SPECIAL APPENDIX to
Michigan’s Noninvasive UST Assessment ODYSSEY

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The following photos are a supplement to the LUSTLine 51 article “Michigan’s Noninvasive UST Assessment Odyssey” and help illustrate the article. The article can be downloaded at www.neiwpcc.org/lustline.htm.

#1 Potential “rust plugs.”

#2 Perforation in endcap.

#3 Perforations in tank wall.

#4 Tank walls out of round
#5 Split weld seam or crack in tank wall.

#6 Pitting corrosion and preferential corrosion of the weld seam along the endcap weld.

#7 Internal corrosion so severe the tank could not be repaired for lining. The assessment of this tank predicted uniform corrosion.

#8 In cases where the non-invasive assessment methodology may have predicted the USTs to be suitable for the installation of a cathodic protection system, it still did not address the need to provide striker plates in USTs to prevent holes being formed under the drop tubes. The non-invasive assessment of this tank predicted uniform corrosion.

#9 Pitting along damaged area penetrated about 1/4" into the metal. The non-invasive assessment of this tank predicted uniform corrosion.
In many cases where tanks were previously lined and subsequently upgraded by cathodic protection, the lining had failed due to cracking, blistering, or product incompatibility. In many of these instances these tanks had been repaired and lined as a result of a previous failure.

During inspections of excavated USTs we found that damage to the asphaltic or dielectric coating on the outer surface of an UST that occurred during installation could cause preferential corrosion where the bare metal was exposed to the corrosion processes.