Testing and Inspection Certificate

Tanknology Inc.
11000 North MoPac Expressway, Suite 500, Austin, TX 78759
800-800-4633 www.tanknology.com

Test Date	8/28/2024	Tanknology WO#	CP1-1356413
Test Purpose	COMPLIANCE	Customer PO#	

Customer
SIMARS CONVENIENCE 2
2068 E MARKET ST
NAPPANEE, IN 46550

Attn: Gurmail Singh
(-) -

Location
SIMARS CONVENIENCE 2 (NAPPANEE)
2068 E MARKET ST
NAPPANEE, IN 46550

Attn: Gurmail Singh
(-) -

Test / Inspection Description	Item Tested	Date Tested	Result
Cathodic Protection Survey	See test report for details	8/28/2024	F

Tanknology Representative: Dustin Hollander
Telephone: (512) 380-7117

Technician: Teddy Barnett
Technician Certification: (See forms)

CATHODIC PROTECTION
COMPLIANCE SURVEY
UST SYSTEM

FOR: SIMARS CONVENIENCE 2
2068 E MARKET ST
NAPPANEE IN 46550

Contact: Gurmail Singh

SITE: SIMARS CONVENIENCE 2
2068 E MARKET ST
NAPPANEE IN 46550

BY: Tanknology Inc.

Jared Beavers
(NACE CP2 #52250)

Survey Date: 8/28/2024
Report Date: 9/4/2024

Work Order: 1356413

11000 N MoPac Expressway, Suite 500, Austin, Texas 78759 - (512)451-6334 - FAX (512)459-1459

COMPLIANCE SURVEY

SACRIFICIAL CP SYSTEM

SIMARS CONVENIENCE 2
SIMARS CONVENIENCE 2
2068 E MARKET ST
NAPPANEE IN 46550

I. SCOPE:

A cathodic protection survey was conducted on 08/28/2024, on the cathodic protection system for SIMARS CONVENIENCE 2 at SIMARS CONVENIENCE 2, 2068 E MARKET ST, NAPPANEE, IN. The purpose of this survey was to determine if the UST system meets corrosion protection requirements. The cathodic protection system for the underground tanks consists of magnesium or zinc anodes. The UST facility consists of one 10000-gallon stip3 (diesel), one 10000-gallon stip3 (unleaded), one 10000-gallon stip3 (premium), one 4000-gallon stip3 (kerosene) tanks and associated fiberglass piping with metallic flexible connectors at the submersible turbine pumps (STP) and dispensers.

II. RESULTS & ANALYSIS:

The structure-to-soil potential measurements are tabulated on the attached survey data sheets. The potential measurements for the underground tanks, ranged from -631 millivolts to -1329 millivolts. The potential measurements for the flexible connectors, ranged from -699 millivolts to -771 millivolts.

III. CONCLUSIONS:

The results of the survey indicate that the structure-to-soil potential measurements for the diesel tank and flexible connectors did not meet the -850 millivolts criterion for cathodic protection. Current requirement testing and remote cell testing on the diesel tank indicated that the tank is electrically isolated from the associated risers. The testing also indicated that the diesel tank and all flexible connectors can be repaired with additional magnesium anodes.

IV. RECOMMENDATIONS:

It is recommended that additional magnesium anodes be installed on the diesel tank and flexible connectors. On completion of the repairs a structure-to-soil potential survey be conducted thereafter by a qualified cathodic protection tester.

Test Procedures: Description of test procedures utilized for this project are contained in the Appendix.

STI-P3 Cathodic Protection System: The STI-P3 cathodic protection system is designed to protect the outside of the tanks only. The risers/piping are electrically isolated from the tank and are not included. The STI-P3 tank incorporates a good exterior coating and factory installed magnesium anodes. The magnesium anodes are provided to protect the surface areas on the tank where coating holidays exist and exposure to corrosion occurs. The surface areas are very small and do not require a large number of anodes for protection. When foreign structures are electrically shorted to the tanks (i.e. piping) the protective effect is depleted and the magnesium anodes for the tanks are consumed rapidly. This is why it is very important to maintain effective electrical isolation of the STI-P3 tank.

