



2025 Whale Rock 30" Waterline Cathodic Protection Survey

Report – Cathodic Protection Services

Issued To: **City of San Luis Obispo**

Prepared By: **Acuren Inspection Inc.**

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0	2025-03-05	Review	First Issue	Jason Riggins Senior CP Technician US CP Division	Liseth Ocano Corrosion Engineer US CP Division	Matthew Buchynski Engineering Manager US CP Division

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ATTENTION: Noah Evans

RE: 2025 CATHODIC PROTECTION SURVEY REPORT
CITY OF SAN LUIS OBISPO – WHALE ROCK 30" WATERLINE

Authorization to proceed with the 2025 cathodic protection (CP) survey for the Whale Rock 30" Pipeline was received electronically from Noah Evans. Acuren Inspection Inc. (Acuren) personnel conducted the fieldwork between January 21, 2025 and January 23, 2025 to assess the status of the CP system.

1.0 PURPOSE

The purpose of the survey was to evaluate the effectiveness of the CP system(s) by measuring structure-to-electrolyte potentials against established industry criteria at all points of access as per CFR Title 49, Part 195 *Transportation of Hazardous Liquids by Pipeline*. Additionally, critical elements which influence the performance of a CP system, such as electrical isolation, electrical interference, and continuity were evaluated. Any encountered deficiencies have been recorded in this report. Minor repairs were completed where required and any remedial work identified to ensure optimal performance of the CP system(s).

2.0 CRITERIA

To evaluate the effectiveness of CP systems, structure-to-electrolyte potential measurements are recorded from all design structures and assessed against industry recognized criteria. Accepted standards for the control of external and internal corrosion include, but are not limited to:

- NACE SP0169-2024: *Control of External Corrosion on Underground or Submerged Metallic Piping Systems*

The accepted criteria for corrosion control of buried or submerged steel structures in the above standard(s) is generally defined as one of the following:

- A minimum of 100 mV of cathodic polarization.

- A polarized structure-to-electrolyte potential of -850 mV or more negative measured with respect to a copper/copper sulphate reference electrode.

Use of the 100-mV criterion requires the measurement of either the formation or decay of polarization. Measuring the formation of polarization requires an accurate static potential reading for comparison at each test location. Static potentials can only be collected when CP system(s) have been turned 'OFF' for a sufficient period to allow for complete depolarization. Measuring the decay of polarization requires the establishment of polarized potentials with all CP systems electrically continuous with an asset turned 'ON'. Polarization decay can then be measured by turning off all applicable CP current sources.

In some circumstances, environmental factors may affect cathodic polarization behavior, requiring specific adjustments to the applicable criteria for adequate CP. Where non-ferrous metals are present, adjustments to the criteria are necessary to preserve the external integrity of the buried metal structure. Extensions of the criteria for these specific situations are further described in the applicable standard(s).

3.0 RECOMMENDATIONS

The following are recommended in order to achieve optimum levels of CP for the Whale Rock pipeline:

- Ensure that the remedial work outlined on the attached "Summary of Deficiencies" is completed and notify Acuren as soon as practical if a re-evaluation of the problem area(s) is desired.
- Continue to operate the impressed current CP system(s) at their respective target current outputs. Ensure the rectifier readings are recorded on a bi-monthly basis.
- Ensure that the galvanic anode system(s) are monitored on a periodic basis and the data collected is stored properly for reference.
- Ensure adequate access is available to all locations during the annual CP survey.
- Consider utilizing Acuren's pipeline integrity services (Indirect Inspection, ECDA) for any length of pipeline where coating condition, burial depth, or CP potentials are of concern.

- Notify Acuren of any changes, additions, or modifications to the facility operation which may impact the operation of the CP system(s) or the status of CP on any protected structures.
- Authorize Acuren to complete the annual CP survey of the facilities in 2026.

4.0 SYSTEM DESCRIPTION

The Whale Rock - Pump Station facilities assets (inlet/outlet headers) are protected by impressed current cathodic protection (ICCP) systems. Specific details concerning the ICCP system design were not available at the time of the survey. The 30" Whale Rock waterline is protected by a series of galvanic anode placements.

4.1 CURRENT SOURCES

The status and output of the rectifier(s) in the Whale Rock – Pump Station facilities is listed in 'Table 1'. It is recommended that the rectifier(s) operate within their target current output(s) to ensure optimum performance of the CP system(s). Specifications and operational data for each rectifier can be found in "Appendix 2".

TABLE 1: RECTIFIER OUTPUT

Rectifier Description	Location	Target Output (A)	Actual Output (A)	Notes
Alpha	Pump Station A	0.4-0.6	0.5	Protects Inlet & Outlet Headers
Bravo	Pump Station B	0.6-0.8	0.7	Protects Inlet & Outlet Headers

The location and status of the galvanic anodes along the 30" Whale Rock pipeline is listed in 'Table 2'. Of the 20x anode test stations detailed only 2x locations have active anode connections with potentials showing an influence of cathodic protection. Anode test station deficiencies are detailed in the deficiency summary found in "Appendix 1".

