

P0078  
manila  
Genesee

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

P007848303

FACILITY: Hunt Farms, Inc		SRN / ID: P0078
LOCATION: 12169 E Richfield Rd, DAVISON		DISTRICT: Lansing
CITY: DAVISON		COUNTY: GENESEE
CONTACT: Glenda Hunt, Owner		ACTIVITY DATE: 04/03/2019
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced, scheduled inspection of facility which AQD has never inspected.		
RESOLVED COMPLAINTS:		

On 4/3/2019, the Michigan Department of Environmental Quality (DEQ), now known as the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) conducted an unannounced, scheduled inspection of Hunt Farms. This was a permitted facility which AQD has not previously inspected.

Environmental contact:

Glenda Hunt, Owner; 810-653-2310; [gahunt4@charter.net](mailto:gahunt4@charter.net)

Gary Parks, Maintenance Manager; 810-653-2310

Facility description:

This facility is a farm, with two 12,000 gallon anhydrous ammonia tanks onsite.

Emission units:

Emission unit* ID	Emission unit description	General Permit to Install (PTI) No.	Compliance status
EU-A1	12,000 gallon anhydrous ammonia storage tank and any associated handling process, nurse tanks, or applicator tanks	55-10	Compliance
EU-A2	12,000 gallon anhydrous ammonia storage tank and any associated handling process, nurse tanks, or applicator tanks	55-10	Compliance

\* An emission unit is any part of a stationary source that emits or has the potential to emit an air contaminant.

Regulatory overview:

This facility was issued two General Permit to Install for anhydrous ammonia tanks, Nos. 55-10 and 56-10, on 3/9/2010. This facility is agricultural in nature. It is considered to be a true minor source, rather than a major source of air emissions. A major source has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. Criteria pollutants are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. It is also considered a minor or area source for Hazardous Air Pollutants (HAPs), because it was not considered to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

AQD most recently updated the Special Conditions for the General Permit to Install for anhydrous ammonia tanks on 3/3/2005. Therefore, PTI Nos. 55-10 and 56-10 issued with the latest versions and format of the Special Conditions.

Fee status:

This facility is not a Category I fee subject source, because it is not a major source for criteria pollutants. It is not a Category II fee-subject source because it is not a major source for Hazardous Air

Pollutants (HAPs), nor is it subject to federal New Source Performance Standards. Additionally, it is not Category III fee-subject, because it is not subject to federal Maximum Achievable Control Technology standards. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

History:

AQD has no record of a complaint ever being received regarding Hunt farms, Inc.

Safety apparel required:

AQD recommends safety glasses with side shields.

Odor evaluation:

No odors were detected upon approaching Hunt Farms. Weather conditions were sunny, clear, and 41 degrees F, with winds 10-20 miles per hour out of the west southwest.

Arrival:

This was an unannounced inspection of a facility which had been permitted, but never inspected, by AQD before.

AQD was represented today by two inspectors, Environmental Quality Analyst Samantha Braman, and by myself. S. Braman, prior to joining AQD in 2018, had worked as a Michigan Agriculture Environmental Assurance program (MAEAP) technician, and had visited Hunt Farms in that capacity. I considered today's inspection an opportunity to introduce S. Braman to inspections of anhydrous ammonia tanks.

Upon arrival at Hunt Farms, no ammonia odors were detected. S. Braman knew the layout of the farm and took us to the office. We met with Ms. Glenda Hunt, Owner, who remembered S. Braman as a MEAP technician. Mr. Hunt requested Mr. Gary Parks, Maintenance manager accompany us for the inspection, as he handles operations and maintenance of the two anhydrous ammonia tanks.

Inspection:

The layout of the Hunt Farms complex was neat, and immaculately maintained. The housekeeping practices for the anhydrous ammonia tanks, EU-A1 and EU-A2, were excellent. Details of the physical conditions of the tanks are discussed later in this report, under the section for Appendix A for permanent anhydrous ammonia storage tanks.

The tanks were surrounded by a tall chain link fence with a locked gate, and appropriate warning signs to indicate anhydrous ammonia was being stored. No anhydrous ammonia odors could be detected around the two tanks, or the two nurse tank filling stations. The tanks were purchased used, according to the permit application, and had previously been permitted by AQD under their previous ownership. Mr. Parks advised us that the tanks were pressure tested, before they were first filled here.

