

<b>Work On Piping &amp; Tank Bottoms Under Cathodic Protection</b>	Document No.: <b>RSW-SAF-063-DT</b>	Approval Date: <b>09-30-20</b>	Page 1 of 2
	Revision No.: <b>6</b>	Next Revision Date: <b>09-30-25</b>	
	Document Custodian: <b>Environmental, Safety and Security</b>		

## 1.0 PURPOSE

The purpose of this procedure is to provide safety guidelines to follow when planning and conducting work on piping and tank bottoms under cathodic protection.

## 2.0 SCOPE

This procedure provides guidance on steps to follow when planning for or working on piping and tank bottoms under cathodic protection. This procedure applies to all persons working on MRD property, including employees and contractors.

## 3.0 PROCEDURE

### 3.1 WORK ON PIPING AND TANK BOTTOMS UNDER CATHODIC PROTECTION

- 3.1.1 The work order originator must provide marked up copies of the P&ID drawings that indicate the cathodic protection for the appropriate section(s) (see the "[Pre-Analysis Excavation Checklist](#)") as well as plot plans indicating the area(s) to be excavated. Instructions for shutting down the appropriate rectifiers shall also be included. These drawings and instructions must be in the possession of the person(s) requesting the safe work permit. Inspection must be notified when any excavation work is done in any tank farm. This notification will consist of a copy of the marked up P&ID drawings indicating who is doing the work and when it is to be done.
- 3.1.2 Isolate via lockout/tagout, any/all appropriate rectifier(s) before beginning any excavation, grading or blinding in the tank farms.
- 3.1.3 Isolate via lockout/tagout, the appropriate rectifier when any repairs to the cathodic protection cables or equipment are required.
- 3.1.4 When breaking flanges or piping that has been gas freed, jumper bonds are not required if the rectifier is electrically isolated.
- 3.1.5 Jumper bonds are required when breaking flanges or piping that requires fresh air whether the rectifier is energized or not.
- 3.1.6 Notify Inspection before any rectifier is turned off and the reason for it. When work is complete, reactivate the rectifier before closing the job.
- 3.1.7 When barge/tank car/truck loading with a line under impressed current cathodic protection, shut the rectifier off, bond the vehicle per appropriate procedure and reactivate the rectifier after the loading is complete and vehicle has been disconnected.

## 4.0 DEFINITIONS

- 4.1 Cathodic Protection - Cathodic protection is a method of preventing the corrosion of metals by passing an electric current through an electrolyte to the metal surface. This flow of electricity opposes the flow of electrons, thus protecting the metal.

4.2 Rectifier - A device that converts alternating current to direct current. The direct current is used in the cathodic protection process.

## 5.0 REFERENCES

5.1 [RSW-SAF-006-DT Safe Work Permit Procedure](#)

## 6.0 ATTACHMENTS

6.1 [RSW-SAF-021-Form1-DT Pre-Analysis Excavation Checklist](#)

## 7.0 REVISION HISTORY

Revision number	Description of change	Written by	Checked by	Effective date
1	Header/Foot Change	C. Talton	-	09-19-06
2	Review and Revision	T. Habets	Safety	07-09-09
3	Updated Document Number	E. Dvorak	L. Mazur	01-05-10
4	Included Tank Bottoms into the scope of procedure, included Cathodic Protection concerns into "Pre-Analysis Excavation Checklist"	J. Rabideau	L. Mazur Safety Steering Committee 7/20/12	11/1/12
5	Minor verbiage changes, updated footer date format	S. Kumpar	J. Rabideau	10/30/15
6	5 Year Review, No Changes	J. Taggart	Al Morales	09/28/20