

N8053
manila
Ingham

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

N805344703

FACILITY: HAWKINS HOMESTEAD		SRN / ID: N8053
LOCATION: 4904 W BARNES RD, MASON		DISTRICT: Lansing
CITY: MASON		COUNTY: INGHAM
CONTACT: Anthony Igl, Partner		ACTIVITY DATE: 06/12/2018
STAFF: Daniel McGeen	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection of anhydrous ammonia tank which had never before been inspected by AQD.		
RESOLVED COMPLAINTS:		

On 6/12/2018, the Michigan Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted an inspection of the anhydrous ammonia storage tank at Hawkins Homestead, which has not previously been inspected by AQD.

Environmental contacts:

Anthony Igl, Partner: 517-628-3568

Jeanine Igl, Partner: 517-749-2327

Kevin, Partner: 517-628-3568

Facility description:

This facility is a farm, with an 18,000 gallon anhydrous ammonia tank onsite.

Emission units:

Emission unit* ID	Emission unit description	General Permit to Install No.	Compliance Status
EU-AMMONIA	A single anhydrous ammonia storage tank and any associated handling process, nurse tanks or applicator tanks. This tank's capacity is rated as 30,000 gallons.	158-08	Noncompliance

* 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 a General Permit to Install for an anhydrous ammonia tank No. 158-08, on 6/5/2008. 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 No. 158-08 was 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).

Location:

This facility is in a rural, agricultural area outside of Mason. The nearest residence is a residence across the street, which is actually associated with Hawkins Homestead. This residence is roughly 425 feet from the anhydrous ammonia tank, as measured in Google Maps, and so the 300 foot setback requirement from nearby residences of the Permit to Install is still met. The next closest residence is over 800 feet to the southeast of the tank. To the west, the closest residences are about 1,300 feet from the tank.

History:

This facility received PTI No. 158-08 on 6/5/2008. The ammonia tank has never been inspected by AQD, prior to today. There has never been a complaint made to AQD about this facility.

Safety apparel required:

None specifically stated at the time of my arrival, but AQD recommends safety glasses with side shields, and sturdy foot wear.

Arrival:

As of June 2018, Google Maps incorrectly placed the facility about one mile east of the actual location (this has since been corrected). I found the site, and drove in the nearby vicinity, to check for offsite odors of ammonia, if any. Weather conditions were cloudy and 73 degrees F, with winds out of the south southeast at 10 miles per hour. To get downwind, I drove west of the facility, on Barnes Road, and then turned north, on S. Eifert Road, where I drove for almost a mile. I could not detect any ammonia odors, and drove back to the farm itself. I arrived at 11:40 AM, and detected no ammonia odors when I exited the State car.

I met with Mr. Anthony Igl, and Kevin, Partners in Hawkins Homestead. I provided my identification/credentials, per AQD procedure. I explained the reason for my visit, that this was a routine inspection, although this anhydrous ammonia tank had never been inspected before by AQD. I provided them with a copy of the original PTI, No 158-08, for convenience, and a copy of the updated Special Conditions for the General Permit to Install for Anhydrous Ammonia Storage and Handling. After the inspection, I noted that this permit had actually been issued after the most recent update to the conditions, which took place in 2005. Therefore, it already contains the latest versions of the special conditions and the handout for updated special conditions was not necessary.

I did not provide a copy of the informational card for the federal boiler National Emissions Standards for Hazardous Air Pollutants (NESHAPs), Subparts DDDDD and JJJJJJ, because it did not appear likely there would be any boilers or hot water heaters onsite, other than residential. A hot water heater of less than 120 gallons in capacity at an area source of HAPs would not be subject to 40 CFR Part 63, Subpart JJJJJJ, *National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers, Area Sources*, under Section 63.11195(f).

Inspection:

I was shown the 30,000 gallon anhydrous ammonia tank, EU-AMMONIATANK. Compliance with the special conditions for General PTI No. 158-08 is described below.

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).

Inspection result: I provided a copy of this regulation, and recommended that they review it.

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

Inspection result: We discussed their inspection and maintenance program. Please see the checklists 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.

Inspection result: I was informed the emergency response plan had not been reviewed with the local fire department for the current year, although they have done this, in past years. This is therefore a violation of SC No. III. 3 and was cited in a Violation Notice (VN) which AQD sent to the facility on 8/17/2018. See resolution at end of this report.

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.