The north tank has a name plate reading:

- 7098 6864
- 52940
- C.U.N.Y.E 2940 XRHDSF
- MFGS SERIAL NO. 5294
- MADE 1964
- MAXIMUM W.P. LBS. 250
- MAXIMUM TEMP. °F. 115
- DIAMETER 82 1/2"

- LENGTH 46-101/2'
- WATER CAP'CY 100,000 lbs
- WATER CAP'CY 12,000 gal
- HEAD THK. 322
- SHELL THK. 5625

**The north tank was 28.5% full, as indicated by a gauge on the east end. It had a pressure gauge whose face was obscured by rust. We were informed that they will replace it.**

**The south tank has a name plate reading:**

- 7008
- BOARD NO. 3061
- C.U.N.Y.E 3061 XRHDHT
- MFSG SERIAL NO. 5306
- MADE 1964
- MAXIMUM W.P. LBS. 250
- MAXIMUM TEMP. °F. 115
- DIAMETER 82 1/2"
- LENGTH 46-101/2'
- WATER CAP'CY 100,000 lbs
- WATER CAP'CY 12,000 gal
- HEAD THK..322
- 5HELL THK. 5625

**The south tank was 30% full. The pressure gauge for this tank read about 60%.**

**Mr. Parks advised each tank was filled 8 times in 2018. It is my understanding that they apply anhydrous ammonia to their fields in order to grow corn.**

Compliance with the general PTI special conditions is described below for not just one but both General PTI Nos. 55-10 and 56-10, which regulate tanks EU-A1 and EU-A2, respectively.

### **I. EMISSION LIMITS**

NA

### **II. MATERIAL LIMITS**

NA

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

Special Condition (SC) No. 1 requires the permittee to maintain onsite a copy of Part 78, Storage and Handling of Anhydrous Ammonia (MIOSHA 1910.111).

*RESULT: COMPLIANCE. I was advised that they are maintaining a copy of this regulation onsite.*

SC No. 2 requires the inspection and maintenance program specified in Appendix A of the general PTI to be implemented and maintained.

*RESULT: COMPLIANCE. An inspection and maintenance program which was more than sufficient to comply with the requirement to follow Appendix A was being done for both tanks, EU-A1 and EU-A2, as will be discussed later in this report.*

SC No. 3 requires an emergency response plan to be approved by the local fire department or county emergency response agency, and to be implemented and maintained. The permittee is also required to review this plan with the local fire department or emergency response agency and make any necessary updates.

*RESULT: COMPLIANCE. We were advised that this is being done for EU-A1 and EU-A2, in that they have meetings with their local fire department each year, where they actually bring responders out to the site, to acquaint them with the site plan. We were advised that they will do it again this year. We were advised that this was actually planned to happen last month (March) to familiarize new fire department staff with the site, but the event was delayed because the fire department had a lot of staff who were out. It is my understanding that photographs were taken to document this event, and are kept onsite. I was advised that in the future they will ensure they keep written records, if they are not doing so already.*

SC No. 4 requires that EU-AMMONIA 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 1,000 feet from a hospital or nursing home.

*RESULT: COMPLIANCE. The tanks EU-A1 and EU-A2 are in compliance with the setback criteria.*

SC No. 5 requires that all transfer operations including transport deliveries are performed by a reliable person properly trained and made responsible for proper compliance with all applicable procedures.

*RESULT: COMPLIANCE: We were informed that this is being done for tanks EU-A1 and EU-A2. We were told that a gas mask is always worn as a safety precaution, during deliveries.*

SC No. 6 states that nurse and applicator tank storage shall be no less than 50 feet from the property line, 150 feet from any existing residences or places of private or public assembly, 250 feet from a school, apartment buildings, or institutional occupancy, and not less than 1,000 feet from a hospital, or nursing home.

SC No. 7 requires that nurse tank filling shall only be done from a permanent stationary storage tank.

*RESULT: COMPLIANCE. We were informed that this is being done, because nurse tanks are only filled from EU-A1 AND EU-A2.*

SC No. 8 states that nurse and applicator tanks shall be filled to no more than 85% of liquid capacity by volume.

