2630-FM-BECB0610 Rev. 3/2017



DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS

UST CATHODIC PROTECTION SYSTEM EVALUATION FORM

This form may be utilized to evaluate underground storage tank (UST) cathodic protection systems.								
Access to the soil directly over the cathodically protected structure that is being evaluated should be provided.								
> A site drawing depicting the UST cathodic protection system and all reference electrode placements must be completed if this form is used. The criteria that are used to determine that cathodic protection is adequate as required by the Storage Tank Act shall be in accordance with a code of								
	ationally recognized association. MATION – Type or print (in ink) all ite	ms						
Facility ID #:	Facility Na							
Facility Street Addres	-							
Facility Telephone:	County			Municipality				
• •	Y WAS CONDUCTED – Mark on			indincipality.	•			
Routine / Require		,	Re-survey after fa	il				
	within 6 months of installation		Re-survey after re		ation			
Cathodic Protection S	Survey Date:				PE - Mark one or both			
	protection survey due:	-	[Galvanic				
(Required within 6 months	of installation/repair and at least every		· · · · · · · · · · · · · · · · · · ·	Impressed	Current			
	TECTION TESTER'S EVALUA							
	protected structures at this facility pass en provided to the UST system(s).	the cathoo	dic protection survey and it	is judged that a	adequate cathodic protection has			
	ne or more protected structures at this otection has not been provided to the US			survey and it is	s judged that adequate cathodic			
Inconclusive Th	e cathodic protection tester is unable to	conclusive	ely evaluate the cathodic pr	otection system	۱.			
Tester's Name:			Company Name:					
Address:		City/Sta	ite:		Phone:			
Certification Source/7	Гуре:			Certificatio	n #:			
Nationally Recognize	d Association Followed for Test	:						
Tester's Signature:				Date Signe	ed:			
	(PERT'S EVALUATION – Mark	only one	Э.					
Section IV only needs to "inconclusive" in Section II	be completed if the cathodic protection I above.	system ev	valuation was conducted by	y a cathodic pr	otection tester and was declared			
	protected structures at this facility pass en provided to the UST system(s).	the cathoo	dic protection survey and it	is judged that a	adequate cathodic protection has			
	ne or more protected structures at this otection has not been provided to the US			survey and it is	s judged that adequate cathodic			
Corrosion Expert's N	ame:		Company Name:					
Address:		City/Sta	ite:		Phone:			
NACE Int./P.E. certifi	cation:	-		Certificatio	n #:			
Corrosion Expert's Si	ionature:			Date Signe	ed:			
•	ICABLE TO EVALUATION - Ma	ark all that	t apply.					
🗌 850 mV On	Structure-to-soil potential more	negative t	than -850 mV with respec	ct to a Cu/CuS	O4 reference electrode with the			
☐ 850 mV Off	Structure-to-soil potential more	protective current on (galvanic systems only). Structure-to-soil potential more negative than -850 mV with respect to a Cu/CuSO₄ reference electrode with the protective current temporarily interrupted (galvanic and/or impressed current systems).						
100 mV Polarizatio					,			
	RED AS A RESULT OF THIS E	VALUAT	TION – Mark only one.					
□ None	Cathodic protection is adequate listed in Section II.	e. No furth	ner action is necessary at	this time. Test	t again by no later than the date			
Retest	Cathodic protection may not be	adequate.	Retest to determine if pass	sing results car	n be achieved.			
Repair & Retest	Cathodic protection is not adequ	uate. Repa	ir or modification is necess	ary.				

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Facility	ID #:		Fac	ility Na	ame:							Surve	y Date:
VII. DES	SCRIPTION	N OF UST S	SYSTE	EM									
 Indicate Indicate Indicate Indicate Indicate 	e the Tank Se e if the tank is e if the piping e how metal	equence # fron Double Wall is Double Wa	n the fac (DW) or II (DW) o ts such	cility's Sto [·] Single V or Single	orage Tank F Vall (SW), ar Wall (SW), a	Registr nd its ty and its	ation/F /pe (e. type (Permit g. ste e.g. fil	Certificate el, sti-P ₃ ®, f berglass, fle	e (e.g. 001 fiberglass exible pla	, 002, , comp stic, c	oosite, etc.) oated steel, gal	s. vanized, copper, etc.) CP w/ anodes, booted, i
Tank #1	Produ		acity ons)					g Type ³	Me		egments at ank ⁴	Metal Segments at Dispenser ⁴	
Ex. 001	Diesel	10,00	00	SW st	ti-P₃®		DW	Fibe	rglass	CP	w/ ai	nodes	In Containment
VIII. IMF	PRESSED	CURRENT	RECT	TIFIER	DATA – C	omple	te all a	pplica	able.				
Rectifier	Manufactu	irer:					F	Rated	DC Out	put:	<u> </u>	/olts	amps
Rectifier	Model:						F	Rectif	ier Seria	l Numb	er:		
Rectifier	Output as	Initially Des				menc	ded (i	f ava	ilable): _	v	olts	a	mps
			Т	Tap Set	ttings		DC (Outp	ut	Hou	ır		
Εv	vent	Date	Co	arse	Fine	Vo	lts	Α	mps	Mete	ər	C	comments
"As Fou	ınd"												
"As Left	t"												
	LOG OF I every 60 day		OPE	RATIO	N – Docum	ent the	e last	three	amp readir	ngs (plus	volts	and hours whe	re available), recorded a
		DC Output											
		Date	Vo	olts	Amps	Ηοι	ur Me	eter Com		Comments	nments		
Most	Recent												
60-Day	ys Prior												
120-Da	ys Prior												
			TIOOC	N/E O I									