V. REGULATORY REQUIREMENTS:

INDIANA CODE: 329 IAC 9-3-1 (c) (1) references EPA ?280.31

FEDERAL REGULATIONS

40 CFR ? 280.31 Operation and maintenance of corrosion protection. All owners and operators of metal UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented until the UST system is permanently closed or undergoes a change-in-service pursuant to ? 280.71: (a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground. (b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic

protection tester in accordance with the following requirements: (1) Frequency. All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the implementing agency; and (2) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association. Note to paragraph (B). The following codes of practice may be used to comply with paragraph (b) of this section: (A) NACE International Test Method TM 0101, ?Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage Tank Systems"; (B) NACE International Test Method TM0497, ?Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems"; (C) Steel Tank Institute Recommended Practice R051, ?Cathodic Protection Testing Procedures for STI-P3? USTs"; (D) NACE International Standard Practice SP 0285, ?External Control of Underground Storage Tank Systems by Cathodic Protection"; or (E) NACE International Standard Practice SP 0169, ?Control of External Corrosion on Underground or Submerged Metallic Piping Systems". (c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly. (d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with ? 280.34) to demonstrate compliance with the performance standards in this section. These records must provide the following: (1) The results of the last three inspections required in paragraph (c) of this section; and (2) The results of testing from the last two inspections required in paragraph (b) of this section.

APPENDIX: TEST PROCEDURES

Local structure-to-soil potentials are obtained over the tanks and/or steel lines to a copper-copper sulfate reference electrode (CSE). The CSE is placed over the steel tank/s and/or steel line/s in the electrolyte to measure cathodic protection levels. The structure-to-soil potential measurements are obtained by making electrical contact to steel structures and CSE placed in various locations in the electrolyte through a Fluke or Beckman digital voltmeter. The digital voltmeter utilized has a minimum 10 Meg Ohms impedance. The local structure-to-soil potentials are obtained with the magnesium anodes connected. The potentials obtained are evaluated to determine cathodic protection levels. Please see the criterion for cathodic protection. The measurements are recorded on the cathodic protection survey data sheets. Local "on" potentials are recorded on the location where the reference cell was placed. For example, a local "on" potential recorded on the ATG row for tank is the local structure-to-soil potential on that tank with the CSE placed in the electrolyte at the ATG man way. Remote (fixed) structure-to-soil potentials are obtained on all tank/s, associated risers, and piping to a CSE that remains in a fixed location in the electrolyte while obtaining all potentials. The measurements are recorded on the cathodic protection survey data sheets. For example a reading recorded on the ATG row under remote potential is a fixed cell potentials from the ATG riser with the CSE located in a remote (fixed) location. Structures of less than 3.0 millivolts (mV) difference are considered electrically continuous with each other. Structures with a difference between 3.0 mV to 10.0 mV indicate an inconclusive electrical continuity test. Structures with a difference of greater than 10.0 mV are considered electrically discontinuous.

In order to determine the effectiveness of the cathodic protection system, local structure-to-soil potential measurements are obtained at representative locations throughout the subject area. These measurements were collected with the magnesium anodes attached. These measurements are then evaluated to determine if an adequate level of cathodic protection has been achieved.

The two (2) most common criteria for cathodic protection as established by the NACE standard practice SP0285-2011 "External Corrosion Control of Underground Storage Tank Systems by Cathodic Protection" are as follows:

1. A negative voltage of at least 0.85 volts as measured between the structure surface and a saturated copper/copper sulfate reference electrode placed in contact with the electrolyte.

2. A minimum negative (cathodic) polarization voltage shift of 100 millivolts measured between the structure surface and a stable reference electrode contacting the electrolyte. This polarization voltage shift is to be determined by interrupting the protective current and measuring the polarization decay. When the current is initially interrupted, an immediate voltage shift will occur. The voltage reading after the immediate shift shall be used as the base reading from which to measure polarization decay.

