

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

N774625821

FACILITY: CROP PRODUCTION SERVICES		SRN / ID: N7746
LOCATION: 1100 N FOREST HILL, SAINT JOHNS		DISTRICT: Lansing
CITY: SAINT JOHNS		COUNTY: CLINTON
CONTACT: Steve Popp, Operations Manager		ACTIVITY DATE: 06/26/2014
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled compliance inspection with particular attention being paid to inspection report recordkeeping and annual review of an emergency response plan by the local fire department, Dallas Twp.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow

Personnel Present: Steve Popp, Operations Manager (steve.popp@cpsagu.com); David Sterner, CPS Site Manager

Other Relevant Personnel: Steve Cundiff, Manager, Operations Compliance (steve.cundiff@cpsagu.com); Reese Martin, Manager, Operations Compliance (reese.martin@cpsagu.com)

Purpose: Conduct an unannounced, scheduled compliance inspection by determining compliance with Crop Production Services' (CPS) 4 General Permits to Install (PTI) No.'s 13-07, 14-07, 15-07, and 155-07 for Anhydrous Ammonia Storage and Handling. The facility was last inspected in May 2013. Particular attention was paid to the compliance status of semi-annual inspections on the permanent storage tanks, as well as the status of emergency plan approval by the Dallas Township local fire department. CPS received violations for these two areas as a result of the last inspection.

Facility Background/Regulatory Overview: CPS provides crop consultation services and fertilizing options, including anhydrous ammonia. The Forest Hill site is specifically used for receiving anhydrous ammonia into permanent storage tanks, filling the associated nurse tanks, and renting the nurse tanks out to local farmers for agricultural purposes. The General Permit to Install special conditions are created based on consideration of Best Available Control Technology for toxics (T-BACT), the American National Standard (ANSI) for Safety Requirements for the Storage and Handling of Anhydrous Ammonia, and MIOSHA requirements summarized in the Department of Labor and Economic Growth General Industry Safety Standards, Part 78 for Storage and Handling of Anhydrous Ammonia (1910.111). The central office for this CPS site was moved from 208 W. Railroad in St. Johns, to 450 S West Street in Henderson, MI. CPS may also be subject to the SARA Title III Program, federally required (40 CFR 68) risk management plans (RMPs), MIOSHA safety standards, etc. I referred CPS to a link for the Department publication "Agribusiness and Farmers: Anhydrous Ammonia Fertilizer" which discusses these possibilities.

Inspection: This was an unannounced compliance inspection. At approximately 2:00 p.m. on June 26, 2014 I arrived unannounced and met with David Sterner, who works onsite at the anhydrous ammonia tank storage facility. He, in turn, called Steve Popp, the new Operations Manager since the fall 2013, to meet us at the CPS Forest Hill site. I provided S. Popp with a DEQ "Environmental Inspections: Rights and Responsibilities" brochure to illustrate a typical inspection procedure. Patrick Nellenbach and Bob Tadsen from the previous inspection report are no longer employed at CPS.

EU-AMMONIA – Special Conditions

The special conditions are the same for each permanent storage anhydrous ammonia tank. Permit No.'s 13-07 (EUMiddle), 14-07 (EUNorth) are for 6,000 gal permanent storage tanks, permit no. 15-07 is for an 18,000 gal permanent storage tank (EUSouth), and permit no. 155-07 is for a 30,000 gal permanent storage tank (EUBIG). D. Sterner said they currently have 69 nurse tanks on site, the remainder have been "rented" out for use. There are 91 nurse tanks total in CPS' possession, according to D. Sterner. All permits apply to the permanent storage tanks and any associated nurse tanks.

1.1

I did not ask S. Popp if he kept a copy of the "Part 78, Storage and Handling of Anhydrous Ammonia" (MIOSHA 1910.111), a copy of which must be maintained, according to this condition. I emailed S. Popp, S. Cundiff, and R. Martin (who will soon be taking over S. Cundiff's position as manager over the Michigan CPS facilities) to remind them that a copy must be kept on-hand. S. Cundiff said he would have S. Popp print 2 copies out – one for the office in Henderson and one from the St. Johns facility. CPS is in compliance with condition 1.1.

