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[Note: The program encourages the use of an electronic form submittal rather than a paper form submittal.]

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Facility I.D.#_____-_____-_____CPTEST

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
CATHODIC PROTECTION MONITORING FORM FOR *GALVANIC SYSTEMS*

Questions on how to complete this form should be directed to the Groundwater Branch, UST Compliance Section at (334) 270-5655

1. Galvanic cathodic protection systems must be tested:
a. In accordance with the latest edition code of practice established by the National Association of Corrosion Engineers (TM0101),
b. By a qualified cathodic protection tester within 1 month of installation and repair of any portion of the UST system, and every 3 years.
2. Please use photocopies of the appropriate pages if you have more than 4 tanks at any one location.
3. Please remove all pages that do not apply to the site.
4. Submit a completed form for all tanks and piping using cathodic protection within 30 days of completing the test by fax to (334) 270-5631, by e-mail to david.batchelor@adem.alabama.gov or by mail to: *Alabama Department of Environmental Management, Groundwater Branch/UST Compliance Section, Post Office Box 301463, Montgomery, AL 36130-1463.*
5. The UST owner is required to keep a record of these tests for 3 years from the date of the test on a form acceptable to the Department.

Facility Information	**Reason Testing Was Conducted (mark only one)**
Site Name:	☐ Routine test within 1 month of installation
Address:	☐ Routine 3-year test
City, County, State, Zip, Country:	☐ Test within 1 month of repair
Owner Information	**General Information**
Owner:	Date of Testing:
Address:	Temperature:
City, State, Zip Code, Country:	Weather Conditions:
Phone Number: Email	Tank Backfill Material:

Site Latitude Longitude

Underground Storage Tank Facility Site Drawing

1. In the space below, sketch the important parts of the facility such as tanks, manways, fill pipes, tank monitor, vapor recovery connections, piping, vents, drilled test ports, anodes, pump islands, and buildings.
2. Indicate reference cell locations using location code "R" and sequential numbers (e.g. R1, R2) and structure contact points using the location code "S" and sequential numbers (e.g. S1, S2) as used in the tables on the following pages.
3. For each tank, include ADEM unique tank number and/or product stored. Use the letter and number designations from the tables on the following pages to indicate reference cell locations and structure contact locations used for each measurement.

Facility I.D.#___________________-__________-___________________CPTEST			
Underground Storage Tanks Continuity Test Results *(Galvanic Systems)*			
1. The "Location Code" must be used to locate the reference cell and structure contact points on the drawing of the facility as discussed on page 1. **2.** Record continuity test measurements using "Fixed Cell, Moving Ground Technique", or the structure-to-structure "Potential Difference Technique". **3.** When using the "Fixed Cell, Moving Ground Technique", the reference cell must be placed in the soil at a location remote from the UST system (not within potential gradient of anodes or shielded by other tanks or structures) and left undisturbed until continuity testing is completed. **4.** If one continuity method fails to conclusively show proper isolation, the other method may be used to try to show proper isolation. **5.** Metallic structures are <u>isolated</u> when the "Voltage Potential" difference between two structures is greater than 10 mv, <u>continuous</u> when 10 mv or less. **6. All single and double wall metal tanks <u>should be isolated from all other metallic structures</u> to maximize the life of the tank's galvanic cathodic protection system .**			
Location Code	**Reference Cell Location and Structure Contact Points *(Check all available points)***	**Voltage Potential *(negative millivolts)***	**Results/Comments *(Mark the one that does* NOT *apply)***
R 1	____________________________*		
Tank (#____), ADEM Unique Tank # and/or Grade of Product Stored ________________________, Size in Gallons_______________			
S ____	(Tank bottom)(test lead)(____________)**	- mv	(continuous) (isolated)
S ____	Submersible pump	- mv	(continuous) (isolated)
S ____	Fill pipe	- mv	(continuous) (isolated)
S ____	Tank monitor	- mv	(continuous) (isolated)
S ____	Vapor recovery connection	- mv	(continuous) (isolated)
S ____	Vent line	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
Tank (#____), ADEM Unique Tank # and/or Grade of Product Stored ________________________, Size in Gallons_______________			
S ____	(Tank bottom)(test lead)(____________)**	- mv	(continuous) (isolated)
S ____	Submersible pump	- mv	(continuous) (isolated)
S ____	Fill pipe	- mv	(continuous) (isolated)
S ____	Tank monitor	- mv	(continuous) (isolated)
S ____	Vapor recovery connection	- mv	(continuous) (isolated)
S ____	Vent line	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other__________________________ ***	- mv	(continuous) (isolated)
Tank (#____), ADEM Unique Tank # and/or Grade of Product Stored ________________________, Size in Gallons_______________			
S ____	(Tank bottom)(test lead)(____________)**	- mv	(continuous) (isolated)
S ____	Submersible pump	- mv	(continuous) (isolated)
S ____	Fill pipe	- mv	(continuous) (isolated)
S ____	Tank monitor	- mv	(continuous) (isolated)
S ____	Vapor recovery connection	- mv	(continuous) (isolated)
S ____	Vent line	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
Tank (#____), ADEM Unique Tank # and/or Grade of Product Stored ________________________, Size in Gallons_______________			
S ____	(Tank bottom)(test lead)(____________)**	- mv	(continuous) (isolated)
S ____	Submersible pump	- mv	(continuous) (isolated)
S ____	Fill pipe	- mv	(continuous) (isolated)
S ____	Tank monitor	- mv	(continuous) (isolated)
S ____	Vapor recovery connection	- mv	(continuous) (isolated)
S ____	Vent line	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)

