

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

P052826473

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: 07/24/2014
STAFF: Michelle Luplow	COMPLIANCE STATUS: Non Compliance	
SUBJECT: Self-initiated compliance inspection		SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow and Kim Sakowski (RRD)
Personnel Present: Russell Fowler (2876 W. Washington Rd, Ithaca, MI 48847)

Purpose: Conduct an unannounced, self-initiated compliance inspection by determining compliance with Fowler's Farm City Sales' Permit to Install (PTI) No. 357-77 for anhydrous ammonia storage and handling. The source has not been inspected since May 1984. The May 1984 inspection revealed several violations of PTI 357-77, and the AQD has a response letter dated 7-13-84 from Gene Fowler, the president of Farm City Sales at the time, explaining the actions taken to resolve the noted violations. The main purpose of this inspection was to check for compliance with these particular non-compliance issues from 1984. This source did not have an SRN assigned to it and therefore I had Dennis McGeen in the Emissions, Reporting, and Assessment Unit create SRN P0528 to be added to MACES.

Facility Background/Regulatory Overview: Russell Fowler said that 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. A phone pole located nearby had an address sign of "2680." He then distributes the anhydrous ammonia to local farmers using his own fleet of nurse tanks.

Inspection: This was an unannounced, self-initiated compliance inspection. At approximately 1:30 p.m. on July 24, 2014 K. Sakowski and I arrived unannounced at Fowler's Farm City Sales business located at 2876 W. Washington Road in Ithaca, just down the road from the anhydrous ammonia tank, and met with Russell Fowler, who works onsite at the store. Prior to meeting with R. Fowler, K. Sakowski and I did a brief survey of the anhydrous ammonia tank and K. Sakowski took photos (see attached). I explained to R. Fowler that we were there to inspect the anhydrous ammonia tank, as it has been 30 years since AQD personnel had been out there. I also provided him with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure, and an "Agribusiness and Farmers: Are You in Compliance?" anhydrous ammonia fertilizer brochure which explains all potential regulations that R. Fowler's anhydrous ammonia tank may be subject to. R. Fowler explained that MIOSHA had visited his site several times within the past 30 years, and explained to me various items that they wanted to see fixed, such as putting gravel underneath the tank, keeping the tank painted, and labeling it.

R. Fowler explained that his anhydrous ammonia loading season runs from approximately the 10th of April through the 4th of July. After the loading season is complete he removes the transfer hoses.

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. During the time of the inspection, the tank was approximately 15% full by volume.

Currently 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 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 (see photos) which R. Fowler explained are used to force liquid from the permanent storage tank to the nurse tanks.

Condition 1

Condition 1 requires that all pipelines and hoses be protected by, for example, elevation or abutments, to prevent accidental breakage. When we arrived onsite with R. Fowler, the hoses were laying on the ground, close to the pathway where trucks would come in to fill nurse tanks (see attached photos). I pointed this area of concern out to R. Fowler. He said that the application season had ended and that during the season he usually keeps the hoses propped up off the ground. I explained to him that they must be propped up at all times to prevent accidental release by being run over. The hoses are attached to equipment that is located atop a 4 foot high concrete slab. Future inspections should be conducted to verify that these areas of concern have been

addressed.

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 on all tanks shall be closed. While onsite, we verified that all valves are closed. R. Fowler showed me how to determine if valves are opened or closed. Most of the valves also have mechanisms that allow R. Fowler to padlock the valves so that unauthorized access would be less likely to occur. Fowler's is in compliance with this condition.

Condition 4

Condition 4 requires that the main shut-off valve, which at Fowler's is located on the cement bulkhead, 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 7

Signs are required to be posted at the facility stating emergency phone numbers for the owner, primary operator, local and state police, local fire department and ambulance service. Fowler's was found to be in non-compliance with this condition during the May 1984 inspection. In response to this 1984 violation, Gene Fowler said that all violations cited could be complied with by October 1, 1984. There were no signs present with this information when K. Sakowski and I arrived onsite. ***I told R. Fowler that I would send a violation notice that would include a notice of violation of this condition for not having signs with emergency contacts posted at the facility.***

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:

- (3.4.1.2) One pair of protective gloves 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)."

The violation notice sent in June of 1984 cited that personal protective equipment (PPE), namely gloves, and goggles or masks, be readily available. R. Fowler showed me that he had protective gloves that are kept at the anhydrous ammonia site, but not the goggles or mask. The 1984 violation notice also mentioned that safety water for flushing body areas be available at all times; however, R. Fowler did not have this item located onsite either. ***Both the PPE and the water container to flush body areas will be included in the violation notice.***

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 permanent anhydrous ammonia tank is painted a medium shade of gray, which would not qualify as having similar reflecting characteristics as the color white. One of Fowler's nurse tank was onsite that day (see attached photos) which was painted white. The 1984 violation letter mentioned that Fowler's needed to have all containers painted with a reflective color. ***The lack of reflective paint for the permanent storage tank will be included in the violation notice.***

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.

Fowler's did not have any markings on the permanent storage tank, as seen in the photos. R. Fowler said at one time the tank was labeled, but was removed in order to paint the tank the current gray color. ***The lack of markings will be included in the violation notice.***

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 10

Condition 10 essentially requires Fowler's to have an emergency response plan (procedures to be followed in the event of an emergency) that is reviewed annually by the local fire department, and is approved by the AQD District office. R. Fowler said that he does not have an emergency response plan and that the fire department has never been out to the Fowler's site. ***I told him I would include a violation notice of special condition 10 for neither having an emergency response plan nor for having a local fire department review the emergency response plan.***

Condition 11

Fowler's is also required to have, at a minimum, a 55 gallon water trap that is used to vent any vapor or liquid lines requiring venting. R. Fowler showed me his water trap which, according to him, did not contain water because the application season was nearing a close. It is an approximately 100 gallon container (see attached photos). However, the container had some holes in it along the bottom corner, which would not be efficient at holding the water necessary to vent the ammonia. R. Fowler told me that he planned on getting a plastic container to hold water for venting in the future. Future inspections are necessary to ensure a container sufficient for ammonia venting is in place.

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 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 non-compliance with conditions 7, 8 and 10 of their PTI for Anhydrous Ammonia Storage and Handling. A violation notice will be sent for these items.

NAME Michael M. Lydon

DATE 8-19-14

SUPERVISOR M. McC