1.2

According to this condition, the permittee must implement and maintain the inspection and maintenance program specified in Appendix A of the permit for the nurse and permanent storage tanks. Permanent storage tanks must be inspected at least twice per year, prior to spring and fall application seasons (CPS' spring season starts around mid-April) using Appendix A for Permanent Ammonia Storage tanks. A violation notice was sent after the May 2013 inspection because CPS had not conducted an inspection of the tanks since 2007, when the permits had first been issued. The June 23, 2013 violation response letter from Bob Tadsen explained that CPS planned on using Appendix A for all future permanent storage tank inspections. During the 2014 inspection D. Sterner showed me the most recent inspections on the permanent storage tanks. According to their records, the last inspection conducted using Appendix A was May 1, 2013; however, during the May 30, 2013 inspection, these records were not in CPS' records and D. Sterner did not indicate that there were any other records present onsite for these inspections besides those documented in 2007. During the June 26, 2014 inspection/review of records the inspection records contained the "May 1, 2013"

Appendix A inspections as well as more recent inspections on a Agrium Sales inspection form (see attachment). Additionally, while their "May 1 2013" inspections were conducted using Appendix A inspection sheets (1 for each permanent storage tank) 2 of the 4 inspections were conducted using the nurse and applicator tank inspection sheet, which do not encompass all of the necessary inspection points that the Permanent Storage inspection sheet does.

As of January 2013, CPS has implemented their own inspection form (see attached) that they plan to utilize on a monthly basis. The last inspection conducted using this form was February 27, 2014 (see attached). This inspection report did not specify which tanks were being inspected; it is assumed that inspection of all tanks were conducted on one form. I cross-checked Appendix A with this new form and all inspection items from Appendix A are accounted for except for:

- 1) Tank free of leaks
- 2) Tank supports in good condition (no cracked or crumbled concrete, etc.)
- 23) Hoes, including those on nurse tanks, securely clamped to the nipples
- 27) Outlet openings on valves and lines free of dirt and rust with protective caps in place

I sent an email to S. Popp, S. Cundiff, and R. Martin informing them of the following:

- 1) CPS should include these 4 aforementioned checkpoints (numbers 1, 2, 23, 27) in their semi-annual inspections if they plan to use their monthly inspection report form.
- 2) An inspection report form should be filled out for each permanent storage tank and each report should identify which tank was inspected
- 3) Inspections should occur before every spring and fall application season

Failure to meet these requirements may result in future violations.

Nurse tank inspections should be performed daily and documented at the permittee's discretion; all maintenance and repairs on the nurse tanks should be documented at all times. D. Sterner showed me documentation of all maintenance and repairs of the nurse tanks and permanent storage tanks. In the "May 1, 2013" CPS Appendix A inspection report D. Sterner noted that 3 of the 4 permanent storage tanks had unsatisfactory paint conditions. When I arrived at the CPS facility, D. Sterner had been working on power washing the paint off the permanent storage tanks to have them repainted, addressing the comments in CPS' inspection report. The 30,000 gallon storage tank and all of the nurse tanks had all been repainted and relabeled with the appropriate stickers. CPS is in compliance with condition 1.2.

1.3

According to S. Popp, there are 3 personnel onsite that are involved with the actual transfer operations of the NH₃ at the loading rack for the nurse tanks. These staff have been trained based on experience/years of working with anhydrous ammonia, according to D. Sterner, but also, according to S. Popp, trained by Ammonia Technician courses and respirator fit tests (see attached for examples). S. Popp said that each operator is required to go through an Asmark quiz and respirator fit test annually. This satisfies condition 1.3. B. Tadsen, from the previous inspection, said that DHC Trucking is the company that is involved with the deliveries and transfers to the permanent storage tanks and confirmed that they are properly trained in these activities.

1.4

Although transfer operations were not currently taking place, D. Sterner verified that nurse tanks are only filled from the permanent storage tanks via the loading rack, satisfying condition 1.4. D. Sterner also said that unloading of the nurse tanks occurs at the bulkhead.

1.5

D. Sterner said they try not to load the nurse tanks above 85 vol%. The meters for determining total volume in the nurse tanks are located on the top of the nurse tanks, facing upward. The uninsulated permanent storage tanks (which are what is present on site), can be filled no more than 87.5 vol% (Rule 7801(b)(11)). The readings off of the gauges for each tank are as follows:

Permanent Storage Tank	Percent full (vol%)
30,000 gal (EUBIG)	10-15
18,000 gal (EUSOUTH)	8
6,000 gal (EUMIDDLE)	84
6,000 gal (EUNORTH)	81

D. Sterner said that EUBIG is no longer kept at full capacity because it is used for excess flow through the anhydrous ammonia system that connects all of the tanks. CPS is in compliance with condition 1.5.

