

Basic Corrosion and Introduction to Cathodic Protection Course Outline

Presented by Antonio Flori, Denver Water

Tuesday, January 21st, 2025	
7:30 AM	Registration - Outside of Academy / Palmer Classrooms
8:00 AM	Welcome and Introductions
	Basic Corrosion Concepts 1. The Basic Corrosion Cell 2. Forms of Corrosion 3. Three Tools to Fight Corrosion
	Electrical and Chemistry Fundamentals 1. About Electricity, Conductors, and Insulators 2. Alternating Current (AC) and Direct Current (DC) Circuits 3. About Voltage, Amperage, and Resistance 4. About Taking Pipe-to-Soil Voltage Readings 5. About IR Drop Error, and Why You Must Consider IR Drops, and Federal Regulations and NACE SP When Taking Pipe-to-Soil Readings 6. About Maintaining and Calibrating Your Reference Electrode 7. Electrical Safety When Taking Electrical Readings 8. Atomic Structure 9. Faradays Laws, Nernst Equation 10. Anode/Cathode reactions 11. WQ Chemistry & Corrosion
11:30 AM	Lunch Provided by the AMPP Rocky Mountain Chapter
1:00 PM	Protective Coatings 1. Types of Coatings 2. Surface preparation/application 3. Common defects
	CP Basics 1. Types of CP 2. Anodes 3. Cathodic Protection Tools and Equipment 4. Establishing Test Stations, and the Difference Between Test Points and Test Stations 5. Monitoring Requirements 6. Stray Current
	CP Surveying 1. Regulations 2. Survey Types and Methods 3. Error in Measurements 4. Equipment Typically Found Inside a Station 5. Electrical Isolation 6. AC Coupling/DC Decoupling Devices
4:30 PM	Summary, Certificates of Participation, and End of Day Wrap-Up