TABLE 2: GALVANIC ANODE OUTPUT

Galvanic Anode Description	Location	Anode Output (mA)	Notes
Magnesium	10+00	0.0	Anode disconnected
Magnesium	71+30	0.0	Anode depleted
Magnesium	96+30	0.0	Anode depleted
Magnesium	96+30	0.0	Anode disconnected (Rear)
Magnesium	130+00	NR	Anode present and functional
Magnesium	157+00	0.0	Anode disconnected
Magnesium	165+00	0.0	Anode depleted
Magnesium	180+25	0.0	Anode(s) disconnected
Magnesium	207+00	0.0	Anode(s) disconnected
Magnesium	227+00	0.0	Anode depleted
Magnesium	295+05	0.0	Anode disconnected
Magnesium	300+00	NR	Anode present and functional
Magnesium	310+90	0.0	Anode disconnected
Magnesium	313+90	0.0	Anode(s) disconnected
Magnesium	397+25	0.0	Anode(s) disconnected
Magnesium	515+00	0.0	Anode disconnected
Magnesium	559+30	0.0	Anode depleted
Magnesium	579+00	0.0	Anode disconnected
Magnesium	602+50	0.0	Anode disconnected
Magnesium	602+50	0.0	Anode disconnected (Rear)

4.2 TEST STATIONS

Test stations are essential pieces of monitoring equipment for evaluation of the performance of a CP system. Test stations can provide additional CP data at locations where no other above ground structures are present for measurement. It is recommended that test stations remain in good working order to facilitate future data collection during annual surveys. Test stations deficiencies should be addressed according to the priority rating in “Appendix 1”. Figure 1 shows the actual view of the location of these test stations.

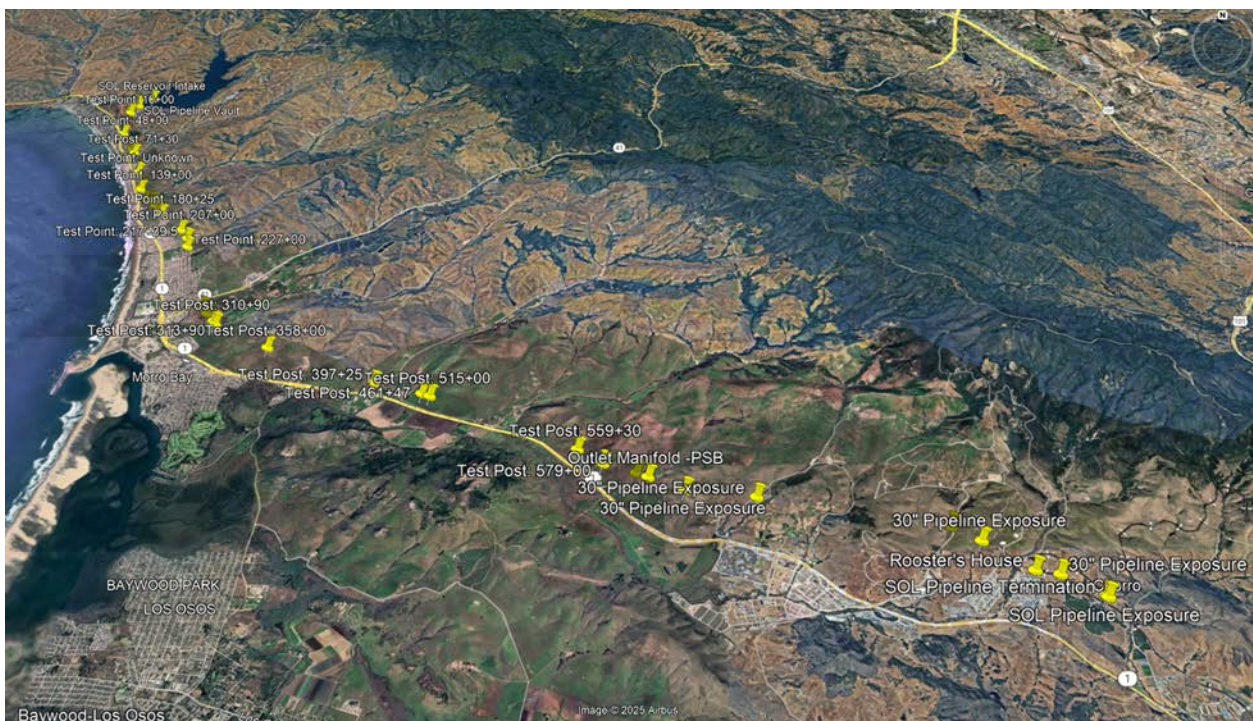


FIGURE 1: TEST STATION LOCATION – ACTUAL VIEW

Test station placement along the 30" Whale Rock waterline begin at station# 10+00 and end at station# 602+50. There are no additional test station locations between Pump Station "B" and the termination of the waterline at the regional treatment plant, approximately 4.5 miles.

5.0 RESULTS

5.1 STATUS OF CATHODIC PROTECTION

The impressed current cathodic protection systems for Pump Station A & B showed moderate levels of CP, assets meet 100mV criteria.

The galvanic anode cathodic protection systems for the 30" Whale Rock waterline showed inadequate levels of CP; CP levels are expected to improve once the deficiencies noted in 4.1 are addressed.

5.2 SYSTEM REPAIRS

Minor repairs to the CP system were completed during the 2025 survey where possible. Repairs completed are summarized in 'Table 3'.

TABLE 3: REPAIRS PERFORMED

Asset Repaired	Location	Deficiency Description	Repair Performed
TR-Alpha	Pump Station A	Rectifier (Alpha) has a broken negative structure cable.	Established structure negative

5.3 ELECTRICAL ISOLATION

Electrical isolation devices are placed strategically along the 30" Whale Rock waterline to prevent current drains to unintended structures, that could detrimentally affect the operation of the CP system(s). Electrical isolation devices should be repaired or installed according to the isolation deficiencies in "Appendix 1". All procured isolation devices should be rated for oil and gas environments, the appropriate services temperature and pressure rating, and their specific application.

