

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

P052837954

FACILITY: Fowler's Farm-City Sales		SRN / ID: P0528
LOCATION: South Algers and Washington, ITHACA		DISTRICT: Lansing
CITY: ITHACA		COUNTY: GRATIOT
CONTACT: Russell Fowler, Owner		ACTIVITY DATE: 12/14/2016
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection to determine compliance with PTI 357-77, paying particular attention to emergency contact sign and emergency response plan status.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Russell Fowler, Operator (2876 W. Washington Rd, Ithaca, MI 48847)

Purpose: Conduct an unannounced, scheduled compliance inspection by determining compliance with Fowler's Farm City Sales' Permit to Install (PTI) No. 357-77 for anhydrous ammonia storage and handling. Particular attention was paid to ensure that the emergency contact sign that was not posted during the October 2015 inspection was done, and that the emergency response plan R. Fowler had submitted to AQD was reviewed by the local fire department or LEPC prior to the 2016 planting season.

Facility Background/Regulatory Overview: Russell Fowler said that Fowler's Farm City Sales purchases anhydrous ammonia from The Andersons to fill their 18,000 gallon permanent storage anhydrous ammonia tank, which is located at the intersection of Washington and Alger Roads in Ithaca. He then distributes the anhydrous ammonia to local farmers using his own fleet of nurse tanks.

Inspection: This was an unannounced, scheduled compliance inspection. At approximately 1:20 p.m. on December 14, 2016 I arrived at Fowler's Farm City Sales to speak with R. Fowler. Attached are photos taken from the car prior to meeting R. Fowler.

At the previous inspection, R. Fowler explained that his anhydrous ammonia loading season runs from approximately April 10th through the 4th of July. He said after the loading season is complete he removes the transfer hoses. I noted that all transfer hoses had been removed from the permanent storage tank.

PTI 357-77

This permit is for the installation and operation of a 12,000 – 30,000 gallon permanent storage anhydrous ammonia tank. R. Fowler currently has an 18,000 gallon tank located on his property.

The permanent storage tank is protected by a guardrail barrier from road traffic and from customers. R. Fowler also said that he dug a trench just inside of the property, near the road, to prevent drunk drivers from driving straight into the permanent storage tank from Alger Rd. He explained that a drunk driver had crashed into the field some years back, but had only knocked over a nurse tank.

Although not required by the current permit (only required by the "new" AQD general permits to install for anhydrous ammonia tanks) R. Fowler has kept the hoses used for anhydrous ammonia transfer up-to-date. The current hoses are marked with an installation date of 2013 and a replacement date of 2019.

The tank employs electric vapor pumps which R. Fowler explained are used to force liquid from the permanent storage tank to the nurse tanks.

The following is a list of items that were out of compliance or pending during the last inspection:

- Emergency response plan developed and approved by the fire department or LEPC
- There was no emergency contact sign on the property

During the inspection, there was no emergency contact sign located on the property of the anhydrous ammonia tank. During the 2015 inspection, R. Fowler said he had not completed this because he was short-staffed. A violation notice was sent for failure to have the emergency contact sign completed by the agreed upon date of July 27, 2015. During this inspection R. Fowler said that in May or June 2016 he had installed the emergency contact sign, but that someone had hit the sign in July and after that time he hadn't installed a new one. He said that the new sign has been painted but still needs to be completed by adding emergency contact names and numbers. He said by the spring he would install the new sign. At that time I will revisit this site to ensure that this has been completed.