*RESULT: COMPLIANCE: We were informed that this is being done for any tanks filled from EU-A1 and EU-A2.*

SC No. 9 states that vapor return lines shall be employed whenever necessary to ensure an accidental release from pressure relief valves will not occur during ammonia transfer operations.

*RESULT: COMPLIANCE. We were informed that vapor return lines are used with EU-A1 AND EU-A2 during transfers.*

SC No. 10 states that nitrogen stabilizer shall not be added to any permanent stationary storage tank or to rail or truck transport tanks.

*RESULT: COMPLIANCE. We were informed that no nitrogen stabilizer is added to tanks EU-A1 AND EU-A2.*

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

SC No.1 requires that all containers shall be fitted with safety relief valves in accordance with Rule 7801(b)(9). The valves are required to be stamped with the date manufactured, and to be replaced, or retested and certified, at least every five years or more often, if there is evidence of danger or deterioration.

*RESULT: COMPLIANCE. It could be visually confirmed that both tanks EU-A1 AND EU-A2 were fitted with safety relief valves, two atop each tank. We could not closely examine the relief valves atop the tanks, but were told that they each had small covers. Mr. Parks advised us that they don't need to be changed this year, but he will change these in 1 or 2 years. It is my understanding that they are set for 200 psi.*

SC No. 2 requires a remotely operated internal or positive shut-off valve to allow access for emergency shut-off of all flow from stationary containers.

*RESULT: COMPLIANCE. We were shown that the external shut-off valve for tanks EU-A1 AND EU-A2 is in working order, and that cables which can be pulled extend the reach of the operator, to keep them at a further distance from any emergency incident. The permit applications indicate the tanks have both an internal emergency shut-off valve and the external-emergency shut-off valve. There is also an emergency shut off for*

*the pump motor, we were shown.*

SC No. 3 requires a bulkhead, anchorage, or equivalent system to be 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.

*RESULT: COMPLIANCE. We were advised of the "break-off coupling" on a valve for tanks EU-A1 AND EU-A2.*

SC No. 4 requires that any liquid lines in rail and transport transfer areas be equipped with back pressure check valves and that all liquid lines not requiring a back check valve, and all vapor lines, be equipped with properly sized excess flow valves. These valves are required to be installed on the main container side of the predictable break point at the bulkhead.

*RESULT: COMPLIANCE. We were shown the shut-off valve for tanks EU-A1 AND EU-A2.*

SC No. 5 requires that all hoses be replaced five years after the date of manufacture, or more often, if there is evidence of damage or deterioration.

*RESULT: COMPLIANCE. We were advised that hoses were younger than 5 years for tanks EU-A1 and EU-A2.*

SC No. 6 states that any vapor line, exclusive of couplings, requiring venting after ammonia transfer be vented through a water trap of 55 gallons minimum size. Safety water is prohibited from being used for this purpose.

*RESULT: COMPLIANCE. We were shown that there is a water trap, stored for the moment, under the north tank. It did not contain water at this time, because it was too early in the season for anhydrous ammonia deliveries, as I understand it, and water could potentially freeze in the trap at this time of year, damaging the container.*

SC No. 7 requires that a sign 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.

*RESULT: COMPLIANCE: There was an appropriate warning sign in place, providing emergency contact information.*

## **V. TESTING/SAMPLING**

NA

## **VI. MONITORING/RECORDKEEPING**

SC No. 1 requires the permittee to keep records of the date, duration, and description of any malfunction or spill occurring from EU-AMMONIA.

*RESULT: COMPLIANCE. It is my understanding that there have been no malfunctions or spills for EU-A1 or EU-A2.*

SC No. 2 requires the permittee to keep, in a satisfactory manner, records of the annual review and approval of the emergency response plan with the local fire department.

*RESULT: COMPLIANCE. It is my understanding that photographs were taken to document the most recent annual site visit by their local fire department, and these photos are kept onsite. This event is done, we were told, to familiarize their fire department and any new fire fighters to the layout of the site. I was advised that in the future they will ensure they keep written records, if they are not doing so already.*

## **VII. REPORTING**

SC No. 1 requires the permittee to contact the Pollution Emergency Alert System (PEAS) telephone number (1-800-292-4706), or the AQD District Supervisor immediately, if there is an abnormal release.