*Describe remote location of reference cell for "Fixed Cell, Moving Ground Technique". *N/A for structure-to-structure "Potential Difference Technique".*

**Indicate base structure contact point for both techniques. Mark all that do NOT apply. *Make sure tank is not internally lined before using tank bottom.*

***Describe location of any other contact points measured.

Facility I.D.#__________________-__________-__________________CPTEST

Underground Storage Tanks Structure-to-Soil Test Results *(Galvanic Systems)*

1. The “Location Code” must be used to locate the reference cell and structure contact points on the drawing of the facility as discussed on page 1.
2. A minimum of 3 tank voltage measurements must be taken; one while the reference cell is placed in the soil as close to the middle of the tank as possible and the others while the reference cell is placed in the soil as close as possible to each end of the tank (but not directly over anodes).
3. All single and double wall metal tanks using a galvanic cathodic protection system, must have all voltage measurements equal to or more negative than –850 mv to be protected from corrosion and pass the structure-to-soil test.

Location Code	**Structure Contact Point and Reference Cell Locations**	**Voltage *(negative millivolts)***	**Results/Comments *(Mark the one that does* NOT *apply)***
Tank (#____)			
S ____	(Tank bottom)(test lead)(____________)*		
R ____	Soil near submersible pump manway	- mv	(pass) (fail)
R ____	Soil near tank monitor manway	- mv	(pass) (fail)
R ____	Soil near vapor recovery manway	- mv	(pass) (fail)
R ____	Soil near vent riser	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
Tank (#____)			
S ____	(Tank bottom)(test lead)(____________)*		
R ____	Soil near submersible pump manway	- mv	(pass) (fail)
R ____	Soil near tank monitor manway	- mv	(pass) (fail)
R ____	Soil near vapor recovery manway	- mv	(pass) (fail)
R ____	Soil near vent riser	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
Tank (#____)			
S ____	(Tank bottom)(test lead)(____________)*		
R ____	Soil near submersible pump manway	- mv	(pass) (fail)
R ____	Soil near tank monitor manway	- mv	(pass) (fail)
R ____	Soil near vapor recovery manway	- mv	(pass) (fail)
R ____	Soil near vent riser	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
Tank (#____)			
S ____	(Tank bottom)(test lead)(____________)*		
R ____	Soil near submersible pump manway	- mv	(pass) (fail)
R ____	Soil near tank monitor manway	- mv	(pass) (fail)
R ____	Soil near vapor recovery manway	- mv	(pass) (fail)
R ____	Soil near vent riser	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)
R ____	Other __________________________**	- mv	(pass) (fail)

*Indicate base structure contact point. Mark all that do NOT apply. *Make sure tank is not internally lined before using tank bottom.*
**Describe location of any other reference cell location used.

Facility I.D.#____________________-___________-____________________CPTEST

Underground Metal Product Piping Continuity Test Results *(Galvanic Systems)*

1. The "Location Code" must be used to locate the reference cell and structure contact points on the drawing of the facility as discussed on page 1.
2. Record continuity test measurements using "Fixed Cell, Moving Ground Technique", or the structure-to-structure "Potential Difference Technique".
3. When using the "Fixed Cell, Moving Ground Technique", the reference cell must be placed in the soil at a location remote from the UST system (not within potential gradient of anodes or shielded by other tanks or structures) and left undisturbed until continuity testing is completed.
4. If one continuity method fails to conclusively show proper isolation, the other method may be used to try to show proper isolation.
5. Metallic structures are isolated when the "Voltage Potential" difference between two structures is greater than 10 mv, continuous when 10 mv or less.
6. All single and double wall metal piping should be isolated from all other metallic structures to maximize the life of the piping's galvanic cathodic protection system .

