

UST-7B

NORTH CAROLINA CATHODIC PROTECTION SYSTEM EVALUATION FOR IMPRESSED CURRENT SYSTEMS



- This form must be utilized to evaluate underground storage tank (UST) cathodic protection systems in the State of North Carolina.
- A copy of this completed form must be submitted by the owner /operator to the NCDENR UST Section, at the address listed below, within 30 days of testing.
- Access to the soil directly over the cathodically protected structure that is being evaluated must be provided.
- A site drawing depicting the UST cathodic protection system and all reference electrode placements must be completed.

I. UST OWNER		II. UST FACILITY	
Name:		Name:	Facility ID:
Address:		Address:	
City:	State:	City:	County:

III. REASON SURVEY WAS CONDUCTED (mark only one)

Routine – 3 year Routine – within 6 months of installation Re-survey as soon as the cathodic protection system reaches steady-state polarization design standards after repair/modification (complete Section XI)

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

PASS All protected structures at this facility pass the cathodic protection and continuity survey (indicate all criteria applicable by completion of Section VI).

FAIL One or more protected structures at this facility fail the cathodic protection and/or continuity survey (complete Section VII).

INCONCLUSIVE If the remote and the local do not both indicate the same test result on all protected structures (both pass or both fail), inconclusive is indicated and/or if the continuity survey indicates inconclusive or isolated results the survey must be evaluated and/or conducted by a corrosion expert (Section V must be completed by a Corrosion Expert).

Tester Name:		Name of Certifying Organization (e.g., NACE):	
Company Name:		Certification Type (e.g., CP Tester, CP Technician):	
Address:		Certification Number:	
City:	State:	Zip:	Phone:
CP Tester's Signature:		Date Signed:	Date CP Survey Performed:

V. 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) a stray current may be affecting buried metallic structures; c) an inconclusive result was indicated in Section IV; or d) when required by NCDENR.

PASS All protected structures at this facility are judged to have adequate cathodic protection and therefore pass the cathodic protection and continuity survey (indicate all criteria applicable by completion of Section VI).

FAIL One or more protected structures at this facility fail or do not pass the cathodic protection and/or continuity survey and it is judged that adequate cathodic protection is not currently being provided to the UST system (indicate what action is necessary by completion of Section VII).

Corrosion Expert's Name:		NACE International Certification Type or Professional Engineer (PE) Specialty:			
Company Name:		NACE International Certification Number or PE Number / State:			
Address:		City:	State:	Zip:	Phone:
Corrosion Expert's Signature:				Date:	

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

850 mV Instant 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 tested exhibits at least 100 mV of cathodic polarization.

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

NONE Cathodic protection is adequate. No further action is necessary at this time.

REPAIR & RETEST Cathodic protection is not adequate. Immediately repair and/or modify cathodic protection system so that adequate cathodic protection is provided and then have the system re-tested as soon as the cathodic protection system reaches steady-state polarization design standards..

Date next cathodic protection survey must be conducted by _____ (required every 3 years)

VIII. DESCRIPTION OF UST SYSTEM

TANK #	PRODUCT STORED (PREMIUM, REGULAR, DIESEL, ETC.)	TANK CAPACITY (GAL)	CONSTRUCTION MATERIAL (TANKS)	CONSTRUCTION MATERIAL (PIPING)	FLEX CONNECTORS PRESENT (Y/N)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

IX. IMPRESSED CURRENT RECTIFIER DATA (complete all that are applicable)

Rectifier Manufacturer:		Note: In order to conduct an effective evaluation of the cathodic protection system, a complete evaluation of the rectifier is necessary.					
Rectifier Model:		Rectifier Serial Number:					
Rectifier Output as Initially Designed or Last Recommended: _____ Volts _____ Amps		Rated DC Output: _____ Volts _____ Amps					
EVENT	DATE	TAP SETTINGS		DC OUTPUT		HOUR METER	COMMENTS
		COARSE	FINE	VOLTS	AMPS		
"AS FOUND"							
"AS LEFT"							

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

Complete if the system is designed to allow 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	9	10	TOTAL
ANODE (+)											
TANK (-)											

XI. DESCRIPTION OF CATHODIC PROTECTION SYSTEM REPAIRS AND/OR MODIFICATIONS

Cathodic protection systems must be evaluated as soon as the cathodic protection system reaches steady-state polarization design standards following any repairs and/or modifications. Complete this section if any repairs or modifications were made to the cathodic protection system in response to a "failed" evaluation. Certain repairs/modifications as determined by NCDENR are required to be designed and/or evaluated by a corrosion expert (completion of Section V required).

- Supplemental anodes for an impressed current system were needed (attach corrosion expert's design).
- Repairs or replacement of rectifier was needed (explain in "Remarks/Other" below).
- Repair or replacement of anode header cables were needed (explain in "Remarks/Other" below).
- Impressed current protected tanks/piping are not electrically continuous (explain repairs/modifications completed in "Remarks/Other" below).
- Adjustments were made to the rectifier output

Remarks/Other:

XII. UST FACILITY SITE DRAWING

Attach detailed drawing 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; Location of CP test stations; Each reference electrode placement must be indicated by a code (e.g., 1,2,3... T-1, T-2, P-1, P-2... etc.) 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.