5.4 SUMMARY

At the time of the survey, the majority of the below ground design structures were not receiving adequate CP as defined by NACE SP0169-2024 to mitigate external corrosion. "Appendix 1" outlines the system repairs, modifications, and upgrades recommended at this time.

Once the recommended repairs are completed, facilities requiring CP should be adequately protected. 'Table 6' outlines the dates and personnel responsible for this project.

TABLE 4: PROJECT DETAILS

Project Dates:	Field:	January 21, 2025 to January 23, 2025
	Office:	February 15, 2021 to March 5, 2025
Personnel :	Field:	- Jason Riggins, Senior CP Technician
	Office:	- Jason Riggins, Senior CP Technician - Lisseth Ocando, Corrosion Engineer - Matthew Buchynski, Engineering Manager

Acuren appreciates the opportunity to have completed this project and looks forward to working with you again in the future. Should there be any questions, comments, or concerns regarding the contents of this report, please contact the undersigned.

Respectfully,

ACUREN INSPECTION INC.



Matthew Buchynski, P.Eng., NACE CP3 Technologist

Engineering Manager – US CP

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APPENDIX 1: CATHODIC PROTECTION SUMMARY OF DEFICIENCIES



CITY OF SAN LUIS OBISPO
WHALE ROCK - CATHODIC PROTECTION SURVEY
SUMMARY OF DEFICIENCIES
2025 CP SURVEY - 30" WATERLINE

Priority:
1 - Deficiency causes asset to not meet criteria. Asset out of compliance.
2 - Deficiency is not causing negative effects to asset at present but may in future.
3 - Deficiency impacts the completion of the intended scope of work.

Deficiency ID	Test Point ID	Deficiency Type	Priority	Asset ID	Description	Recommended Action	Cost Estimate	Action Assigned To	Additional Reference	Deficiency Status	Target Completion Date	Actual Completion Date	Comments
SOL-0001		Electrical Insulation	1		Conveyance conduit is shorted to piping system of the water treatment plant. This issue is a concern and is reduce the life of the CP systems and lowering CP protection levels on the water system.	Recommended to install permanent isolators and remeasure to ensure total isolation and improved mechanical connection.		City of San Luis Obispo	Water Treatment Facility	Incomplete	2025/12/30	2024/10/14	
SOL-0002	System	Inadequate Monitoring	2	Water Piping System	Missing multiple periods of rectifier operational data. Synchronous interruption require to gather reliable IR free potentials required.	Install Remote Monitoring Units at each of the three operational rectifiers or establish a bi-monthly rectifier inspection/reporting program.		SOL/Acuren		Monitor	2025/12/30		Acuren to provide proposal
SOL-0003	System	Inadequate Reference Information	2	Facility	System drawings are missing updates and MOC information.	Redline and update drawings after completion of deficiency remediation, circuit reconfiguration, and annual survey. Draft updates and install printed copies in rectifiers/JBs.		SOL/Acuren		Incomplete	2025/03/30		Acuren to provide proposal
SOL-0004	System	Rectifier/Groundbed	1	TR-Alpha	Rectifier (Alpha) has a broken negative structure cable. Rectifier is functional, but not connected to inlet/ outlet headers.	Establish structure negative, energize ICCP system and allow to polarize. Update system documentation to reflect system changes.		Acuren	Pump Station A	Complete	2025/01/22	2025/01/23	Completed as part of project
SOL-0005	System	Inadequate Cathodic Protection	1	TR-Bravo	Test point not meeting 100mV / 850mV criterion.	Adjust system output. Update system documentation to reflect system changes.		Acuren	Pump Station B	Complete	2025/01/22	2025/01/23	Completed as part of project
SOL-0006	TP 10+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0007	TP 48+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0008	TP 63+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0009	TP 65+85	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0010	TP 71+30	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0011	TP 96+30	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0012	TP 139+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0013	TP 143+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0014	TP 157+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0015	TP 160+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0016	TP 165+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0017	TP 176+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		



CITY OF SAN LUIS OBISPO
WHALE ROCK - CATHODIC PROTECTION SURVEY
SUMMARY OF DEFICIENCIES
2025 CP SURVEY - 30" WATERLINE

- Priority:**
1 - Deficiency causes asset to not meet criteria. Asset out of compliance.
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3 - Deficiency impacts the completion of the intended scope of work.

Deficiency ID	Test Point ID	Deficiency Type	Priority	Asset ID	Description	Recommended Action	Cost Estimate	Action Assigned To	Additional Reference	Deficiency Status	Target Completion Date	Actual Completion Date	Comments
SOL-0018	TP 180+25	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0019	TP 207+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0020	TP 217+39.5	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0021	TP 227+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0022	TP 257+10	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0023	TP 295+05	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0024	TP 310+90	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0025	TP 313+90	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0026	TP 358+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0027	TP 397+25	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0028	TP 430+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0029	TP 461+47	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0030	TP 515+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0031	TP 559+30	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0032	TP 579+00	Inadequate Cathodic Protection	1	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing galvanic anode at this location		Acuren		Monitor	12/30/2025		
SOL-0033	TP 602+50	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Re-establish galvanic anode connection and allow to polarize.		Acuren		Monitor	12/30/2025		
SOL-0034	PLEX-03	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		
SOL-0035	PLEX-04	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		
SOL-0036	PLEX-05	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		
SOL-0037	PLEX-06	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		

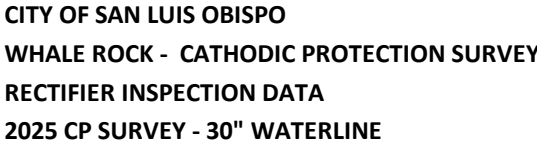


CITY OF SAN LUIS OBISPO
WHALE ROCK - CATHODIC PROTECTION SURVEY
SUMMARY OF DEFICIENCIES
2025 CP SURVEY - 30" WATERLINE

Priority:
1 - Deficiency causes asset to not meet criteria. Asset out of compliance.
2 - Deficiency is not causing negative effects to asset at present but may in future.
3 - Deficiency impacts the completion of the intended scope of work.

