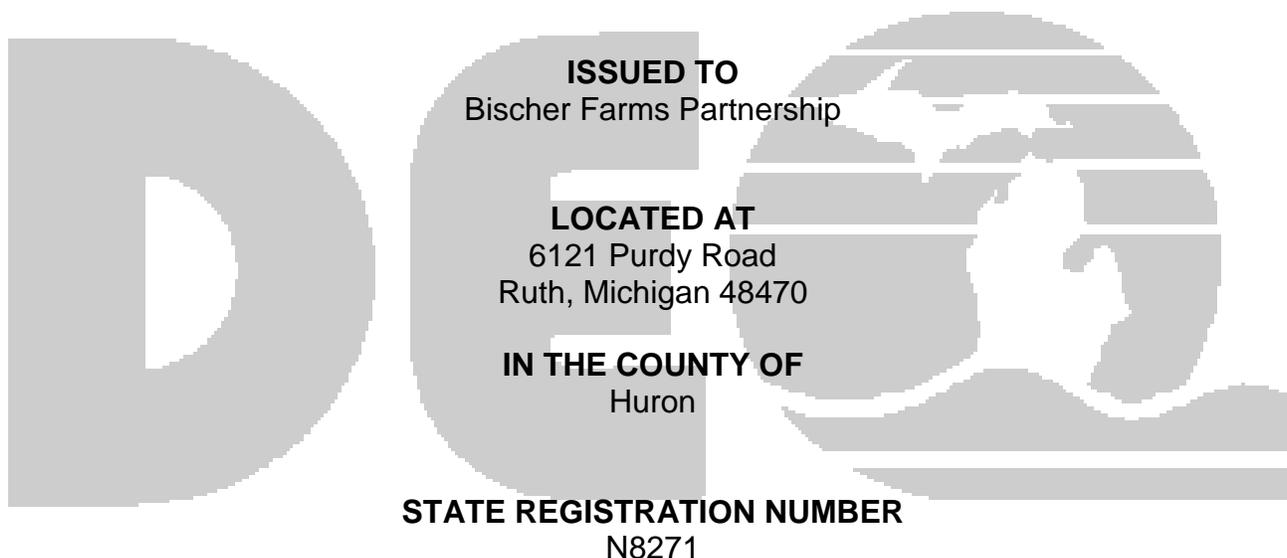


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

May 15, 2009

**PERMIT TO INSTALL**

No. 100-09



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>4/27/2009</b>	
DATE PERMIT TO INSTALL APPROVED: <b>5/15/2009</b>	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant/Measurement Abbreviations</b>	
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	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 <sub>2</sub>	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)	Flexible Group ID
EU-AMMONIA	A single anhydrous ammonia storage tank and any associated handling process, nurse tanks or applicator tanks. The nominal tank storage capacity shall not exceed 32,066 gallons.	NA
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.		

#### The following conditions apply to: EU-AMMONIA

**DESCRIPTION:** A single anhydrous ammonia storage tank and any associated handling process, nurse tanks or applicator tanks. The nominal tank storage capacity shall not exceed 32,066 gallons.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

#### **I. EMISSION LIMITS**

NA

#### **II. MATERIAL LIMITS**

NA

#### **III. PROCESS/OPERATIONAL RESTRICTIONS**

1. Except where specific requirements of these special conditions are applicable and more stringent, EU-AMMONIA shall comply with "Part 78, Storage and Handling of Anhydrous Ammonia" (MIOSHA 1910.111), hereinafter Rule 7801. A copy of this standard, which may be obtained by contacting the Michigan Department of Consumer and Industry Services, Bureau of Safety and Regulations, Safety Standards Division, 7150 Harris Drive, P.O. Box 30643, Lansing, MI 48909-8143, shall be maintained for inspection at the facility.<sup>1</sup> **(R 336.1901)**
2. The permittee shall not operate EU-AMMONIA unless the inspection and maintenance program specified in Appendix A has been implemented and maintained.<sup>1</sup> **(R 336.1901)**
3. The permittee shall not operate EU-AMMONIA unless an emergency response plan, to be followed in the event of an emergency, has been approved by the local fire department or county emergency response agency and is implemented and maintained. Prior to each spring season, the permittee shall review this

plan with the local fire department or emergency response agency and make any necessary updates.<sup>1</sup>  
**(R 336.1901)**

