.18 The permittee shall keep, in a satisfactory manner, records of the temperature from the inlet of the dryer of EUDRYER, based on an hourly average of four 15 minute periods. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **[R336.1225, R336.1702(a)]**
- 2.19 The permittee shall keep, in a satisfactory manner, hourly records of the pressure drop across the multiclone for EUDRYER. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **[R336.1331]**

**Stack/Vent Restrictions**

	<b>Stack &amp; Vent ID</b>	<b>Maximum Diameter (inches)</b>	<b>Minimum Height Above Ground Level (feet)</b>	<b>Applicable Requirement</b>
2.20	SVDRYER	36	34.5	R336.1225, 40CFR 52.21(c)&(d), R336.2803, R336.2804
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air. Additional text, descriptions, stack/vent conditions, etc. as needed.				

**The following conditions apply to: FGFACILITY**

**Description:** All process equipment such as EUPROCESS, EUFURNACE and EUDRYER at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.

**Pollution Control Equipment:** Twin cyclone dust collectors

**Emission Limits**  
 NA

**Process/Operational Limits**

- 3.1 The permittee shall not operate FGFACILITY unless a malfunction abatement plan (MAP) as described in Rule 911(2), for EUBURNER, EUDRYER, and EUPROCESS has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:

- a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. The permittee shall retain a copy of the plan at the facility at all times. **[R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)]**

- 3.2 The permittee shall not operate FGFACILITY unless a program for spills and continuous fugitive emissions control for all plant roadways, the plant yard, all material storage areas, and all material handling operations has been submitted to the AQD District Supervisor within 60 days after the issuance of this permit, and is implemented and maintained. The plan shall identify the specific measures to be taken to prevent spills and fugitive dust and the frequency of these measures. In addition, the permittee shall record the number of raw material and product trucks which are at the facility on a daily basis. **[R336.1372, Act 451 324.5524]**

#### **Recordkeeping/Reporting/Notification**

- 3.3 The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.