

Upgraded Tank Inspection Requirements

As part of the December 22, 1998 upgrade deadline, all steel tanks had to meet one of three possible corrosion protection options to continue to operate: 1) Interior lining only, 2) Cathodic protection only, or 3) Interior lining and cathodic protection.

- 1) ***Interior lined only*** tanks are certified for 10 years. They must be inspected (or re-certified) within ten years of the lining, and then every five years thereafter. For example, if a tank was lined January 1, 1995, it must be inspected by January 1, 2005. The tank will have to be inspected again by January 1, 2010 and every 5 years thereafter until the tank is permanently closed.
- 2) ***Cathodically protected only*** tanks were certified for 6 months. They had to be re-certified (or checked for adequate protection) within 6 months of installation of the CP system and every three years thereafter. For example, if CP was added January 1, 1995, the tanks had to be re-certified by June 1, 1995; June 1, 1998; June 1, 2001 and will have to be re-certified again by June 1, 2004. The tanks must be re-certified every three years until the tanks are permanently closed. CP repairs also require the re-certification within 6 months, and then every three years thereafter.
- 3) ***Interior lined and cathodically protected*** tanks require re-certification of the CP system, but the owner has two options to comply with the certification requirements of the lining. (*Please note that if the internal lining was installed to repair a leak, the lining and CP must be maintained and re-certified according to paragraph 1 & 2):
 - a. Both the CP certification and the lining certification methods can be maintained (as defined in paragraph 1 and 2), or
 - b. The owner can choose to only maintain the CP certification IF they meet one of the following criteria, and the lining was not a repair to a leak in the tank:
 - CP was added before the internal tank lining,
 - CP was added within 12 months after the internal tank lining, or
 - A complete tank integrity assessment (which includes a grid of metal thickness readings) is conducted after the lining is installed. If the tank PASSES the integrity assessment, then internal lining inspections are not needed as long as CP is maintained and re-certified as required.

Tank Lining Re-certification. There are several items to be aware of when internal tank linings are to be inspected. Tanks must be empty. Tanks must be clean (including all sludge on bottom). The inspection must be performed and passing results must be received prior to the 10-year or 5-year certification deadline. Also, the certification must be received by PMMIC prior to the tanks being put back into service. **All tanks required to have the lining and/or CP certifications cannot contain fuel if they do not have a current certification, or if they failed an inspection.**

There are currently two methods of conducting internal tank lining inspections in Iowa:

- Manned-entry is an invasive method that requires the tanks to be completely empty and cleaned so a certified lining inspector can physically enter the tank to perform the inspection. The inspector enters the tank through a hole that is cut in the top portion of the tank. With manned entry inspection, if a repair is required, in most cases the lining can be repaired at the

same time as the inspection. Once the tank is successfully repaired, it must be re-certified by the inspector and precision tested before it is put back into service.

- Video camera (scope) entry is a non-invasive method that requires the tanks be empty and cleaned so a camera can inspect the entire tank. The camera is inserted in to the tank through the fill pipe (or another riser pipe) so no holes need to be cut in the tank. Although the video inspection can be set up in less time, there can be more delays, especially if repairs are needed. Generally, the video inspectors are not prepared to do any repairs at the time of the inspection, so repairs will need to be scheduled at a later date. Also, video inspections are not always reviewed on site, so it may be several days or weeks before the results are released to the owner.

If a tank “fails” the lining inspection the **tank cannot operate again until the cause of the failure is addressed and the tank passes another inspection.** In addition, after a “failed” tank is repaired and before the tank can be put back into service, the tank must pass a precision (0.1 gph) tightness test performed by a licensed tester. Regulations require the precision test to be completed within 30 days of the repair. All lining repairs require manned entry, regardless of method of inspection. Be prepared for the shutdown time required to repair a lined tank. The tank must remain empty from the inspection until re-certification after the repair, so plan ahead!