Deficiency ID	Test Point ID	Deficiency Type	Priority	Asset ID	Description	Recommended Action	Cost Estimate	Action Assigned To	Additional Reference	Deficiency Status	Target Completion Date	Actual Completion Date	Comments
SOL-0038	PLEX-07	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		
SOL-0039	PLEX-08	Inadequate Cathodic Protection	2	Water Piping System	Test point not meeting 100mV / 850mV criterion.	Consider installing anode test station.		Acuren	Pipeline Exposure	Monitor	12/30/2025		
SOL-0040		Monitoring	3	Water Piping System	Need 2025 "off" potential	Interrupted 2026 Annual Survey		Acuren		Incomplete	1/30/2026		Acuren to provide proposal

APPENDIX 2: RECTIFIER AND GROUND BED DATA

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APPENDIX 3: STRUCTURE-TO-ELECTROLYTE POTENTIAL DATA



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CITY OF SAN LUIS OBISPO

WHALE ROCK - CATHODIC PROTECTION SURVEY

CP TEST POINT DATA

2025 CP SURVEY - 30" WATERLINE

Project Name	Test Point Terminal ID	Test Point Lead ID	Client Asset Designation	Pipeline License Number	From Location	To Location	Substance	OD (in)	Length (ft)	Status	Material	Structure On (-mV _{csd})	Structure Off (-mV _{csd})	Anode On (-mV _{csd})	Anode Off (-mV _{csd})	Reference Cell Location	Field Comments	Comments	Measurement Status	Measurement Date	Interrupted Protection Source	Technician Name
Anode Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		346			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
10+00	Lead #2 - Anode	1x - Red	-	-	-	-	-	-	-	-	-				1415	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
35.442646	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.887133	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Test Station	Lead #1 - Pipe 1	1x - Bare	CC	-	Reservoir	Station A	Water	30	-	O	-		570			Port. Ref.	No Anode at location	40+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
48+00	Lead #2 - Pipe 1	1x - Bare	CC	-	Reservoir	Station A	Water	30	-	O	-		570			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
35.434807	Lead #3 - Pipe 1	1x - Bare	CC	-	Reservoir	Station A	Water	30	-	O	-		570			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
-120.88579	Lead #4 - Pipe 1	1x - Bare	CC	-	Reservoir	Station A	Water	30	-	O	-		570			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		475			Port. Ref.	No Anode at location	63+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
63+00	Lead #2 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		475			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
35.429397	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.881814	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		430			Port. Ref.	No Anode at location		AF	1/21/2025	N/A	J. Riggins
65+85	Lead #0 - Empty		-	-	-	-	-	-	-	-	-								AF	1/21/2025	N/A	J. Riggins
35.428832	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.881311	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		330			Port. Ref.		71+30 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
71+30	Lead #2 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-		330			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.427664	Lead #3 - Pipe 2	1x - White	CC	-	Reservoir	Station A	Water	30	-	O	-		449			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
-120.880275	Lead #4 - Pipe 2	1x - White	CC	-	Reservoir	Station A	Water	30	-	O	-		449			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			449		Port. Ref.	Anode Depleted		AF	1/21/2025	N/A	J. Riggins
Anode Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-	415				Port. Ref.		Pump Station A	AF	1/21/2025	N/A	J. Riggins
96+30	Lead #2 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-			415		Port. Ref.	Anode Depleted	ICCP system installed/ Non-Functional	AF	1/21/2025	N/A	J. Riggins
35.421243	Lead #3 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-			415		Port. Ref.	Anode Depleted	Protects Inlet/ Outlet Header	AF	1/21/2025	N/A	J. Riggins
-120.876756	Lead #0 - Header 1	1x - Black	CC	-	Station A	Station A	Water	-	-	O	-		250			Port. Ref.		Establish structure negative	AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Header 2	1x - Black	CC	-	Station A	Station A	Water	-	-	O	-		246			Port. Ref.		Headers not isolated from pipeline	AF	1/21/2025	N/A	J. Riggins
	Lead #1 - Pipe 2	1x - Black	CC	-	Station A	Station A	Water	-	-	O	-		237			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #2 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-				1200	Port. Ref.	Anode not connected	TP at Rear of station	AF	1/21/2025	N/A	J. Riggins
Anode Test Station	Lead #1 - Pipe 1	1x - White	CC	-	Station A	Station B	Water	30	-	O	-	1279				Port. Ref.		Active Anode location	AF	1/21/2025	N/A	J. Riggins
130+00	Lead #2 - Pipe 1	1x - White	CC	-	Station A	Station B	Water	30	-	O	-	1279				Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.416033	Lead #3 - Pipe 2	1x - White	CC	-	Station A	Station B	Water	30	-	O	-		713			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
-120.874328	Lead #4 - Pipe 2	1x - White	CC	-	Station A	Station B	Water	30	-	O	-		713			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Red	-	-	-	-	-	-	-	-	-			1279		Port. Ref.	Anode present		AF	1/21/2025	N/A	J. Riggins
Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		385			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
139+00	Lead #0 - Empty		-	-	-	-	-	-	-	-	-						No Anode at location					
35.415255	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.874005	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		439			Port. Ref.		143+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
143+00	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		439			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
35.411367	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		420			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
-120.871147	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		420			Port. Ref.	No Anode at location		AF	1/21/2025	N/A	J. Riggins
Anode Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		439			Port. Ref.		157+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
157+00	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		439			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
35.41093	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		417			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
-120.870125	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		417			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-				1417	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins



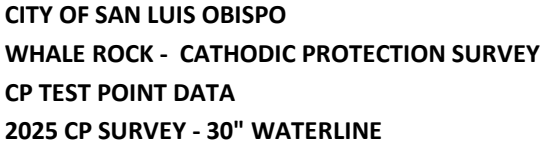
**CITY OF SAN LUIS OBISPO
WHALE ROCK - CATHODIC PROTECTION SURVEY
CP TEST POINT DATA
2025 CP SURVEY - 30" WATERLINE**

Project Name	Test Point Terminal ID	Test Point Lead ID	Client Asset Designation	Pipeline License Number	From Location	To Location	Substance	OD (in)	Length (ft)	Status	Material	Structure On (-mV _{csd})	Structure Off (-mV _{csd})	Anode On (-mV _{csd})	Anode Off (-mV _{csd})	Reference Cell Location	Field Comments	Comments	Measurement Status	Measurement Date	Interrupted Protection Source	Technician Name
Test Station 160+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		505			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.410217	Lead #0 - Empty		-	-	-	-	-	-	-	-	-					Port. Ref.	No Anode at location		AF	1/21/2025	N/A	J. Riggins
-120.86901	Lead #0 - Empty		-	-	-	-	-	-	-	-	-					Port. Ref.			AF	1/21/2025	N/A	J. Riggins
Anode Test Station 165+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	587				Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.408715	Lead #2 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-		587			Port. Ref.	Anode depleted		AF	1/21/2025	N/A	J. Riggins
-120.867843	Lead #3 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-		587			Port. Ref.	Anode depleted		AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Test Station 176+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		578			Port. Ref.		171+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
35.407844	Lead #0 - Empty		-	-	-	-	-	-	-	-	-						No Anode at location	Confirm Isolation				
-120.866588	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 180+25	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		525			Port. Ref.		180+25 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
35.406898	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		525			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
-120.865904	Lead #3 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-			1324		Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-			1325		Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
Anode Test Station 207+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		437			Port. Ref.		207+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
35.401691	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		437			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
-120.859617	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		426			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		426			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			1315		Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
	Lead #6 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			1297		Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
Anode Test Station 217+39.5	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	413				Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.399405	Lead #2 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			413		Port. Ref.	Anode present	217+39.5 Bond station	AF	1/21/2025	N/A	J. Riggins
-120.857469	Lead #0 - Empty		-	-	-	-	-	-	-	-	-							16" Foreign Line Crossing - Valley				
Anode Test Station 227+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	217				Port. Ref.		227+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
35.396956	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	217				Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
-120.856558	Lead #3 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			217		Port. Ref.	Anode present		AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Test Station 257+10	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		545			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.380229	Lead #0 - Empty		-	-	-	-	-	-	-	-	-						No Anode at location	247+73 - 266+52 Parrallel Gas Main				
-120.847629	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 295+05	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		497			Port. Ref.		292+50 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
35.378811	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		497			Port. Ref.		295+05 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
-120.846187	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		507			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		507			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			1437		Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
Anode Test Station 300+00	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	1182				Port. Ref.		Active Anode location	AF	1/21/2025	N/A	J. Riggins
35.376827	Lead #2 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		727			Port. Ref.		302+50 Foreign Line Crossing - PG&E	AF	1/21/2025	N/A	J. Riggins
-120.844256	Lead #3 - Anode	1x - Black	-	-	-	-	-	-	-	-	-			1182		Port. Ref.	Anode present		AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 310+90	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		582			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
35.376827	Lead #2 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-				1543	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
-120.844256	Lead #3 - Anode	1x - Black	-	-	-	-	-	-	-	-	-					Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											