Tanknology

Tanknology Cathodic Protection Survey Data Sheet

Customer Name: SIMARS CONVENIENCE 2	Site ID: NAPPANEE	Work Order: 1356413	Date: 8/28/2024
Site Address: 2068 E MARKET ST , NAPPANEE, IN 46550			State Facility ID:

		Local Potentials (mV)			Continuity Testing	
Tank	Test Type	Native	Inst. Off	ON	Remote (mV)*	Continuity (mV)**
Diesel 1	Tank Bottom				-626	R1 30 FEET
Diesel 1	Tank Bottom				-628	R2 40 FEET
Diesel 1	Fill			-631	-497	
Diesel 1	ATG			-714	-395	
Diesel 1	ATG Conduit				-639	
Diesel 1	Extra Riser				-505	
Diesel 1	STP			-702	-514	
Diesel 1	pp2 Wire				-626	
UNLEADED 2	Tank Bottom				-1207	R1 30 FEET
UNLEADED 2	Tank Bottom				-1209	R2 40 FEET
UNLEADED 2	Fill			-1078	-660	
UNLEADED 2	ATG			-1285	-594	
UNLEADED 2	ATG Conduit				-633	
UNLEADED 2	Vapor Rec				-991	
UNLEADED 2	STP			-1161	-511	
PREMIUM 3	Tank Bottom				-1268	R1 30 FEET
PREMIUM 3	Tank Bottom				-1270	R2 40 FEET
PREMIUM 3	Fill			-1035	-1240	
PREMIUM 3	ATG			-1329	-527	
PREMIUM 3	ATG Conduit				-678	
PREMIUM 3	Vapor Rec				-904	
PREMIUM 3	STP			-1157	-509	
KEROSENE 4	Tank Bottom				-944	R1 60 FEET
KEROSENE 4	Tank Bottom				-947	R2 70 FEET
KEROSENE 4	Fill			-921	-504	
KEROSENE 4	ATG			-889	-572	
KEROSENE 4	ATG Conduit				-734	
KEROSENE 4	Extra Riser				-535	
KEROSENE 4	Other SWING JOINT			-1045	-644	
Piping						
1/2	Flex Connector			-771		CONTAINED
3/4	Flex Connector					CONTAINED
5/6	Flex Connector			-750		CONTAINED
7/	Flex Connector			-710		CONTAINED
STP Diesel 1	Flex Connector			-699		CONTAINED
STP UNLEADED 2	Flex Connector			-721		CONTAINED
STP PREMIUM 3	Flex Connector			-746		CONTAINED
STP KEROSENE 4	Other SIPHON FLEX			-712		CONTAINED
Rectifier Neg:						

Information

Tank #	Regulator ID	Size	Material	Product	Piping Material
1	1	10000	STIP3	Diesel	Fiberglass
2	2	10000	STIP3	UNLEADED	Fiberglass
3	3	10000	STIP3	PREMIUM	Fiberglass
4	4	4000	STIP3	KEROSENE	Fiberglass

CP System: Sacrificial

Flex Connector / Swing Joint Corrosion Type:

MPD: Flexible connector contained

STP: Flexible connector contained

Comments / Condition of paving etc:
SEE FLEX AND DESIGN FORMS

technician Signature: Teddy Barnett

technician Name: Teddy Barnett

NACE Cert #: 7841 **Exp:** 05/31/2027

Remote test cell location: 30

Direction: S

Temperature: 90

Weather: clear

Backfill: Pea Gravel

Backfill condition: Moist

Tanknology

Tanknology Cathodic Protection Survey Data Sheet

Customer Name: SIMARS CONVENIENCE 2	Site ID: NAPPANEE	Work Order: 1356413	Date: 8/28/2024
Site Address: 2068 E MARKET ST , NAPPANEE, IN 46550			State Facility ID:

		Local Potentials (mV)			Continuity Testing	
Tank	**Test Type**	**Native**	**Inst. Off**	**ON**	**Remote (mV)***	**Continuity (mV)****
Gas Meter						
Electric						
Water Meter						

Information

Tank #	Regulator ID	Size	Material	Product	Piping Material
1	1	10000	STIP3	Diesel	Fiberglass
2	2	10000	STIP3	UNLEADED	Fiberglass
3	3	10000	STIP3	PREMIUM	Fiberglass
4	4	4000	STIP3	KEROSENE	Fiberglass

CP System: Sacrificial

Flex Connector / Swing Joint Corrosion Type:

MPD: Flexible connector contained

STP: Flexible connector contained

Comments / Condition of paving etc:
SEE FLEX AND DESIGN FORMS

technician Signature: Teddy Barnett

technician Name: Teddy Barnett

NACE Cert #: 7841 **Exp:** 05/31/2027

Remote test cell location: 30

Direction: S

Temperature: 90

Weather: clear

Backfill: Pea Gravel

Backfill condition: Moist

Customer Name: SIMARS CONVENIENCE 2	Site ID: NAPPANEE	Work Order: 1356413	Date: 8/28/2024
Site Address: 2068 E MARKET ST , NAPPANEE, IN 46550			

Rectifier Information

Rectifier Data

AS FOUND

DC Volts:
DC Amps:
Tap Setting Course:
Tap Setting Fine:
Hour Meter:

AS LEFT

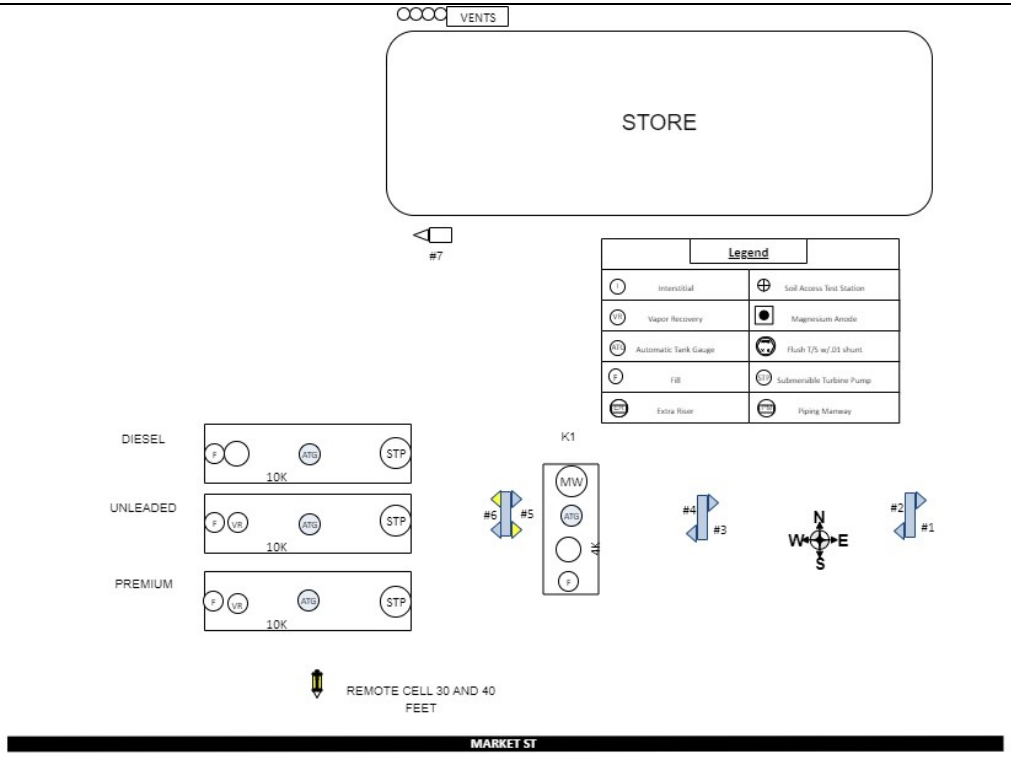
DC Volts:
DC Amps:
Tap Setting Course:
Tap Setting Fine:
Hour Meter:

Junction Box Data
Anodes (amps)

Anode #1
Anode #2
Anode #3
Anode #4
Anode #5
Anode #6
Anode #7
Anode #8
Anode #9
Anode #10
Anode #11
Anode #12

Structures (amps)

Structure #1:
Structure #2:
Structure #3:
Structure #4:
Structure #5:
Structure #6:

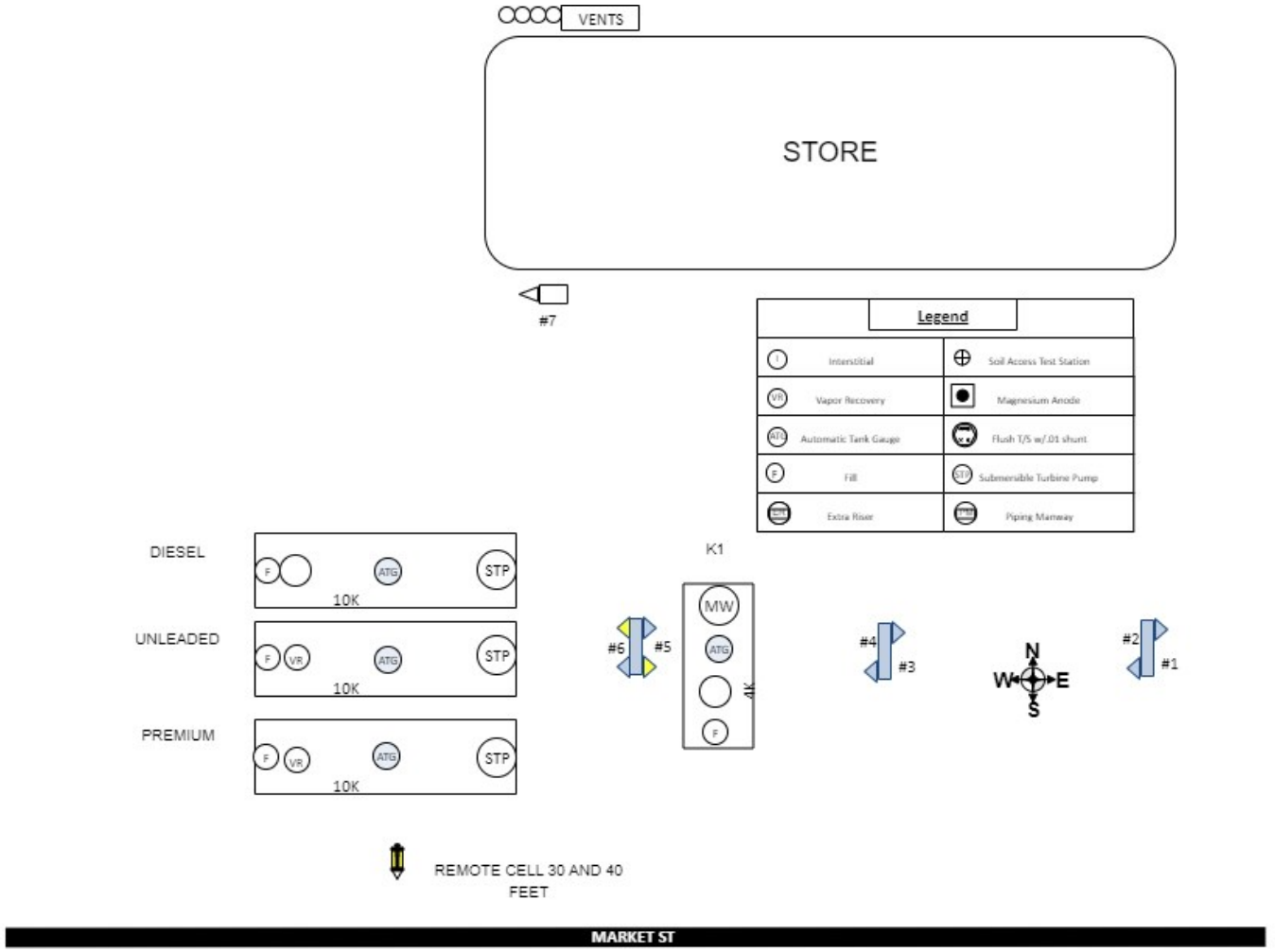


Site Diagram

(This site diagram is for reference only and is not drawn to scale)

Work Order:	1356413
Site ID / Name:	NAPPANEE / SIMARS CONVENIENCE 2
Address:	2068 E MARKET ST
City:	NAPPANEE

State: IN Zip: 46550



W.O.# CP1-1356413

Tanknology Inc.

