



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

4/16/2001

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

**SUBJECT:** Update to the Regulatory Interpretation Request:  
Clarification of "Corrosion Expert" and "Cathodic Protection Tester"

**FROM:** Cliff Rothenstein, Director /s/  
Office of Underground Storage Tanks

**TO:** EPA UST/LUST Regional Program Managers  
State UST Managers

This memorandum provides an update to the memorandum titled *Regulatory Interpretation Request: Clarification of "Corrosion Expert" and "Cathodic Protection Tester"* dated September 24, 1994. Since the original memorandum was issued, NACE International has made changes to their certification categories. In particular, they have added two new categories, cathodic protection tester and cathodic protection technician, and have changed some of the requirements for cathodic protection specialist. EPA believes that both of the new certification categories fit under the definition of cathodic protection tester. However, we believe that neither of the new certifications meets EPA's definition of corrosion expert. Attached is an update to the table provided in the September 24, 1994 memorandum. This table describes the various NACE International certifications and shows how each certification fits into EPA's corrosion expert and cathodic protection tester definitions and supercedes the table provided in the September 24, 1994 memorandum.

As always, state agencies may impose requirements that are more stringent than the federal regulations. Owners and operators of UST facilities and members of the contracting community should confer with their state UST program offices to determine whether they interpret corrosion expert and cathodic protection tester definitions differently.

If you have any questions on this issue, please contact Paul Miller of my staff by phone at (703) 603-7165 or by email at miller.paul@epa.gov. For information on NACE International's accreditation programs, please contact NACE International at (281) 228-6200 or visit their website at [www.nace.org](http://www.nace.org).

Attachment

cc: Cliff Johnson, NACE International  
Kathy Nam, OGC  
OUST Desk Officers

**ATTACHMENT: NACE CERTIFICATION LEVELS THAT MEET EPA’S DEFINITIONS OF CORROSION EXPERT AND CATHODIC PROTECTION TESTER**

<i>EPA Definition (40 CFR §280.12)</i>	<i>NACE Certification</i>	<i>Expertise/qualifications in corrosion control of USTs</i>
<p><b>CORROSION EXPERT</b></p> <p>(The EPA definition requires NACE certification unless the person is a registered PE with certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks. <b>Please check with state and local authorities to determine if their requirements are more stringent.</b>)</p>	Corrosion Specialist	<ul style="list-style-type: none"> <li>• Cathodic protection (includes all areas of expertise under Cathodic Protection Specialist)</li> <li>• Coatings and linings</li> <li>• Metallurgy</li> <li>• Plastics (non-metallic materials)</li> <li>• Inhibitors (environmental treatment)</li> <li>• Corrosion assessment</li> <li>• Stray current or cathodic interference testing and analysis</li> <li>• Corrosion site surveys</li> <li>• Corrosion control designs and recommendations</li> <li>• Work/education experience is the same as for Cathodic Protection Specialist plus a Specialty Area Certification.</li> </ul>
	Level 3 - Cathodic Protection (CP) Specialist	<ul style="list-style-type: none"> <li>• System design and specifications</li> <li>• Installation supervision</li> <li>• System testing/commissioning</li> <li>• Stray current/cathodic interference testing and analysis</li> <li>• System maintenance</li> <li>• Cathodic protection assessment</li> <li>• Cathodic protection recommendations</li> <li>• Analysis of cathodic protection feasibility</li> <li>• Cathodic protection installation permits/licenses</li> <li>• 4 years CP work experience in responsible charge plus CP level 2 certification or equivalent training plus one of the following:               <ul style="list-style-type: none"> <li>• 8 additional years CP work experience plus 2 years post-high school training in math or science from an approved technical/trade school</li> <li>• 2 additional years CP work experience plus 4-year engineering or physical science degree</li> <li>• Engineer-in-training (EIT) registration or equivalent.</li> <li>• Professional engineer (PE or P. Eng) or equivalent registration.</li> <li>• Bachelor’s degree in engineering or physical sciences and an advanced degree in engineering or physical science that required a qualification exam.</li> </ul> </li> </ul>

