



MEMO

August 29, 2008

To: Iowa Certified Third Party UST Compliance Inspectors
From: Tom Collins/Paul Nelson
Re: Inspection/Database procedures

It has taken us two years to complete the UST third party compliance inspection permanent certification, which culminated in our August training session with Marcel Moreau. Thanks for taking part in the two-day training session. We covered a lot of ground and I want to emphasize some of the points made during training.

1. **Database.** The database is expected to be completed in September and in final production. For the time being, we've printed procedures for making corrections and reports. In other words, when the violations/deficiencies identified during your inspection are corrected or resolved within 60 days, you must go back into the database and make the appropriate changes. This final inspection report is supposed to be entered into the database within 90 days of the initial inspection.

The attached document also shows you how to print off an inspection report to give to the owner/operator following your inspection. It is a paper record for the owner to keep in his/her records.

2. **Corrections.** Owners and operators have 60 days to return to compliance following your inspection. It is your responsibility to track violations and corrections. Make sure you are clear to owners/operators about completing the corrections and submitting the documentation to you that they have been corrected. In order to ensure a return to compliance in 60 days, give the owner/operator a reasonable amount of time to complete the corrections, but don't just ask them to have the problem corrected in 60 days—make sure it is corrected and completed within 60 days. You may have to make a phone call to the owner/operator, maybe even a follow up visit, but don't just ask that something be corrected and let it pass. As soon as corrections meet compliance requirements, it is important that you enter the corrections in the database. Instructions on how to do this are attached. Remember, you must submit a final report (unless there are no violations/deficiencies) within 90 days of the inspection date.

If for some reason the owner/operator does not meet the return to compliance deadline of 60 days, notify Paul or me and we will have the field office follow up. We will also periodically run queries on the database to check for compliance and to see who has not completed the corrections. The point is--do all you can to see that the site returns to compliance within 60 days.

3. **Before the Physical Inspection.** The most efficient and effective way to conduct records review is to receive them before the inspection. A memo has been prepared to help owners/operators organize their records and submit them to you before the inspection. It is attached and also will be available on our website. Feel free to send this to owner/operators after you schedule their inspection. The letter requests the following records:
 - a. monthly release detection, annual tightness tests (for pressurized product lines), annual function tests for automatic line leak detectors, 3 year tightness tests (for suction product lines), 5 year tightness tests for tanks doing inventory control or manual tank gauging 1001-2000 gallons).
 - b. secondary containment systems using electronic monitoring must document sensors have been tested annually for proper operation
 - c. corrosion protection for steel UST systems (last two testing results), 60 day log for impressed current systems; periodic inspection results of lined tanks
 - d. any repairs of tanks/piping/equipment and subsequent testing
 - e. UST financial responsibility (insurance)
 - f. Temporary closure form (if applicable)
 - g. Third party evaluations for any leak detection equipment should be available on site
4. **DB Training.** We will conduct database training this fall. Anyone who enters information on the inspection database should attend this training. We will give you a date for training as soon as the database is in final production.
5. **Website.** A Frequently Asked Questions (FAQ) page just for compliance inspectors will be added to the website. The website will also undergo changes to make it more user friendly to UST professionals and the public.
6. **Photos, Photos, Photos.** Facility photos and photos of violations/deficiencies must be taken for every inspection. Any inspection completed without facility photos (even if there already are facility photos from the 2007 inspection) and violation/deficiency photos is subject to disciplinary action. Remember: photos should be no larger than to 1 megapixel.
7. **Inspect the Interstice.** Please check the interstice of any double walled system if it is practical, regardless of whether they are using it for the primary method of release detection monitoring. Any new UST system (installed after August 1, 2008) must have secondary containment and use interstitial monitoring as the primary method of monthly leak detection.

8. **Drop Tubes/Fill Pipes.** The following is from NFPA 30, Flammable and Combustible Liquids Code, 2003 Edition, 4.3.3.4.4 and concerns drop tubes, which is referenced in our tank rules.
- Fill pipes that enter the top of a tank shall terminate within 150 mm (6 in.) of the bottom of the tank. Fill pipes shall be installed or arranged so that the vibration is minimized.
 - Exception No. 1: Fill pipes in tanks whose vapor space under the expected range of normal operating conditions is not in the flammable range or is inerted need not meet this requirement.
 - Exception No. 2: Fill pipes in tanks handling liquids with minimal potential for accumulation of static electricity need not meet this requirement provided that the fill line is designed and the system operated to avoid mist generation and an adequate level of residence time is provided downstream of filters or screens such that the charge generated is dissipated.

Drop tubes are required on all UST systems unless they meet the two exceptions above. In addition, NESHAP requires drop tubes on gasoline tanks where the total throughput for a site is 10,000 gallons or greater in any 30-day period.