11000 N. MoPac Expressway, Suite 500 Austin, TX 78759 (800) 964-0010

JOB CLEARANCE FORM & SITE SAFETY CHECKLIST – OVF

Policy 100-29-A
Rev: H
Revised: 6/25/2022

Site Name/#:	Street Address:	W.O.#:
Simms Convenience II	2068 E. Market Wallace Rd.	ST. 1356413

Arrival Time:	Departure Time:	Travel Time:	Others on site:	Date
1552	2000			8-28-24

Scope of Work and Tasks Performed (JSA's must be available for all tasks):
Cathodic Protection Survey

Repairs to Equipment or Parts Provided:

Follow-up actions required; equipment isolated; comments:

PPE - PERSONAL PROTECTIVE EQUIPMENT REQUIRED (Check ✓ items used or mark ~ if not applicable)

✓ Safety Vest/Shirt (all jobs)	✓ Gloves (all jobs)	☐ Splash Goggles (if needed)	☐ Hearing Protection (if needed)
✓ Safety Toe Boots (all jobs)	✓ Safety Glasses (all jobs)	☐ Hard Hat (if needed)	☐ Other _____

✓ PRE-TEST PROCEDURES (Check ✓ each item completed or mark ~ if not applicable)

1. ☐ Discuss safety procedures with site personnel. Nearest hospital: _____
2. ✓ Get ATG printout & check fuel/water levels. Prior to fuel delivery the system must be placed back into working order.
3. ✓ Barricade work area (cones, flags, bars/tape) and place Fire Extinguishers & "No Smoking" Signs at perimeter.
4. ☐ Confined Space Entry – If required complete separate CSE Checklist. If NO CSE check the following reason:
   ☐No CS's ☐CS's not opened ☐No entry only visual ☐No entry - used tools ✓Work from prone position w/o risk of falling in
5. ☐ Implement Lockout/Tagout per API 1646 (when accessing product piping during tasks)
   - ☐ Secure nozzles with "Out of Service" bags and nylon ties.
   - ☐ Close ball valves or check valves on product piping.
   - ☐ All applicable equipment disabled during test(s).
   - ☐ Secure the circuit breaker(s) with lockout devices and tags.
   - ☐ Disconnect electrical "bayonet" connector from the STP(s).
   - ☐ **Verify LOTO is complete by trying to operate pumps.**

SIGN IN	Lead Technician Name	Lead Technician Signature
General Safety Checks: All site personnel have been informed. Is a fuel delivery due today? _____ LOTO procedures have been discussed. Work areas barricaded to protect workers, staff & public.	T. Barnett	
	Site Representative Name	**Site Representative Signature**
	Mike Hatch	Mike Hatch

✓ POST-TEST PROCEDURES (Check ✓ each item completed or mark ~ if not applicable)

1. ☐ Remove all "Lockout/Tagout" devices and nozzle bags/ties.
2. ☐ Run all pumps and verify there are no leaks:
   - ☐ Leak Detector & Vent Tubes
   - ☐ Impact Valve Test Ports under dispensers
   - ☐ STP Functional Elements & Relief Screws
3. ✓ Get ATG printout. Confirm water levels same as start or explain difference: Unable To print. Pictures.
4. ☐ Check following components operational:
   - ☐ ATG probes, sensors, & caps
   - ☐ Ball floats, dry breaks & caps
   - ☐ Containment sumps are dry
   - ☐ Manhole covers and sump lids
   - ☐ Spill containers & drain valves
   - ☐ Drop tubes, flapper valves, fill adapters & caps
   - ☐ Shear valves are open
   - ☐ Dispensers & POS operational
   - ☐ Dispenser panels are replaced
   - ☐ Vents & Extractors (not capped, plugged or isolated)
   - ☐ Cathodic protection operational
   - ☐ Siphon lines and manifold valves open
5. ☐ Remove barricades.

SIGN OUT & Operator Verification of Work (OVF)	Lead Technician Name	Lead Technician Signature
General Safety Checks: Work area has been left clean & safe. Site staff aware of work status including any remaining isolation. Changes to equipment are documented and communicated. All incidents, near incidents, and unsafe situations reported.	T. Barnett	
	Site Representative Name	**Site Representative Signature**
	Mike Hatch	Mike Hatch
Site Representative Comments:		

OVF