**CITY OF SAN LUIS OBISPO
WHALE ROCK - CATHODIC PROTECTION SURVEY
CP TEST POINT DATA
2025 CP SURVEY - 30" WATERLINE**

Project Name	Test Point Terminal ID	Test Point Lead ID	Client Asset Designation	Pipeline License Number	From Location	To Location	Substance	OD (in)	Length (ft)	Status	Material	Structure On (-mV _{sat})	Structure Off (-mV _{sat})	Anode On (-mV _{sat})	Anode Off (-mV _{sat})	Reference Cell Location	Field Comments	Comments	Measurement Status	Measurement Date	Interrupted Protection Source	Technician Name
Anode Test Station 313+90 35.376173 -120.843635	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		727			Port. Ref.		312+00 Insulating Coupling	AF	1/21/2025	N/A	J. Riggins
	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		727			Port. Ref.		Confirm Isolation	AF	1/21/2025	N/A	J. Riggins
	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		505			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		508			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-				1451	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
	Lead #6 - Anode	1x - Black	-	-	-	-	-	-	-	-	-				1468	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
Anode Test Station 358+00 35.369856 -120.831119	Lead #1 - Pipe 1	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-	482				Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #2 - Pipe 2	1x - Black	CC	-	Reservoir	Station A	Water	30	-	O	-	319				Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #3 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-			482		Port. Ref.	Anode present		AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-			319		Port. Ref.	Anode present		AF	1/21/2025	N/A	J. Riggins
Pipeline Exposure PLEX-01 35.369856 -120.831119	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Reservoir	Station A	Water	30	-	O	-		472			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Reservoir	Station A	Water	30	-	O	-		NR						AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 397+25 35.36237 -120.808837	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		195			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		194			Port. Ref.		397+25 Foreign Line Crossing - Unknown	AF	1/21/2025	N/A	J. Riggins
	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		207			Port. Ref.		397+25 Bond Station - Unknown	AF	1/21/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		207			Port. Ref.		418+60 Foreign Line Crossing - Valley	AF	1/21/2025	N/A	J. Riggins
	Lead #5 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-				1291	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
	Lead #6 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-				1399	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
Anode Test Station 430+00 35.359801 -120.799179	Lead #1 - Pipe 1	1x - White	CC	-	Station A	Station B	Water	30	-	O	-		200			Port. Ref.			AF	1/21/2025	N/A	J. Riggins
	Lead #2 - Anode	1x - Red	-	-	-	-	-	-	-	-	-				200	Port. Ref.	Anode not connected		AF	1/21/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 461+47 35.359801 -120.799179	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		200			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #1 - Foreign 1	1x - Green	-	-	-	-	-	-	-	-	-		50			Port. Ref.	Unknown	461+47 Foreign Line Crossing - Gas	AF	1/22/2025	N/A	J. Riggins
	Lead #2 - Anode	1x - Red	-	-	-	-	-	-	-	-	-				50	Port. Ref.	Anode not connected	461+47 Bond Station	AF	1/22/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Anode Test Station 515+00 35.359144 -120.797544	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		346			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #2 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		562			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #3 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-				1481	Port. Ref.	Anode not connected		AF	1/22/2025	N/A	J. Riggins
	Lead #4 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-				562	Port. Ref.	Anode present		AF	1/22/2025	N/A	J. Riggins
Anode Test Station 559+30 35.348159 -120.769263	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	547				Port. Ref.		559+30 Insulating Coupling	AF	1/22/2025	N/A	J. Riggins
	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	547				Port. Ref.		Confirm Isolation	AF	1/22/2025	N/A	J. Riggins
	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		325			Port. Ref.		560+80 Foreign Line Crossing - Water	AF	1/22/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		325			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-				547	Port. Ref.	Anode present		AF	1/22/2025	N/A	J. Riggins
Anode Test Station 579+00 35.345316 -120.764613	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	547				Port. Ref.		579+00 Insulating Coupling	AF	1/22/2025	N/A	J. Riggins
	Lead #2 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-	582				Port. Ref.		Confirm Isolation	AF	1/22/2025	N/A	J. Riggins
	Lead #3 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		331			Port. Ref.		569+30 Foreign Line Crossing - Gas	AF	1/22/2025	N/A	J. Riggins
	Lead #4 - Pipe 2	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		332			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #5 - Anode	1x - Black	-	-	-	-	-	-	-	-	-				582	Port. Ref.	Anode present		AF	1/22/2025	N/A	J. Riggins
Pipeline Exposure PLEX-02 35.343491 -120.758687	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station A	Station B	Water	30	-	O	-		324			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	SAI #2 - Pipe 1	1x - Pipeline	-	-	-	-	-	-	-	-	-					Port. Ref.			AF	1/22/2025	N/A	J. Riggins
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											



Project Name	Test Point Terminal ID	Test Point Lead ID	Client Asset Designation	Pipeline License Number	From Location	To Location	Substance	OD (in)	Length (ft)	Status	Material	Structure On (-mV _{cs})	Structure Off (-mV _{cs})	Anode On (-mV _{ca})	Anode Off (-mV _{ca})	Reference Cell Location	Field Comments	Comments	Measurement Status	Measurement Date	Interrupted Protection Source	Technician Name
Anode Test Station	Lead #1 - Pipe 1	1x - Black	CC	-	Station A	Station B	Water	30	-	O	-		615			Port. Ref.		Pump station B	AF	1/22/2025	N/A	J. Riggins
602+50	Lead #2 - Anode 1	1x - Black	-	-	-	-	-	-	-	-	-				1615	Port. Ref.	Anode not connected	ICCP system installed/ Functional	AF	1/22/2025	N/A	J. Riggins
35.342727	Lead #3 - Anode 2	1x - Black	-	-	-	-	-	-	-	-	-		542			Port. Ref.		Protects Inlet/ Outlet Header	AF	1/22/2025	N/A	J. Riggins
-120.756801	Lead #0 - Header 1	1x - Black	CC	-	Station B	Station B	Water	30	-	O	-		505			Port. Ref.		Requires adjustment	AF	1/22/2025	N/A	J. Riggins
	Lead #0 - Header 2	1x - Black	CC	-	Station B	Station B	Water	30	-	O	-		532			Port. Ref.		Headers not isolated from pipeline	AF	1/22/2025	N/A	J. Riggins
	Lead #1 - Pipe 2	1x - Black	CC	-	Station B	W. Plant	Water	30	-	O	-				1325	Port. Ref.	Anode not connected	628+80 Foreign Line Crossing - Water	AF	1/22/2025	N/A	J. Riggins
	Lead #2 - Anode 2	1x - Black																				
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP	625+46 Pipeline Exposure	AF	1/22/2025	N/A	J. Riggins
PLEX-03	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.		628+80 Foreign Line Crossing - Water	AF	1/22/2025	N/A	J. Riggins
35.340004	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.750271	Lead #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP	633+82 Pipeline Exposure	AF	1/22/2025	N/A	J. Riggins
PLEX-04	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.338695	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.738024	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP		AF	1/22/2025	N/A	J. Riggins
PLEX-05	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.333286	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.706171	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP		AF	1/22/2025	N/A	J. Riggins
PLEX-06	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.330842	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.701633	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP		AF	1/22/2025	N/A	J. Riggins
PLEX-07	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.325228	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.690598	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.	No presence of CP		AF	1/22/2025	N/A	J. Riggins
PLEX-08	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		NR			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.321939	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.684382	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
Pipeline Exposure	SAI #1 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		348			Port. Ref.	No presence of CP		AF	1/22/2025	N/A	J. Riggins
PLEX-09	SAI #2 - Pipe 1	1x - Pipeline	CC	-	Station B	W. Plant	Water	30	-	O	-		342			Port. Ref.			AF	1/22/2025	N/A	J. Riggins
35.321768	Term #0 - Empty		-	-	-	-	-	-	-	-	-											
-120.684148	Term #0 - Empty		-	-	-	-	-	-	-	-	-											

