

WYOMING STORAGE TANK PROGRAM

GALVANIC (SACRIFICIAL ANODE) CATHODIC PROTECTION SYSTEM EVALUATION

- A site drawing depicting the UST Cathodic Protection (CP) system and all reference electrode placements should be completed.
- After August 1, 2009, testers must be licensed by the Storage Tank Program (STP) to perform CP testing on regulated tanks.
- After August 1, 2009, CP experts must be licensed by the STP to perform work requiring a CP expert.

I. UST OWNER		II. UST FACILITY	
NAME:		NAME:	FACILITY #
ADDRESS:		ADDRESS:	
CITY:	STATE:	CITY:	COUNTY:
III. CP TESTER		IV. CP TESTER'S LICENSE	
TESTER'S NAME:		WYOMING CP TESTER LICENSE NUMBER:	
COMPANY NAME:		EXPIRATION DATE:	
ADDRESS:			
CITY:	STATE:		

V. REASON SURVEY WAS CONDUCTED (mark only one)

- Routine - 3 year
 Routine – within 6 months of installation
 60-day 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 any onsite excavation, & every 3 years thereafter).

VI. 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 criteria applicable by completion of Section VIII).
- 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 IX).
- 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 the survey should be evaluated and/or conducted by a corrosion expert (complete Section VII).

CP TESTER'S SIGNATURE:

DATE CP SURVEY PERFORMED:

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

The survey must be conducted and/or evaluated by a corrosion expert when: a) an inconclusive is indicated for any protected structure since both the local and the remote structure-to-soil potentials do not result in the same outcome (both pass or both fail); b) repairs to galvanized or uncoated steel piping are conducted or c) supplemental anodes are added to the tanks and/or piping without following an accepted industry code.

- 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 VIII).
- 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 what action is necessary by completion of Section IX).

CORROSION EXPERT'S NAME:

COMPANY NAME:

WYOMING CP EXPERT LICENSE NUMBER:

CORROSION EXPERT'S SIGNATURE:

DATE:

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

- 850 ON** Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO₄ reference electrode with the protective current applied (This criterion is applicable to any galvanically protected structure).
- 850 OFF** Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO₄ reference electrode with protective current temporarily interrupted (This criterion is applicable only to those galvanic systems where the anodes can be disconnected).
- 100 mV POLARIZATION** Structure tested exhibits at least 100 mV of cathodic polarization (This criterion is applicable to galvanic systems where the anodes can be temporarily disconnected).

IX. 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 (see Section V).
- RETEST** Cathodic protection may not be adequate. Retest during the next 60 days to determine if passing results can be achieved.
- REPAIR & RETEST** Cathodic protection is not adequate. Repair/modification is necessary as soon as practical but within the next 60 days.

X. DESCRIPTION OF UST SYSTEM

TANK #	PRODUCT	CAPACITY	TANKS	PIPING	FLEX CONNECTORS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

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

Complete if any repairs or modifications to the cathodic protection system are made or are necessary. Certain repairs/modifications as may be required to be designed and/or evaluated by a corrosion expert (completion of Section VII required).

- Supplemental anodes for a sti-P₃[®] tank (attach corrosion expert's design or documentation of which industry standard was followed).
- Supplemental anodes for metallic pipe (attach corrosion expert's design or documentation industry standard was followed).
- Galvanically protected tanks/piping not electrically isolated (explain in "Remarks/Other" below).

Remarks/Other: _____

XII. 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. 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 should be indicated by a code (1,2, T-1,) corresponding with the appropriate line number in Section XIV of this form.

WYOMING STORAGE TANK PROGRAM

IMPRESSED CURRENT CATHODIC PROTECTION SYSTEM EVALUATION

- A site drawing depicting the Cathodic Protection (CP) system and all reference electrode placements should be completed.
- After August 1, 2009, CP testers must be licensed by the Storage Tank Program (STP) to perform CP testing on regulated tanks.
- After August 1, 2009, CP experts must be licensed by the STP to perform work requiring a CP expert.

I. UST OWNER		II. UST FACILITY	
NAME:		NAME:	FACILITY #
ADDRESS:		ADDRESS:	
CITY:	STATE:	CITY:	COUNTY:
III. CP TESTER		IV. CP TESTER'S LICENSE	
TESTER'S NAME:		WYOMING CP TESTER LICENSE NUMBER:	
COMPANY NAME:		EXPIRATION DATE:	
ADDRESS:			
CITY:	STATE:		

V. REASON SURVEY WAS CONDUCTED (mark only one)

Routine - 3 year
 Routine – within 6 months of installation
 90-day re-survey after fail
 Re-survey after repair/modification

Date next cathodic protection survey must be conducted _____ (required within 6 months of installation/repair or onsite excavation, & every 3 years thereafter).

VI. 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 criteria applicable by completion of Section VIII).

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 IX).

INCONCLUSIVE The cathodic protection survey of an impressed current system should be evaluated by a corrosion expert (complete section VII)

CP TESTER'S SIGNATURE:	DATE CP SURVEY PERFORMED:
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VII. 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 VI.

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 VIII).

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 what action is necessary by completion of Section IX).

CORROSION EXPERT'S NAME:	COMPANY NAME:
WYOMING CP EXPERT LICENSE NUMBER:	
CORROSION EXPERT'S SIGNATURE:	DATE:

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

850 ON Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO₄ reference electrode with protective current on.

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) exhibit at least 100 mV of cathodic polarization.

IX. 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 (see Section V).

RETEST Cathodic protection may not be adequate. Retest during the next 60days to determine if passing results can be achieved.

REPAIR & RETEST Cathodic protection is not adequate. Repair/modification is necessary as soon as practical but within the next 60 days.

X. DESCRIPTION OF UST SYSTEM

TANK #	PRODUCT	CAPACITY	TANK MATERIAL	PIPING MATERIAL	FLEX CONNECTORS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

XI. 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"							

XII. 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 (-)											

XIII. DESCRIPTION OF CATHODIC PROTECTION SYSTEM REPAIRS AND/OR MODIFICATION

Complete if any repairs or modifications to the cathodic protection system are made OR are necessary. Certain repairs/modifications may be required to be designed and/or evaluated by a corrosion expert (completion of Section VII required).

- 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: _____

XIV. STORAGE TANK FACILITY SITE DRAWING

Attach detailed drawing of the tank system and cathodic protection systems. Sufficient detail should 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 should 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 should be indicated by a code (1,2,3 R-1, R-2, R-3...etc.) corresponding with the appropriate line number in Section XVI of this form.