Inspection result: The tank is well over 50 feet from the property line. It is over 260 feet from the farmhouse onsite, as measured in Google Maps. The nearest other residences are a house over 400 feet to the south, which appeared to be associated with Hawkins Homestead, and a house over 800 feet to the southeast. The nearest house to the west is over 1300 feet away. The facility appears to be over 500 feet from any school, apartment building, or institutional occupancy, and at least 1,000 feet from a hospital or nursing home.

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.

Inspection result: It is my understanding that Mr. Igl and Kevin are reliable persons properly trained and made responsible for proper compliance.

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.

Inspection result: It is my understanding that nurse and applicator tank storage complies with the setbacks required by this condition.

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

Inspection result: It is my understanding that they comply with this.

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

Inspection result: I was advised that they comply with this.

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.

Inspection result: It is my understanding that they comply with this.

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

truck transport tanks.

Inspection result: I was informed that they do not use nitrogen stabilizer in the tank.

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.

Inspection Result: Safety relief valves atop the tank could not easily be examined from ground level. It is my understanding that any safety relief valves atop the tank not meeting the above criteria will be replaced.

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.

Inspection Result: I was shown the location of the remotely operated shut-off valve.

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.

Inspection Result: I shown the system that they have in place. It was explained to me that an iron component of the system is where the break would occur while retaining intact the piping and valves on the plant side of the transfer area.

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.

Inspection Result: I was informed that the delivery truck will have a back pressure check valve.

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.

Inspection Result: The hoses which I observed were less than 5 years from the dates of manufacture, which was visible on the hoses themselves.

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.

Inspection Result: I was shown the water trap they have available. it appeared to me to be roughly the right size.

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.

Inspection Result: At this time, a sign was not present with emergency phone numbers. A Violation Notice (VN) was subsequently sent to the facility, on 8/17/2018. See resolution at end of this report.

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.

Inspection Result: It is my understanding that they have not had any malfunctions or spills occurring from EU-AMMONIA.

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.

Inspection Result: I was advised that they do not have a record of the most recent review with the local fire department, although they have kept such records in the past. This was cited as a violation in a subsequent VN, sent on 8/17/2018. See resolution at end of this report.

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.

Inspection Result: It is my understanding that they have never had an abnormal release from the anhydrous ammonia tank.

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.

Inspection Result: It is my understanding that the tank has not been modified.

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: *The nurse tank I examined appeared free of leaks.*
2. Paint in good condition: *The paint on the tank was showing traces of rust that were starting to appear. I recommended repainting the tank.*
3. Valves and fittings free from leaks and in good condition: *Valves and fittings appeared to be free from leaks and in good condition.*
4. Protective guards in place and in good condition: *The protective guards appeared to be sturdy and in good condition*
5. Outlet openings on valves and lines free of dirt and rust with protective caps in place: *Outlet openings on valves were free of dirt and rust with caps in place. The nurse tanks do not have their own hoses, I was advised.*
6. Safety relief valves free of debris with rain caps installed? *Safety relief valves atop the tank appeared to have rain caps in place.*
7. Gages, pressure and liquid, are operable: *Gages on the nurse tank for both pressure and liquid appeared operable.*
8. Excess flow valves installed and in good condition: *They appeared to meet this requirement with bleeder valves.*
9. Valves properly labeled "liquid" and "vapor": *It was explained to me that these valves are interchangeable.*
10. Vapor and liquid hoses are proper ammonia type and free of damage or deterioration: *It was explained to me that the nurse tanks do not have their own hoses. Instead, the hoses are on the applicator.*
11. Hoses, including those on nurse tanks, securely clamped to the nipples: *It was explained to me that the*

nurse tanks do not have their own hoses. Instead, the hoses are on the applicator.

12. Hoses suitably racked to prevent kinking and hose on delivery tanks securely fastened to prevent dragging. *It was explained to me that the nurse tanks do not have their own hoses. Instead, the hoses are on the applicator.*
13. Tanks securely attached: *The tank appeared securely attached.*
14. Trailer tongues, hitches, and safety chains in sound condition: *The trailer tongue and hitch appeared in good condition. My notes did not mention if I saw a chain associated with this tank.*
15. Nurse tank valves locked or capped if site is unattended or not fenced in: *I was advised that the site is attended.*
16. Nurse tanks properly labeled: *On the nurse tank was a green U.S. DOT placard for pressurized gas, with DOT/UN 4 digit Identification Number 1005, and labels reading: ANHYDROUS AMMONIA; and: INHALATION HAZARD.*
17. Five gallon or larger can filled with clean water for transport vehicles: *It is my understanding that the nurse tanks at the site have a 5 gallon container for water.*
18. Quick disconnects annually reconditioned: *I was advised that the applicator has quick disconnects, which are greased annually.*