APPENDIX 4: RECTIFIER SURVEILLANCE FORM

	Advanced Services Department Tomball Office, Suite #100 14434 Medical Complex Dr Tomball, TX 77377 United States Phone: (936) 441-2288	CLIENT	City of San Luis Obispo					
		PROJECT	SLO WL - Cayucos - San Luis Obispo					
		JOB ID						
		DESCRIPTION	Cathodic Protection Survey					

RECTIFIER INSPECTION REPORT

RECTIFIER NAME:	ALPHA				GPS	Latitude	Longitude
RECTIFIER I.D.:	932321					35°25'16" N	120°52'36" W
RECTIFIER LOCATION:	Pump Station A - MCC					MODEL #	ES
MANUFACTURED BY:	Universal Rectifiers					SERIAL #	932321
TYPE:	Air Cooled					MAX COARSE TAPS	3
						MAX FINE TAPS	6

	VOLTS	AMPS	PHASE	RATED T (°F)
RECTIFIER INPUT AC:	115	1.2	1	122
RECTIFIER OUTPUT DC:	20	5		
SHUNT SIZE:	1	0.2		
SHUNT FACTOR (A/mV):	0.0002			

RECTIFIER DATA

DATE	TECHNICIAN	COARSE TAP	FINE TAP	SHUNT mV	DC VOLTS	DC AMPS	CIRCUIT RESISTANCE (Ohm)	REMARKS
2025-01-22	J. Riggins	C1	F2	0.00	7.63	0	#DIV/0!	No current output
2025-01-22	J. Riggins	C1	F6	0.00	16.39	0	#DIV/0!	No Neg. Attachment
2025-01-23	J. Riggins	C1	F6	2.30	4.29	0.5	8.58	As-Left

GROUNDBED DATA

SYSTEM TYPE	ICCP	Bed # 1	Reading Date					
NUMBER OF ANODES	Unknown							
SHUNT TYPE	None	Anode #	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)
REMARKS	No information on groundbed, unknown number of anodes, no positive junction box located. ICCP protects Inlet/Outlet headers. Unknown if headers are isolated from pipeline segments.	1	NR					
		2	NR					
		3	NR					
		4	NR					
		5	NR					
		6	NR					
		7	NR					
		8	NR					
		9	NR					
		10	NR					
		Total:	0.0	0.0	0.0	0.0	0.0	0.0

OTHER CONDITIONS

		Reading Date					
		2025-01-22					
CONDITIONS (IF APPLICABLE)	Housing	Excellent					
	Hasp	Excellent					
	Gasket Seal	Good					
	Panel	Excellent					
	AC Breaker	Good					
	Transformer	Good					
	Oil Level	Not Applicable					
	Oil Color	Not Applicable					
Oil Temperature	Not Applicable						

PICTURES

	Advanced Services Department Tomball Office, Suite #100 14434 Medical Complex Dr Tomball, TX 77377 United States Phone: (936) 441-2288	CLIENT	City of San Luis Obispo					
		PROJECT	SLO WL - Cayucos - San Luis Obispo					
		JOB ID						
		DESCRIPTION	Cathodic Protection Survey					

RECTIFIER INSPECTION REPORT

RECTIFIER NAME:	BRAVO				GPS	Latitude	Longitude
RECTIFIER I.D.:	932322					35°20'33" N	120°45'23" W
RECTIFIER LOCATION:	Pump Station B - MCC					MODEL #	ES
MANUFACTURED BY:	Universal Rectifiers					SERIAL #	932322
TYPE:	Air Cooled					MAX COARSE TAPS	3
						MAX FINE TAPS	6

RECTIFIER INPUT AC: RECTIFIER OUTPUT DC: SHUNT SIZE: SHUNT FACTOR (A/mV):	VOLTS	AMPS	PHASE	RATED T (°F)
	115	1.2	1	122
	20	5		
	1	0.2		
	0.0002			

RECTIFIER DATA

DATE	TECHNICIAN	COARSE TAP	FINE TAP	SHUNT mV	DC VOLTS	DC AMPS	CIRCUIT RESISTANCE (Ohm)	REMARKS
2025-01-22	J. Riggins	C2	F1	1.10	10.42	0.2	52.10	As-Found
2025-01-22	J. Riggins	C2	F6	1.80	16.39	0.4	40.98	Adjusted
2025-01-23	J. Riggins	C3	F1	1.80	17.36	0.7	24.80	As-Left

