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west virginia department of environmental protection

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Environmental Enforcement  
Hazardous Waste/Underground Storage Tanks  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
304-926-0470  
FAX: 304-926-0457

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
dep.wv.gov

## **POLICY**

**Effective Date: September 15, 2001**

### **TEST REQUIREMENTS FOR IMPRESSED CURRENT SYSTEMS**

- I. Purpose:** To ensure that tests on impressed current systems are properly conducted according to the required protocols and that certified testing personnel are able to be held fully responsible for testing procedures.
- II. Policy:** The following protocol shall be followed and documentation provided:
- A. Certification:**
- Test conducted by a West Virginia certified Class D or E tester.
- B. Testing procedures:**
- Verify that all metallic components of the tank system (i.e. riser pipes, vent lines, piping, tank to tank, tank to rectifier) are electrically continuous. (Note: A Sti-P3® tank that has had an impressed current system installed may not be continuous with its associated piping, vents or risers.)
  - Take voltage and amperage readings from the rectifier.
  - Take current-on readings using a copper-copper sulfate reference cell in the following locations:
    - Both ends and the middle centerline of each tank and
    - Both ends of each piping run and/or the location on the pipe farthest from the anode.
  - Current-off readings taken in the same manner and location as the current-on readings.
  - If a minimum voltage of -850 mV is not recorded for all of the current-off readings then additional readings must be taken to measure for a 100 mV polarization change at all locations not demonstrating a current-off reading of -850 mV.

TEST REQUIREMENTS FOR IMPRESSED CURRENT SYSTEMS

Promoting a healthy environment.

- No measurements are to be made through concrete or asphalt. Readings are invalid if test holes are not present.

**C. Frequency of Testing**

- Within 6 months of installation
- At least every 3 years after initial test
- Within 6 months following any repair to the system

**D. Required Documentation**

The test must be sufficiently documented so that any knowledgeable person can make the same measurements at the same places.

- Site sketch including:
  - All reference cell locations;
  - All structure connections; and
  - Tank and piping locations.
- All volt meter readings
- Type of measurements (i.e. continuity, current-on, current-off)
- The criteria used to evaluate the system
- Conclusions (i.e. protected, not protected)
  - To pass, the 850 mV current-off or the 100 mV polarization change criterion must be met at all reference cell locations along the length of the tank and piping.