4. The permittee shall not operate EU-AMMONIA unless all transfer operations including transport deliveries are performed by a reliable person properly trained and made responsible for proper compliance with all applicable procedures.<sup>1</sup> **(R 336.1901)**
5. Nurse and applicator tank storage shall be no less than 50 feet from the property line; 150 feet from any existing places of residence or private or public assembly; 250 feet from a school, apartment building, or institutional occupancy; and no less than 1000 feet from a hospital or nursing home.<sup>1</sup> **(R 336.1901)**
6. Nurse tank filling shall be done only from a permanent stationary storage tank.<sup>1</sup> **(R 336.1901)**
7. Nurse and applicator tanks shall be filled to no more than 85 percent of liquid capacity by volume. Storage tanks may be filled according to temperature density correction tables in Rule 7801(b)(11) where tanks have a thermometer well and suitable level gauge.<sup>1</sup> **(R 336.1901)**
8. Vapor return lines shall be employed whenever necessary to ensure an accidental release from pressure relief valves will not occur during ammonia transfer operations.<sup>1</sup> **(R 336.1901)**
9. Nitrogen stabilizer shall not be added to any permanent stationary storage tank or to rail or truck transport tanks.<sup>1</sup> **(R 336.1901)**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. All containers shall be fitted with safety relief valves in accordance with Rule 7801(b)(9). Such valves shall be stamped with the date manufactured, and shall be replaced, or re-tested and re-certified, at least every five years or more often if there is evidence of damage or deterioration.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
2. The permittee shall not operate EU-AMMONIA unless a remotely operated internal or external positive shut-off valve is installed to allow access for emergency shut-off of all flow from stationary storage containers.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
3. The permittee shall not operate EU-AMMONIA unless a bulkhead, anchorage, or equivalent system is used at each transfer area so that any break resulting from a pull will occur at a predictable location while retaining intact the valves and piping on the plant side of the transfer area.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
4. The permittee shall not operate EU-AMMONIA unless any liquid lines in rail and transport transfer areas are equipped with back pressure check valves and all liquid lines not requiring a back check valve and all vapor lines are equipped with properly sized excess flow valves. These valves shall be installed on the main container side of the predictable break point at the bulkhead.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
5. All hoses shall be replaced five years after date of manufacture or more often if there is evidence of damage or deterioration.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
6. Any vapor or liquid line, exclusive of couplings, requiring venting after ammonia transfer shall be vented through a water trap of 55 gallons minimum size. Safety water shall not be used for this purpose.<sup>1</sup> **(R 336.1224, R 336.1225, R 336.1901)**
7. A sign shall be present and conspicuously placed at the facility entrance stating the emergency phone numbers for the owner, primary operator, local and state police, local fire department, and ambulance service.<sup>1</sup> **(R 336.1901)**

8. EU-AMMONIA shall be located a minimum of 50 feet from the property line, 300 feet from any existing places of residence or private or public assembly, 500 feet from a school, apartment building, or institutional occupancy, and not less than 1000 feet from a hospital or nursing home.<sup>1</sup>

#### **V. TESTING/SAMPLING**

NA

#### **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall notify the Pollution Emergency Alert System (PEAS) 1-800-292-4706 and/or the AQD District Supervisor immediately of any abnormal release of anhydrous ammonia from EU-AMMONIA. A normal release includes only hose coupling bleed downs, operation of hydrostatic relief valves, and normal pressure relief from the safety relief valve(s). Relief due to overfilling is not normal. All records shall be kept on file for a period of at least five years and made available to the Department upon request.<sup>1</sup> **(R 336.1901)**
2. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction or spill occurring from EU-AMMONIA, including the estimated amount of ammonia released into the atmosphere. Do not include trace amounts from normal hose coupling bleed downs. All records shall be kept on file for a period of at least five years and made available to the Department upon request.<sup>1</sup> **(R 336.1901)**
3. The permittee shall keep, in a satisfactory manner, records of the date of annual review and approval of the emergency response plan with the local fire department. All records shall be kept on file for a period of at least five years and made available to the Department upon request.<sup>1</sup> **(R 336.1901)**

#### **VII. REPORTING**

NA

#### **VIII. STACK/VENT RESTRICTIONS**

NA

#### **IX. OTHER REQUIREMENTS**

NA

#### **Footnotes:**

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

**Appendix A – Page 1 of 2**  
**Inspection and Maintenance Program**  
 Nurse and Applicator Tanks

Inspections to be performed daily and documented at the permittee's discretion. Permittee shall document all maintenance and repairs.