An emergency response plan is required to be reviewed and approved (by the LEPC or fire department) prior to each spring planting season (condition 10). During the 2015 inspection, I provided R. Fowler with a copy of Fowler's emergency response plan that was received on August 24, 2015, for the purposes of having it reviewed by the local fire department or local emergency planning committee prior to the 2016 planting season. I reminded R. Fowler of this requirement and required that it be done prior to the start of his planting season in April 2016. During the current inspection R. Fowler explained that he had submitted his emergency response plan to the City of Ithaca Fire Department prior to the 2016 spring planting season for review and approval. They responded that this was not under their jurisdiction and so passed it on to Gratiot County Emergency Management. Attached is a letter dated 5/17/16 from Gratiot County's Emergency Management Coordinator, Dan Morden, in response to the request to review the emergency response plan. In the letter it is explained that Fowler's is required to report under SARA Title III, Section 302. SARA Title III requires that those facilities that have Extremely Hazardous Substances (EHSs) that are greater than or equal to the Threshold Planning Quantity (TPQ) are subject to the emergency planning requirements in Section 302 of Title III. Those subject to Section 302 require an off-site emergency response plan developed by the LEPC, which in Gratiot County's case is currently Dan Morden. D. Morden is currently working on drafting an off-site emergency response plan for Fowler's. Through multiple discussions with D. Morden (see attached email), we determined that the best approach for future annual approvals would be to request that R. Fowler contact him to review the existing emergency response plan. Once this is done, D. Morden said that they he can generate a letter to R. Fowler from the LEPC stating that the plan has been reviewed and meets the requirements under SARA Title III and the Right-to-Know. I will inform R. Fowler of this procedure. As of January 24, 2017, R. Fowler has in his position the draft off-site emergency response plan to review for final copy.

Compliance with the remaining PTI conditions are addressed below:

Condition 1

Condition 1 requires that all pipelines and hoses be protected by, for example, elevation or abutments, to prevent accidental breakage. The piping system below the anhydrous ammonia tank is protected by a guardrail structure. The pump itself rests atop a concrete block. During previous inspections it was noted that hoses were not elevated above-ground, but upon subsequent inspections R. Fowler and removed them from lying on the ground to be propped up off the ground. The hoses, as previously mentioned in this report, have been removed for the winter. Fowler's is in compliance with this condition at this time.

Condition 2

Although there were no transfer operations being conducted, R. Fowler verified that when transfer operations occur, vapor return lines are used. Condition 2 requires vapor return lines be used during ammonia transfer operations. Fowler's is in compliance with this condition.

Condition 3

Except during transfer operations, all valves (liquid and vapor) are required to be closed. During the 2015 inspection, while onsite, upon bending down near the ammonia tank to take photos of the main shutoff valve, I detected NH₃ vapors. I made R. Fowler aware of this who sent one of his employees to determine the source of the odors. The employee said that the air compressor valve hadn't been shut all the way. R. Fowler explained that they had filled some nurse tanks that day and hadn't completely closed the valve. A violation notice was sent in 2015 for failure to close all valves. In the VN response R. Fowler said that he now uses a check-off sheet to remind him to double-check all valves after filling the nurse tanks.

Condition 4

Condition 4 requires that the main shut-off valve, which at Fowler's is located underneath the tank, is required to be locked when not being used during transfer operations. The main shut off valve was locked. Fowler's is in compliance with this condition.

Condition 5

R. Fowler said he is the one that does the transfer operations and that he has been doing anhydrous ammonia transfer since he was a teenager working for his father, previous owner Gene Fowler. I considered him to be a reliable person properly instructed to perform anhydrous ammonia transfer procedures. Fowler's is in compliance with this condition.

Condition 6

Nurse tanks are required to be filled only from the main storage tank. R. Fowler verified that this is the case. Fowler's is in compliance with this condition.

Condition 8

This condition requires compliance with the Michigan Department of Labor regulations as defined in the American National Standards Institute (ANSI) manual K61.1-1972 (second edition). The most recent updated version of this ANSI standard is K61.1-1999 (fifth edition). The following are ANSI standards that apply to this location with their associated status of compliance:

ANSI K61.1-1999 Section 3.4

Fowler's is required to have the following items on-hand for emergency and rescue purposes:

(3.4.1.1) Two full-faced gas masks jointly approved by NIOSH and MSHA, each with one spare canister in a readily accessible location, OR two high visibility full head hoods each with a minimum of 5 minute pressurized air supply (this includes full face respirators or self-contained breathing apparatuses as alternatives)

(3.4.1.2) One pair of protective gloves impervious to ammonia

(3.4.1.3) One pair of protective boots impervious to ammonia

(3.4.1.5) Easily accessible emergency shower and a plumbed eyewash unit or at least 100 gal of clean water in an open top container

(3.4.1.6) Chemical splash goggles

Section 11.6 on safety equipment also states that "Any person making, breaking or testing any ammonia connection, transferring ammonia, or performing maintenance or repair on an ammonia system under pressure shall wear protective gloves impervious to ammonia and chemical splash goggles. A full face shield may be worn over the goggles, but the face shield shall not be worn as a substitute for a primary eye protection device (goggles)."

