



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF UNDERGROUND STORAGE TANKS

4th Floor, L & C Tower
401 Church Street
Nashville, TN 37243

IMPRESSED CURRENT CATHODIC PROTECTION TESTING SURVEY

- This form must be utilized to evaluate underground storage tank (UST) cathodic protection systems in the State of Tennessee.
Access to the soil directly over the cathodically protected structure that is being evaluated must be provided.

I. UST FACILITY

II. UST OWNER

NAME: FACILITY ID NUMBER: ADDRESS: CITY: COUNTY: NAME: COMPANY: ADDRESS: CITY: STATE:

III. CP TESTER

TESTER'S NAME: COMPANY: ADDRESS: LIST CERTIFICATION, IF ANY: CITY: STATE: PHONE NUMBER:

IV. REASON SURVEY WAS CONDUCTED (mark only one)

- Routine - 3 year Routine - within 6 months of installation Re-survey after fail Re-survey after repair/modification
Date next cathodic protection survey must be conducted by: (required within 6 months of installation/repair, or every 3 years).

V. CATHODIC PROTECTION TESTER'S EVALUATION (mark only one)

- PASS All protected structures at this facility pass the cathodic protection survey and it is judged that adequate cathodic protection has been provided to the UST system (indicate all applicable criteria by completion of Section VII).
FAIL One or more protected structures at this facility fail the cathodic protection survey and it is judged that adequate cathodic protection has not been provided to the UST system (complete Section VIII).
INCONCLUSIVE The cathodic protection survey of an impressed current system must be evaluated by a corrosion expert because it cannot be determined that the protected structures are continuous or other factors may be resulting in high readings (complete Section VI).

My signature below is affirmation that I have sufficient education and/or experience to meet the definition of cathodic protection tester in Tennessee Rule 1200-1-15-.01(4) [40 CFR 280.12], that I am competent to perform the tests indicated above, that test results on this form are a complete and truthful record of all testing at this location on the date shown, and that I am responsible for conclusions contained therein.

CP TESTER'S SIGNATURE: DATE CP SURVEY PERFORMED:

VI. CORROSION EXPERT'S EVALUATION (mark only one)

The survey must be conducted and/or evaluated by a corrosion expert when: a) supplemental anodes or other changes in the construction of the impressed current system are made; b) stray current may be affecting buried metallic structures or c) an inconclusive result was indicated in Section V.

- PASS All protected structures at this facility pass the cathodic protection survey and it is judged that adequate cathodic protection has been provided to the UST system (indicate all criteria applicable by completion of Section VII).
FAIL One or more protected structures at this facility fail the cathodic protection survey and it is judged that adequate cathodic protection has not been provided to the UST system (indicate required action by completion of Section VIII).

CORROSION EXPERT'S NAME: COMPANY NAME:

NACE INTERNATIONAL CERTIFICATION? Yes No NACE INTERNATIONAL CERTIFICATION NUMBER:

My signature below is affirmation that I have sufficient education and/or experience to meet the definition of corrosion expert in Tennessee Rule 1200-1-15-.01(4) [40 CFR 280.12], that I am competent to perform the evaluation indicated above, and that I am responsible for its conclusions.

CORROSION EXPERT'S SIGNATURE: DATE:

VII. CRITERIA APPLICABLE TO EVALUATION (mark all that apply)

- 850 OFF Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO4 reference electrode with protective current temporarily interrupted (instant-off).
100 mV Polarization Structure(s) tested exhibit at least 100 mV of cathodic polarization.

VIII. ACTION REQUIRED AS A RESULT OF THIS EVALUATION (mark only one)

- NONE Cathodic protection is adequate. No further action is necessary at this time. Test again by no later than the date specified in Section IV.
RETEST Cathodic protection may not be adequate. Retest to determine if passing results can be achieved.
REPAIR & RETEST Cathodic protection is not adequate. Repair/modification is necessary as soon as practical.

**IX. DESCRIPTION OF UST SYSTEM**

FACILITY NAME:			FACILITY ID NUMBER:		
TANK #	PRODUCT	CAPACITY	TANK MATERIAL	PIPING MATERIAL	FLEX CONNECTORS / LOCATION
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

If metal flex connectors are present, are they corrosion protected?

YES    Method:     Isolation (booted)     Isolation (contained in sump or no soil contact)  
 Attached Anode<sup>1</sup>

NO    Action taken: \_\_\_\_\_

<sup>1</sup> If the flex connectors are protected by sacrificial anodes, test accordingly and include the data with this form.

**X. IMPRESSED CURRENT RECTIFIER DATA** (complete all applicable)

In order to conduct an effective evaluation of the cathodic protection system, a complete evaluation of rectifier operation is necessary.

RECTIFIER MANUFACTURER: \_\_\_\_\_ RATED DC OUTPUT: \_\_\_\_\_ VOLTS \_\_\_\_\_ AMPS

RECTIFIER MODEL: \_\_\_\_\_ RECTIFIER SERIAL NUMBER: \_\_\_\_\_

RECTIFIER OUTPUT AS INITIALLY DESIGNED OR LASTLY RECOMMENDED (if available): \_\_\_\_\_ VOLTS \_\_\_\_\_ AMPS

EVENT	DATE	TAP SETTINGS		DC OUTPUT		HOUR METER	COMMENTS
		COARSE	FINE	VOLTS	AMPS		
"AS FOUND"							
"AS LEFT"							

Check all that apply:     single amp/voltmeter     dual amp/voltmeter     red/green indicator light

**XI. IMPRESSED CURRENT POSITIVE & NEGATIVE CIRCUIT MEASUREMENTS** (output amperage)

Complete if system design allows such measurements (i.e. individual lead wires for each anode are installed and measurement shunts are present).

CIRCUIT	1	2	3	4	5	6	7	8	8	10	TOTAL
ANODE (+)											
TANK (-)											

**XII. DESCRIPTION OF CATHODIC PROTECTION SYSTEM REPAIRS AND/OR MODIFICATION**

Complete if repairs or modifications to the cathodic protection system are made or are necessary. Certain repairs/modifications as explained in the text of the TDEC cathodic protection guidance document (CGD-109) are required to be designed and/or evaluated by a corrosion expert (completion of Section VI required). Attach corrosion experts calculations and diagram and have corrosion expert sign Section VI.

- Additional anodes for an impressed current system (attach corrosion expert's design).
- Repairs or replacement of rectifier (explain in "Remarks/Other" below).
- Anode header cables repaired and/or replaced(explain in "Remarks/Other" below).
- Impressed current protected tanks/piping not electrically continuous (explain in "Remarks/Other" below).

Remarks/Other: \_\_\_\_\_

### **XIII. UST FACILITY SITE DRAWING**

Attach detailed drawing or use the space provided to draw a sketch of the UST and cathodic protection systems. Sufficient detail must be given in order to clearly indicate where the reference electrode was placed for each structure-to-soil potential that is recorded on the survey forms. Any pertinent data must also be included. At a minimum you should indicate the following: all tanks, piping, and dispensers; all buildings and streets; all anodes and wires; and location of rectifier. Each reference electrode placement must be indicated by a code (1,2, T-1,) corresponding with the appropriate line number in Section XIV. of this form.

**AN EVALUATION OF THE CATHODIC PROTECTION SYSTEM IS NOT COMPLETE WITHOUT AN ACCEPTABLE SITE DRAWING.**