IX. IMPRESSED CURRENT POSITIVE & NEGATIVE CIRCUIT MEASUREMENTS

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 Amps
Anode (+)											
Tank (-)											

 Facility ID #:
 Facility Name:
 Survey Date:

 X. CATHODIC PROTECTION SYSTEM CONTINUITY DETERMINATION – Mark all that apply.

 Cathodically protected components of the UST system(s) must be either electrically isolated or electrically continuous depending on the type of cathodic protection system. Indicate the results of continuity testing below.

	Pass	All structures protected by galvanic systems are electrically isolated from other metallic structures.
Galvanic Systems	Fail	One or more structures protected by galvanic systems are not electrically isolated from other metallic structures. <i>Explain in Section XIII Comments</i> .
	Inconclusive	Electrical isolation/continuity could not be determined for one or more structures protected by galvanic systems. Explain in Section XIII Comments.
	Pass	All structures protected by an impressed current system are electrically continuous with the negative circuit.
Impressed Current Systems	Fail	One or more structures protected by an impressed current system are not electrically continuous with the negative circuit. <i>Explain in Section XIII Comments</i> .
	Inconclusive	Electrical isolation/continuity could not be determined for one or more structures protected by an impressed current system. <i>Explain in Section XIII Comments</i> .

XI. CATHODIC PROTECTION SYSTEM SURVEY

				Instant ⁵	100 mV P	olarization	
Location ¹ Code	Contact Point ²	Reference Cell Placement ³	On ⁴ Voltage (mV)	Off Voltage (mV)	Ending ⁶ Voltage (mV)	Voltage ⁷ Change (mV)	Pass/ ⁸ Fail
			1				

1. Designate numerically or by code on the site drawing each local reference electrode placement (e.g. R1-IC, R2-G, R3-IC...etc.)

Describe the structure that is being tested, and where the structure being tested is contacted by the test lead (e.g. plus tank bottom; diesel piping

 @ dispenser 7/8; etc.)

3. Describe the exact location where the reference electrode is placed for each measurement (e.g. soil @ regular tank STP manway; soil @ dispenser 2, etc.)

4. Record the structure-to-soil potential (voltage) observed with the current applied (e.g. -1070 mV)

5. If applicable, record the structure to soil potential (voltage) observed when the current is interrupted (e.g. 680 mV)

6. {Applies to 100 mV polarization test only} Record the voltage observed at the end of the test period (e.g. 575 mV)

7. {Applies to 100 mV polarization test only} Subtract the final voltage from the instant off voltage (e.g. 680 mV - 575 mV = 105 mV)

8. Indicate if the tested structure passed or failed one of the acceptable criteria

Use copies of this page as needed for additional reference cell readings.

Facility ID #:

Facility Name:

XII. UST FACILITY SITE DRAWING

Provide a detailed site drawing of the UST(s) and cathodic protection system(s) in the space below (or attach a detailed site drawing prepared on a separate sheet). At a minimum, indicate the following: all tanks, piping, and dispensers; all buildings and streets; all anodes, wires, and rectifiers; and the location of any cathodic protection test stations. In addition, clearly indicate where the reference electrode was placed for each structure-to-soil potential measurement. Label each reference electrode placement by the code (e.g. R1-IC, R2-G, R3-IC, etc.) that corresponds to the respective structure-to-soil potentials documented in Section XI. Any other pertinent data should also be included.

An evaluation of the cathodic protection system should not be considered complete without an acceptable site drawing.

Facility ID #:	Facility Name:	Survey Date:
XIII. COMMENTS		

The comments section should be used to note additional information discovered or actions taken during the cathodic protection survey that affect compliance at the facility. For example, include comments concerning any observations made by the tester that would affect the survey results. Record phone conversations or email correspondence with DEP personnel that took place concerning this survey.

If additional comment sheets are needed, label each sheet with the report header information and attach the sheet(s) to the back of this form.