R. Fowler now has a face shield, in addition to protective gloves which he had at the prior inspection. He said the safety water is also present onsite during transfer. Fowler's is in compliance with this standard.

ANSI K61.1-1999 Section 5.12 – Painting of containers

Fowler's is required per this standard to have a reflective surface maintained in good condition on the anhydrous ammonia tank. White or other colors with similar reflecting characteristics are acceptable. Fowler's has painted the entire tank white in response to previous violations and is therefore in compliance with this standard.

ANSI K61.1-1999 Section 6.4 – Installation of storage containers

According to 6.4.1 the aboveground containers should be reinforced with concrete footings and foundations or structural steel supports mounted on reinforced concrete, and the lowest point of the tank should not be less than 18 inches above ground. Fowler's permanent storage tank has concrete footings and the distance between the ground and lowest point of the tank is greater than 18 inches. Fowler's is in compliance with this ANSI standard.

ANSI K61.1-1999 Section 6.6 – Marking containers

Fowler's is required to have each container be marked on at least 2 sides, which are visible with the words "ANHYDROUS AMMONIA" in sharply contrasting colors with letters not less than 3.9 inches high. Each container should also be marked on each end and on each side with the words "INHALATION HAZARD" in sharply contrasting colors with letters not less than 2 inches high. The 1984 violation notice also mentioned that this must be done on the main storage tank.

R. Fowler had placed these two types of stickers on the permanent storage tank and they were present during the previous inspection. However, during this inspection they were no longer on the tank. I spoke with R. Fowler who indicated that the stickers were not properly adhered to the tank and because of the cold weather the stickers had peeled off and blown away (see attached photos). He explained that these stickers will adhere better when the ambient temperature is warm and there is no anhydrous ammonia in the tank (he said NH₃ in the tank makes the sides of the container cold and therefore proper adhesion does not take place). He said that he will replace these stickers when the tank is warm and empty this year. I will conduct a site review at this time to verify both the stickers and emergency contact sign have been replaced.

Condition 9

Fowler's is required to have a caution sign ("Do not start vehicle engine until hoses are disconnected") on the pulling vehicle's windshield or steering wheel, or remove keys from the customer's truck completely, and also have a wheel chock in place for each wheel on the pulling vehicle. Filling operations were not being conducted during the inspection, therefore I could not verify compliance of this condition at the time.

Condition 11

Vapor and liquid lines are required to be vented after ammonia transfer in a 55 gallon water trap at minimum. R. Fowler said he does have plastic 55 gallon tubs that he uses for the safety water and for the water trap. He explained that he brings the tubs over to the tank whenever he's loading out anhydrous ammonia. He said that he does not leave the tubs at the anhydrous ammonia tank site because they would likely get stolen and I told him that this is fine as long as he is using both when operating the anhydrous ammonia tank. Fowler's is in compliance with condition 11 at this time.

Condition 12

A mechanically operated positive shut-off valve is required to be installed on the main storage tank liquid lines to regulate the rate of the liquid release. R. Fowler showed me the shut-off valve which is located directly under the tank itself (same as main shut off valve) and through which the liquid lines can be opened or closed. Fowler's is in compliance with this condition

Condition 13

Opacity is limited to 20%. I saw no signs of opacity during the inspection. Fowler's is in compliance with this condition.

At this time, Fowler's Farm-Services Sales is found to be in compliance with the conditions of PTI 357-77 for Anhydrous Ammonia Storage and Handling.



Image 1(NH3 tank) : No stickers present 12/14/16

NAME

Michael McLean

DATE

2/7/17

SUPERVISOR

B.M.