The exceptions above may include tanks ≤ 250 gallons which are filled by a tank wagon. Drop tubes are required on all UST systems unless they meet the two exceptions above and the NESHAP requirements (see table below). The owner would need to provide proof that the tanks meet the exceptions.

9. **Monitoring Wells.** If you come across monitoring wells that have damaged covers or otherwise provide open access to groundwater, show the owner/operator and ask them to get them repaired. Usually it takes a phone call by the owner/operator to the certified groundwater professional to get the cap replaced or the well secured. Monitoring wells should be properly secured (bolted), not necessarily locked with a padlock.
10. **Sumps and Spill Buckets.** Sumps and spill buckets must be free from debris, liquid and ice--in other words, dry and clean. If you find a bucket with any liquid or debris, ask the owner to clean it out. No sump or spill bucket is designed or manufactured to hold product. Spill buckets and sumps last longer when the debris and liquid are expeditiously removed. Make sure the spill bucket is sealed tightly to the riser and that the spill bucket is liquid tight with no cracks or warping.
- Don't forget to run your hand around the outside of the spill bucket (with gloves of course) to feel for cracks or holes. Make sure containment sumps are intact, penetration seals are in good condition and sensors are placed correctly on all sumps.
11. **Metal in Contact with Backfill.** Flex connectors, submersible turbine sumps and any component that routinely contains a regulated substance must be protected from corrosion. It is easier to dig out a buried submersible turbine sump or flex connector and isolate it than it is to add cathodic protection.
12. **Ball Float Vent Valves.** PEI RP 100-05 edition recommends against the use of ball float valves. Many systems in Iowa still have them because they were a relatively inexpensive method of overfill prevention. The danger is they can over pressurize a tank when an

overflow occurs. Ball float vent valves are not allowed on suction systems, pumped deliveries, remote fills, or emergency generator tanks. Let the owner know it is a violation to have this method on suction systems (or the other applications mentioned in PEI RP 100-05 7.3.3).

Here are a couple approaches to take if it is not practical (i.e., if concrete has to be broken) to remove the ball float vent valve. First, if an ATG system is present the owner/operator should be able to install an overflow alarm outside where the transporter can hear it. The alarm is an alternative as long as it engages well before the ball float vent valve and will have to be programmed to do so. The other option is to install an automatic shutoff device in the drop tube, but, again, make sure the flow shut off device activates at a level lower in the tank than the ball float vent valve.

13. National Emission Standards for Hazardous Air Pollutants (NESHAP) for Gasoline Dispensing Facilities. We discussed these Federal Air Quality rules at our training. This is part of the fuel delivery system and needs to be inspected. Make sure the appropriate equipment is installed, that the tank top equipment is tight and that the vapor control equipment is in good condition (not damaged). These rules affect all UST facilities in different ways depending on their level of monthly throughput (see table below). New facilities (those built after November 9, 2006) must meet the requirements by September 23, 2008, or upon start-up, whichever is later. Existing facilities must be in compliance by January 10, 2011. DNR's Air Quality Bureau is the administrative agency. Contact Christine Paulson at 515.242.5154 Christine.Paulson@dnr.iowa.gov or Diane Brockshus at 515.281.4801) Diane.Brockshus@dnr.iowa.gov for more information. We will have more information posted on our website.

Monthly Throughput	Requirement	Reporting
LESS THAN 10,000 GALLONS	1. Minimize spills	None, but must be able to prove throughput is <10,000 gpm
	2. Clean up spills expeditiously	
	3. Cover gas containers and tank fill with gasketed seals	
	3. Minimize gas sent to open collection systems	
10,000 GALLONS OR MORE But less than 100,000 gallons	All of the above, plus 5. Must use submerged fill (drop tube) for product transfers. Applies to tanks ≥250 gallons	Compliance Status by 1/10/2011
100,000 GALLONS OR MORE	All of the above, plus	Same as above plus
	6. Stage 1 Vapor Recovery (Vapor Balance System) required on storage tanks. New facilities must have dual point system.	Notification 60 days before static pressure (decay) test and pressure/vacuum test on vent cap/pipe
	a. Equip connections and lines with seal closures	Vent pipes/caps tested separate and then with decay test
	b. Vapor tight line from storage tank to transporter	
	c. Transporter must not exceed 18" water pressure during deliveries	
	d. Designed to prevent over-tightening or loosening fittings	
	e. Separate gauging riser must be equipped with drop tube	
	f. Use vapor-tight caps for liquid fill connections	
	g. Install pressure/vacuum vent valves on tank vent pipes	

As always, contact Paul Nelson at 515.281.8779 Paul.Nelson@dnr.iowa.gov or me at 515.281.8879 Tom.Collins@dnr.iowa.gov with questions. The most important thing is to work safely around petroleum products and always protect your self.