*RESULT: COMPLIANCE. It is my understanding that there have been no abnormal events for EU-A1 or EU-A2.*

### VIII. STACK/VENT RESTRICTIONS

NA

### IX. OTHER REQUIREMENTS

SC No. 1 prohibits the permittee from replacing or modifying any portion of EU-AMMONIA, or installing new equipment, unless conditions (a), (b), and (c) are all met. The three conditions require that the general permit be updated, that the permittee continue to meet all general permit applicability criteria, and that the permittee keep records of the date and description of any replacement, modification or installation of new equipment.

*RESULT: COMPLIANCE. It is my understanding that there have been no changes, other than routine replacement of hoses or valves, as required by the General PTI Nos. 55-10 and 56-10.*

We walked across the street to a large barn, to examine one or more nurse tanks. We were able to observe a number of them, after squeezing in between farm equipment in the large barn.

#### **I & M Program checklist for nurse and applicator tanks, from page 1 of 2 of Appendix A of general PTI:**

1. Tank(s) free of leaks: Yes.
2. Paint in good condition: Yes.
3. Valves and fittings free from leaks and in good condition: Yes.
4. Protective guards in place and in good condition: Yes.
5. Outlet openings on valves and lines free of dirt and rust with protective caps in place: *I could not get to a vantage point high enough to examine the valve openings, but the nurse tanks were being stored out of the elements. We were told the safety valves were believed to be younger than 5 years.*
6. Safety relief valves free of debris with rain caps installed? *I could not get to a vantage point high enough to examine the valve openings, but the nurse tanks were being stored out of the elements. We were told the safety valves were believed to be younger than 5 years.*
7. Gages, pressure and liquid, are operable: *There were gauges for pressure and liquid level on the nurse tanks, but I could not confirm operational status. They appeared to be in good condition, visually.*
8. Excess flow valves installed and in good condition: *We were told the safety valves were younger than 5 years in age. I could not see the valves clearly from ground level.*
9. Valves properly labeled "liquid" and "vapor": *Unknown, as I did not ask about this condition.*
10. Vapor and liquid hoses are proper ammonia type and free of damage or deterioration: *The hoses were being stored elsewhere, but were brand new in 2018, we were told.*
11. Hoses, including those on nurse tanks, securely clamped to the nipples: *The hoses were being stored elsewhere.*
12. Hoses suitably racked to prevent kinking and hose on delivery tanks securely fastened to prevent dragging. *The hoses were being stored elsewhere. Hoses would only be attached to delivery tanks (applicator tanks) during the application of the anhydrous ammonia to fields, as I understand it.*
13. Tanks securely attached: *The nurse tanks were not attached to motorized farm equipment at this time.*
14. Trailer tongues, hitches, and safety chains in sound condition: Yes.
15. Nurse tank valves locked or capped if site is unattended or not fenced in: *The nurse tanks were enclosed within a large barn, and the site is attended.*

16. Nurse tanks properly labeled: *Yes, with "CAUTION AMMONIA" labels, "INHALATION HAZARD" labels, and green, diamond-shaped U.S. DOT placards for pressurized gas, with U.S. DOT/UN 4 digit Identification Number 1005.*
17. Five gallon or larger can filled with clean water for transport vehicles: *Each nurse tank had a water canister strapped to its side, near the top.*
18. Quick disconnects annually reconditioned: *I did not inquire on this item.*