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: *The permanent storage tank appeared free of leaks.*
2. Tank supports in good condition (no cracked or crumbled concrete, etc.): *The tank supports appeared to be steel, and showed only traces of rust on the white paint.*
3. Paint in good condition: *The paint on the tank appeared in good condition, overall, though there were occasional traces of rust.*
4. Equipment locked when not in use: *I was advised that the equipment is padlocked, when not in use.*
5. Tank properly labeled: *On the permanent storage tank was a green U.S. DOT placard for pressurized gas, with DOT/UN 4 digit Identification Number 1005, and labels reading: ANHYDROUS AMMONIA; and: INHALATION HAZARD.*
6. Valves and fittings free from leaks and in good condition: *The valves were new, I was shown.*
7. Piping properly supported and guards in place: *Pipes appeared properly supported, and concrete guards were in place to protect them.*
8. Pipes free of physical damage and rust and properly painted: *The pipes were free of physical damage, and most had little or no rust; the vapor line appeared rusty.*
9. Employees trained in proper filling procedures: *I was advised that they are trained in proper filling procedures.*
10. Provisions for bleeding of transfer hose from transport truck: *I was shown a white tank, to be used for bleeding of the transfer hose.*
11. Wheels properly chocked on the transport truck or rail tank car while unloading: *I was told that to the best of their knowledge, wheels are properly chocked on transport trucks.*
12. Information and warning signs displayed and in good condition: *Overall, the condition was good. I was advised that they have a replacement for the label ANHYDROUS AMMONIA, which had partially peeled from the tank.*

13. Area free of weeds, trash, and other unsafe conditions: *There were only scattered weeds, and the area appeared free from trash and other unsafe conditions.*
14. Unused equipment stored out of the way: *Unused equipment was stored out of the way.*
15. Chemical safety goggles available, and in good condition: *It is my understanding that safety goggles are available, and in good condition.*
16. Protective gloves, boots, suits or slickers available and in good condition: *It is my understanding that they have some protective equipment available. My notes were not clear on which or if all items were available.*
17. Gas masks with ammonia type canisters and refill canisters within date limits available: *It is my understanding that gas masks with ammonia type canisters and refill canisters are available. Offhand, it was not certain if they were within date limits available.*
18. Emergency clean water, shower or 75 gallon tank available nearby: *They appeared to meet this requirement. Emergency water was nearby, and there would be a shower available nearby.*
19. Hoses in good condition: *Hoses are stored indoors, I was advised, which should help keep them in good condition.*
20. Hoses no older than 5 years from date of manufacture and marked: *The hoses they have were manufactured in 2016.*
21. Vapor and liquid hoses are proper ammonia-type and free of damage or deterioration: *The vapor and liquid hoses met these criteria.*
22. Hoses suitably racked to prevent kinking: *They appeared to meet this requirement.*
23. Hoses, including those on nurse tanks, securely clamped to the nipples: *They appeared to meet this requirement for the permanent storage tank. The nurse tanks do not have their own hoses, I was advised.*
24. Gages, pressure and liquid level, operable: *The pressure gauge read 125 psi. The liquid gage read 84% full.*
25. Valves properly labeled "liquid" and "vapor": *The valve on the left is for vapor, I was informed, while the one on the right is for liquid. I was advised that they will label these.*
26. Safety relief valves within 5 years of manufacture or recertification and marked: *The safety relief valves will be replaced, I was informed, as they may not meet this criteria.*
27. Outlet openings on valves and lines free of dirt and rust with protective caps in place: *It is my understanding that lines and valves are stored indoors.*
28. Safety relief valves free of debris with rain caps installed: *They appeared to meet this requirement.*
29. Safety relief valve manifold operable: *I was informed that they believe this to be operable.*
30. Remote shut-off valve in working order: *I was informed that there are 2 locations for remote shut-off valves, one at each end of the tank.*

End of review of special conditions.

Conclusion:

The facility was generally in compliance. except for the most recent year. there had not been an annual

review of their emergency response plan with the local fire department, records were not available of past reviews, and there was not a sign posted with emergency contact phone numbers. Facility staff indicated a willingness to address these concerns.

Resolution:

A VN was sent on 8/17/2018, for a violation of PTI No. 158-08 SC Nos III. 3, IV. 7, and No. VI. 2. On 8/27/2018, a detailed letter was received in response to the VN, listing the corrective actions Hawkins Homestead has taken and is taking to resolve the cited violations. The response plan resolves the violations, and the compliance status of Hawkins Homestead can now be returned to "Compliance" from this point forward.

NAME 

DATE 9/22/2018 SUPERVISOR 