GROUNDBED DATA

SYSTEM TYPE	ICCP	Bed # 1	Reading Date					
NUMBER OF ANODES	Unknown							
SHUNT TYPE	None	Anode #	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)
REMARKS	No information on groundbed, unknown number of anodes, no positive junction box located. ICCP protects Inlet/Outlet headers. Unknown if headers are isolated from pipeline segments.	1	NR					
		2	NR					
		3	NR					
		4	NR					
		5	NR					
		6	NR					
		7	NR					
		8	NR					
		9	NR					
		10	NR					
		Total:	0.0	0.0	0.0	0.0	0.0	0.0

OTHER CONDITIONS

		Reading Date					
		2025-01-22					
CONDITIONS (IF APPLICABLE)	Housing	Excellent					
	Hasp	Excellent					
	Gasket Seal	Good					
	Panel	Excellent					
	AC Breaker	Good					
	Transformer	Good					
	Oil Level	Not Applicable					
	Oil Color	Not Applicable					
	Oil Temperature	Not Applicable					

PICTURES

APPENDIX 5: LIST OF DRAWINGS

Drawing Number	Drawing Description
SLO-CC-0001	Conduit As-Built Station 0 to 255
SLO-CC-0002	Conduit As-Built Station 255 to 525
SLO-CC-0003	Conduit As-Built Station 555 to 810
SLO-CC-0004	Conduit As-Built Station 810 to 903 and detail drawings
SLO-CC-0005	Pump Station As-Built - Upgrade

APPENDIX 6: CATHODIC PROTECTION PHOTO LOG

PHOTO SUMMARY

City of San Luis Obispo

Whale Rock
Cathodic Protection Survey
2025-01-20

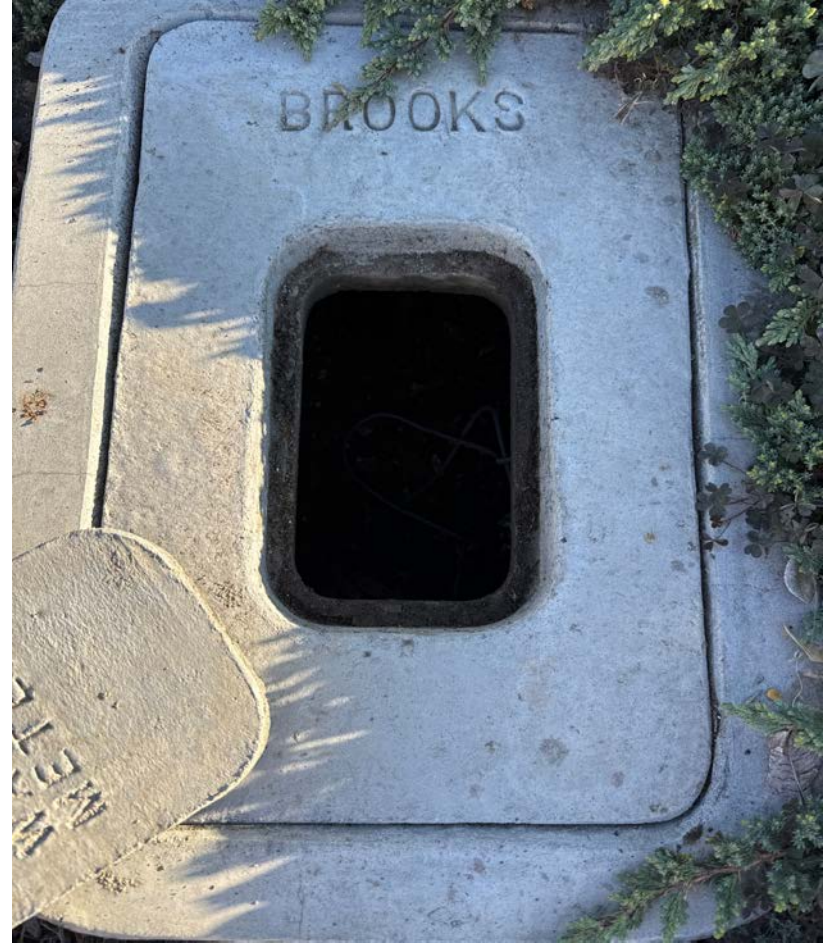
2025 CP Survey – TP 10+00



2025 CP Survey – TP 48+00



2025 CP Survey – TP 63+00



2025 CP Survey – TP 65+85



2025 CP Survey – TP 71+30



2025 CP Survey – TP 96+30



2025 CP Survey – TP 130+00



2025 CP Survey – TP 139+00



2025 CP Survey – TP 143+00



2025 CP Survey – TP 157+00



2025 CP Survey – TP 160+00



2025 CP Survey – TP 165+00



2025 CP Survey – TP 171+00



2025 CP Survey – TP 176+00



2025 CP Survey – TP 185+25



2025 CP Survey – TP 207+00



2025 CP Survey – TP 217+39.5



2025 CP Survey – TP 227+00



2025 CP Survey – TP 257+10



2025 CP Survey – TP 295+05



A photograph of a rural road. In the foreground, a mailbox is mounted on a wooden post, casting a long shadow. The road is paved and stretches into the distance. To the right, there is a wooden fence and a white car parked further down the road. The background features rolling hills under a clear blue sky.



2025 CP Survey – TP 313+90



2025 CP Survey – TP 358+00



2025 CP Survey – TP 397+25



2025 CP Survey – TP 430+00



2025 CP Survey – TP 461+47



2025 CP Survey – TP 515+00



2025 CP Survey – TP 559+30



2025 CP Survey – TP 579+00



2025 CP Survey – Pump Station A



2025 CP Survey – Pump Station A



2025 CP Survey – Pump Station B