1.6

Per the May 30, 2013 inspection, CPS is in compliance with the setback distances required in the permit between nurse

and applicator tank storage and residences, places of private or public assembly, schools, apartments, institutions, hospitals or nursing homes. CPS has a fenced-in area where it keeps the nurse tanks during the off-season; however, during the inspection 4-5 full nurse tanks were lined up along the fence near the road. D. Sterner said they are kept there during the application season. The nurse anhydrous tanks can be stored no less than 20' from the property line. The property line, in country/unincorporated areas, extends to the middle of the road. Using a Clinton County online MapViewer, the distance from the anhydrous nurse tanks to the center of the road is 38'. Even if the property line were to extend to the edge of the grass on the road, CPS would still be in compliance with this part of the condition at 21' from the property line. The anhydrous nurse tanks also may not be less than 150' from any existing residence or private/public assembly. There is a residence directly across the street from CPS, but according to the MapViewer ruler tool, the residence is almost exactly 150' from the nurse tanks lined up along the fence. See the May 2013 inspection report for all maps.

1.7

For the May 2013 inspection a violation was issued to CPS for failure to have an emergency response plan approved by the local fire department. Bob Tadsen wrote in his June 23, 2013 letter to AQD that a visit from the fire department was to occur July 10, 2013. S. Popp forwarded the documented emergency response plan review by the fire department for July 10, 2013 (see attached). CPS currently has a 2014 "Handi-Plan" emergency response plan with updated contact information, site maps, etc. S. Popp has a visit scheduled with the Dallas Twp Fire Department for July 16, 2014 for a walk-through and approval of the emergency response plan. S. Cundiff provided me with a blank form that CPS will use during the fire department's walkthrough of the facility: it includes the date, the local emergency planning agency's (LEPC) name, the local law enforcement agency's name, a list of things to review/discuss with the fire department, and a space for signatures of all those involved in the plan review (see attached). CPS is in compliance with condition 1.7.

1.8

CPS is required to have safety relief valves on all of its permanent storage and nurse tanks; valves must be replaced or recertified every 5 years. D. Sterner said that every 5 years the safety relief valves are replaced on the nurse tanks. I did not verify the manufacture dates on the valves to verify the valves had been replaced within the last 5 years. P. Nellenbach said that 30 of the 91 nurse tanks got their liquid, fill, and vapor valves replaced the spring of 2013 and each of these valves has its own emergency shutoff valve. The next replacement year is 2018. The permanent storage tanks have safety relief valves located on the tops of the tanks. CPS is in compliance with condition 1.8.

1.9

CPS had installed remotely operated pneumatic control valves in December 2012, to replace the mechanical, external shutoff valves for the permanent storage tanks. Valves in the tanks can now be automatically closed by pushing a button located 20' away from the tanks. This satisfies condition 1.9.

1.10

At the transfer area for permanent storage, I verified that a bulkhead was in place, satisfying condition 1.10.

1.11

From the previous 2013 inspection, each liquid line is equipped with internal excess flow valves (globe valves) at each transfer spot, where the valve shuts off flow if the product is moving too fast through the lines. CPS is in compliance with condition 1.11.

1.12

The hoses located at the nurse tank loading rack were replaced in December 2012. The new hoses have a "remove by 2019" expiration date marked on them. This satisfies condition 1.12.

1.13

According to D. Sterner, after transfers to the permanent storage tanks, the vapor and liquid lines of all 4 permanent storage tanks are vented to a 150 gallon water tank. D. Sterner said that the water is changed in the tank every 4 trucks that unload into the permanent storage tanks. At the anhydrous ammonia nurse tank transfer station any residual NH_3 left in the hose is bled off into the air through bleeder valves. CPS is in compliance with condition 1.13.

1.14

A professionally designed sign was conspicuously placed on the fence at the entrance off of Forest Hill. It contains the following emergency contacts: Stephen Popp, David Sterner, the CPS office number, and police, fire, and Chemtree contact numbers. A duplicate sign is also located on the fence facing M-21; both signs are an updated version from the sign that was installed after the 2013 inspection. CPS is in compliance with condition 1.14.

1.15

According to D. Sterner there have been no abnormal releases of anhydrous ammonia from their site since 2006, when the last release was reported according to AQD files. CPS is in compliance with condition 1.15.

At this time, Crop Production Services is found to be in compliance with their General PTI conditions for Anhydrous Ammonia Storage and Handling.

NAME Michael M. Lybun

DATE 7-7-14

SUPERVISOR Michael M. Lybun