Tank Identification:	Satisfactory?			Satisfactory?			Satisfactory?		
	Yes	No	Date *	Yes	No	Date *	Yes	No	Date *
	1. Tank free of leaks								
2. Paint in good condition									
3. Valves and fittings free from leaks and in good condition									
4. Protective guards in place and in good condition									
5. Outlet openings on valves and lines free of dirt and rust with protective caps in place									
6. Safety relief valves free of debris with rain caps installed									
7. Gages, pressure and liquid level, are operable									
8. Excess flow valves installed and in good condition									
9. Valves properly labeled "liquid" and "vapor"									
10. Vapor and liquid hoses are proper ammonia-type and free of damage or deterioration									
11. Hoses, including those on nurse tanks, securely clamped to the nipples									
12. Hoses suitably racked to prevent kinking and hose on delivery tanks securely fastened to prevent dragging									
13. Tanks securely attached									
14. Trailer tongues, hitches, and safety chains in sound condition									
15. Nurse tank valves locked or capped if site is unattended or not fenced in									
16. Nurse tanks properly labeled									
17. Five gallon or larger can filled with clean water for transport vehicles									
18. Quick disconnects annually reconditioned									

Date Inspected: \_\_\_\_\_

Inspector: \_\_\_\_\_

\* For each tank, check if condition is satisfactory or not satisfactory. If condition is not satisfactory, complete date when corrected. If condition is not applicable, write NA.

**Appendix A – Page 2 of 2**  
**Inspection and Maintenance Program**  
 Permanent Ammonia Storage Tank

Permitee shall conduct inspections and complete form at least twice per year, prior to spring and fall application seasons.

Tank Identification:	Satisfactory?		
	Yes	No	Date*
1. Tank free of leaks			
2. Tank supports in good condition (no cracked or crumbled concrete, etc.)			
3. Paint in good condition			
4. Equipment locked when not in use			
5. Tank properly labeled			
6. Valves and fittings free from leaks and in good condition			
7. Piping properly supported and guards in place			
8. Pipes free of physical damage and rust and properly painted			
9. Employees trained in proper filling procedures			
10. Provisions provided for bleeding of transfer hose from the transport truck			
11. Wheels properly chocked on the transport truck or rail tank car while unloading			
12. Information and warning signs displayed and in good condition			
13. Area free of weeds, trash and other unsafe conditions			
14. Unused equipment stored out of the way			
15. Chemical safety goggles available and in good condition			

	Satisfactory?		
	Yes	No	Date*
16. Protective gloves, boots, suits or slickers available and in good condition			
17. Gas masks with ammonia type canisters and refill canisters within date limits available			
18. Emergency clean water, shower or 75 gallon tank available nearby			
19. Hoses in good condition			
20. Hoses no older than five years from date of manufacture and marked			
21. Vapor and liquid hoses are proper ammonia- type and free of damage or deterioration			
22. Hoses suitably racked to prevent kinking			
23. Hoses, including those on nurse tanks, securely clamped to the nipples			
24. Gages, pressure and liquid level, operable			
25. Valves properly labeled "liquid" and "vapor"			
26. Safety relief valves within five years of manufacture or recertification and marked			
27. Outlet openings on valves and lines free of dirt and rust with protective caps in place			
28. Safety relief valves free of debris with rain caps installed			
29. Safety relief valve manifold operable			
30. Remote shut-off valve in working order			

Date Inspected: \_\_\_\_\_

Inspector: \_\_\_\_\_

\* For each item, check if condition is satisfactory or not satisfactory. If condition is not satisfactory, complete date when corrected. If condition is not applicable, write NA.