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<i>EPA Definition (40 CFR §280.12)</i>	<i>NACE Certification</i>	<i>Expertise/qualifications in corrosion control of USTs</i>
<p><b>CATHODIC PROTECTION TESTER</b></p> <p>(The EPA definition of cathodic protection tester does not require any certification; however, persons holding these NACE certification levels are viewed by EPA as fully meeting regulatory requirements. <b>Please check with state and local authorities to determine if their requirements are more stringent.</b>)</p>	<p>Level 2 - Cathodic Protection Technician</p>	<ul style="list-style-type: none"> <li>• Perform advanced field tests and evaluate the results</li> <li>• Verify stray current interference</li> <li>• Understand AC voltage and its mitigation</li> <li>• Maintain advanced documentation and records, including data plotting</li> <li>• Conduct and understand the importance of periodical surveys, including IR Free readings and polarization decay tests</li> <li>• Install, repair, modify and test rectifiers and component parts such as circuits</li> <li>• Collect data on ER probes</li> <li>• 3 years CP work experience plus high school diploma or GED plus CP level 1 certification or equivalent training</li> <li>–or–</li> <li>1 year CP work experience plus 4-year physical science or engineering degree plus CP level 1 certification or equivalent training</li> <li>–or–</li> <li>2 years CP work experience plus 2-year post high school training from an approved math or science technical/trade school plus CP level 1 certification or equivalent training</li> </ul>
	<p>Level 1 - Cathodic Protection Tester</p>	<ul style="list-style-type: none"> <li>• Perform atmospheric corrosion inspections</li> <li>• Understand the basics of corrosion and cathodic protection theory</li> <li>• Conduct insulator tests and identify shorts in CP systems</li> <li>• Use test instruments to perform a variety of field tests and take rectifier readings</li> <li>• Install galvanic anodes and test</li> <li>• Read shunts and understand their use in rectifiers, bonds, and anodes</li> <li>• Perform the periodic surveys such as structure to soil, soil resistivity, coupon tests, offshore platform and riser surveys, rectifier readings, and surveys of bonds and diodes</li> <li>• Knowledge of reference cells and their installation, testing and safety requirements</li> <li>• Basic location mapping, report preparation and record keeping</li> <li>• 6 months cathodic protection work experience plus high school diploma or GED</li> </ul>

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<i>EPA Definition (40 CFR §280.12)</i>	<i>NACE Certification</i>	<i>Expertise/qualifications in corrosion control of USTs</i>
<b>CATHODIC PROTECTION TESTER (continued)</b>  (The EPA definition of cathodic protection tester does not require any certification; however, persons holding these NACE certification levels are viewed by EPA as fully meeting regulatory requirements. <b>Please check with state and local authorities to determine if their requirements are more stringent.</b> )	Senior Corrosion Technologist	<ul style="list-style-type: none"> <li>• Installation supervision</li> <li>• System testing and commissioning</li> <li>• System maintenance</li> <li>• Evaluation of system performance</li> <li>• Eight years corrosion work experience, including four years in responsible charge,</li> <li style="text-align: center;">–or–</li> <li>• Bachelor’s degree in physical sciences or engineering plus four years corrosion work experience in responsible charge.</li> </ul>
	Corrosion Technologist	<ul style="list-style-type: none"> <li>• Installation supervision</li> <li>• System testing</li> <li>• System maintenance</li> <li>• Installation work</li> <li>• Routine inspections</li> <li>• Preliminary data analysis</li> <li>• Minimum of four years corrosion work experience</li> </ul>
	Corrosion Technician*	<ul style="list-style-type: none"> <li>• Routine system testing</li> <li>• System maintenance</li> <li>• Routine inspections</li> <li>• Installation work</li> <li>• Minimum of two years corrosion work experience</li> </ul>

\*Please note that NACE requires a *Corrosion Technician* performing as a CATHODIC PROTECTION TESTER be directly supervised by a *Corrosion Technologist, Senior Corrosion Technologist, Cathodic Protection Specialist, or Corrosion Specialist*.

Note: NACE International Certification requires a combination of fulfillment of formal education and work experience requirements as well as successfully passing a certification examination pertinent to the category of certification. All applicants must provide documented proof of acceptable work experience in the field of corrosion causes and mechanisms.