**I & M program checklist for permanent anhydrous ammonia storage tank, from page 2 of 2 of Appendix A of general PTI:**

1. Tank free of leaks: *Both EU-A1 and EU-A2 were free of leaks.*
2. Tank supports in good condition (no cracked or crumbled concrete, etc.): *The concrete saddle supports were in excellent condition. We were told they are 4 feet wide, go 6 feet underground, and are reinforced with steel rebar.*
3. Paint in good condition: *Paint on both EU-A1 and EU-A2 was in very good condition, with only minor cracking or tiny chips of paint.*
4. Equipment locked when not in use: *There is a locked chain-link fence which surrounds the two tanks.*
5. Tank properly labeled: *The fencing around the tanks has warning signs advising of anhydrous ammonia, but I was advised that they will apply green diamond labels to the tanks. This refers to the green, diamond-shaped U.S. DOT placards for pressurized gas, with U.S. DOT/UN 4 digit Identification Number 1005.*
6. Valves and fittings free from leaks and in good condition: *Valves and fittings for EU-A1 and EU-A2 appeared to be free from leaks and in good condition.*
7. Piping properly supported and guards in place: *Yes.*
8. Pipes free of physical damage and rust and properly painted: *Yes.*
9. Employees trained in proper filling procedures: *Yes.*
10. Provisions for bleeding of transfer hose from transport truck: *Yes, a water trap stored under the north tank, when not in use.*
11. Wheels properly chocked on the transport truck or rail tank car while unloading: *NA, as no transport trucks were onsite.*
12. Information and warning signs displayed and in good condition: *Yes, on the chain-link fence surrounding tanks EU-A1 and EU-A2.*
13. Area free of weeds, trash, and other unsafe conditions: *Yes, the area around the tanks was immaculate.*
14. Unused equipment stored out of the way: *Yes, there was equipment being stored nearby.*
15. Chemical safety goggles available, and in good condition: *We were advised that there was a gas mask and other safety equipment available.*
16. Protective gloves, boots, suits or slickers available and in good condition: *We were advised that there was a gas mask, rubber gloves, and long sleeved suits, available, and the gas mask is always worn during transfer operations. We were told that there is a fan under the nurse tank filling station(s); it is my understanding that this is to blow any ammonia vapors away from workers, for safety.*
17. Gas masks with ammonia type canisters and refill canisters within date limits available: *We were advised that there was a gas mask and other safety equipment available.*

18. Emergency clean water, shower or 75 gallon tank available nearby: *There was an emergency shower on the north side of the north tank, we were shown. We were advised that another is nearby.*
19. Hoses in good condition: *The hoses were being stored indoors, at this time. We ere told they were brand new in 2018, and that they are cleaned out, or "blown out," after each use.*
20. Hoses no older than 5 years from date of manufacture and marked: *The hoses were being stored indoors at this time, but were reported to be brand new in 2018. Mr. Parks advised us that they change the hoses ahead of the required 5-year time frame, rather than wait for 5 years. He described how hoses can begin to deteriorate and get small, pinhole-like openings, where white spots form, before the 5 years are up.*
21. Vapor and liquid hoses are proper ammonia-type and free of damage or deterioration: *We did not see any hoses at this time. We were told they were brand new in 2018, and they are cleaned out or "blown out," after use.*
22. Hoses suitably racked to prevent kinking: *We did not see any hoses in use at this time, as they were stored indoors.*
23. Hoses, including those on nurse tanks, securely clamped to the nipples: *We did not see any hoses in use at this time.*
24. Gages, pressure and liquid level, operable: *Gauges were operable, although rust obscured the face of the pressure gauge on the north tank. We were assured that this would be replaced.*
25. Valves properly labeled "liquid" and "vapor": *We were shown that yellow paint is used to identify vapor, and red is used to identify liquid. There are two nurse tank racks/filling stations which follow this color system, in addition to valves on a lint to EU-A1 and EU-A2.*
26. Safety relief valves within 5 years of manufacture or recertification and marked: *We could not closely examine relief valves atop the tanks. Mr. Parks advised us that they don't need to be changed this year, but he will change these in 1 or 2 years.*
27. Outlet openings on valves and lines free of dirt and rust with protective caps in place: *We could see no evidence of dirt or rust on the valves at the two nurse tank racks.*
28. Safety relief valves free of debris with rain caps installed: *We could not closely examine the relief valves atop the tanks, but were told that they each had small covers.*
29. Safety relief valve manifold operable: *We could not closely examine relief valves atop the tanks.*
30. Remote shut-off valve in working order: *The remote shut-off valve appeared to be freshly painted, and free of rust, aside from traces of rust on a single bolt.*

## Conclusion:

No instances of noncompliance were observed. The overall housekeeping practices and maintenance of the tanks were of extremely high quality. The only changes to be made following the inspection were replacing a gauge whose face was obscured by rust, and placing on EU-A1 and EU-A2 green, diamond-shaped U.S. DOT placards for pressurized gas, with the U.S. DOT/UN 4 digit Identification Number 1005. We left the site at 11:31 AM.

NAME

DATE

SUPERVISOR