Location Code	**Reference Cell Location and Structure Contact Points** *(Check all available points)*	**Voltage Potential** *(negative millivolts)*	**Results/Comments** *(Mark the one that does* **NOT** *apply)*
R 1	____________________________*		
Tank (#____) Metal Piping, Type of Metal (steel) (copper)(________________) Approximate Length of Piping in Feet______________			
S ____	(Piping)(flex conn.) at submersible pump**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other__________________________***	- mv	(continuous) (isolated)
Tank (#____) Metal Piping, Type of Metal (steel) (copper)(________________) Approximate Length of Piping in Feet______________			
S ____	(Piping)(flex conn.) at submersible pump**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other__________________________***	- mv	(continuous) (isolated)
Tank (#____) Metal Piping, Type of Metal (steel) (copper)(________________) Approximate Length of Piping in Feet______________			
S ____	(Piping)(flex conn.) at submersible pump**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
Tank (#____) Metal Piping, Type of Metal (steel) (copper)(________________) Approximate Length of Piping in Feet______________			
S ____	(Piping)(flex conn.) at submersible pump**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	(Piping)(flex conn.) at dispenser #_____**	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)
S ____	Other __________________________***	- mv	(continuous) (isolated)

*Describe remote location of reference cell for "Fixed Cell, Moving Ground Technique". *N/A for structure-to-structure "Potential Difference Technique".*
**Indicate piping and/or flex connector. Mark any that do NOT apply.
***Describe location of any other contact points measured.

Facility I.D.#____________________-____________-____________________CPTEST

Underground Metal Product Piping Structure-to-Soil Test Results *(Galvanic Systems)*

1. The "Location Code" must be used to locate the reference cell and structure contact points on the drawing of the facility as discussed on page 1.
2. Piping voltage measurements should be taken with the reference cell in the soil at both ends of the piping run (but not directly over anodes), and if the run is longer than 100 feet, in the soil as close as possible to the middle of the piping run (but not directly over anodes).
3. All single and double wall metal piping using a galvanic cathodic protection system, must have all voltage measurements equal to or more negative than –850 mv to be protected from corrosion and pass the structure-to-soil test.

Location Code	Structure Contact Point and Reference Cell Locations	Voltage *(negative millivolts)*	Results/Comments *(Mark the one that does* NOT *apply)*
Tank (#____) Metal Piping			
S ____	Product piping at (dispenser #________) (sub pump) (______________________)*		
R ____	Soil at submersible pump	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil at middle of piping run	- mv	(pass) (fail)
R ____	Other ______________________**	- mv	(pass) (fail)
Tank (#____) Metal Piping			
S ____	Product piping at (dispenser #________) (sub pump) (______________________)*		
R ____	Soil at submersible pump	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil at middle of piping run	- mv	(pass) (fail)
R ____	Other ______________________**	- mv	(pass) (fail)
Tank (#____) Metal Piping			
S ____	Product piping at (dispenser #________) (sub pump) (______________________)*		
R ____	Soil at submersible pump	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil at middle of piping run	- mv	(pass) (fail)
R ____	Other ______________________**	- mv	(pass) (fail)
Tank (#____) Metal Piping			
S ____	Product piping at (dispenser #________) (sub pump) (______________________)*		
R ____	Soil at submersible pump	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil under dispenser #______	- mv	(pass) (fail)
R ____	Soil at middle of piping run	- mv	(pass) (fail)
R ____	Other ______________________**	- mv	(pass) (fail)

*Indicate base structure contact point. Mark all that do NOT apply.
**Describe location of any other reference cell location used.

Facility I.D.#_____-_____-_____CPTEST

Cathodic Protection Test Results *(Galvanic Systems)*

1. If any portion of the system fails, the system fails, and "Fail" should be marked below.

☐	**Pass**	*I certify that all structures at this facility "pass" the cathodic protection testing and in my best judgement, adequate cathodic protection has been provided to the UST system.* **No further action is necessary at this time**.
☐	**Fail**	*I certify that one or more structures at this facility "fail" the cathodic protection testing and in my best judgement, adequate cathodic protection has NOT been provided to the UST system.* **The cathodic protection system must be repaired in accordance with a code of practice developed by a nationally recognized association or independent laboratory, and re-tested within 1 month following the repair.**

Name:	Name of Company:
Certifying Organization:	Address:
Type of Certification:	City, State, Zip Code:
Date of Certification:	Phone Number:
Signature:	Date:

Description of Cathodic Protection System Repairs and/or Comments

1. If applicable, describe the repairs in detail below and provide a sketch of the location and depth of any new anodes.
2. If repairs are made, provide the code of practice information below such as the Steel Tank Institute Standard R-972-2010 "Recommended Practice for the Addition of Supplemental Anodes to STI-P3 USTs".

Association or Independent Laboratory:	
Code of Practice Name:	
Code of Practice Number:	Code of Practice Date:

Underground Storage Tank Protection Owner Certification

I certify under penalty of law that I am familiar with the information on this form and that based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Signature of Owner:	Date: