Appendix I

Excerpt of Praxair Enhanced TracerTight® Protocols for Newly-Constructed UST Systems

Instructions and Procedures for Contractors for a TracerTight® Pre-Test Evaluation and New Construction Enhanced Leak Detection Test (NCELD)

Contact Information
Before starting work, please retrieve the latest ELD instructions from the ELD web site:
www.TracerResearch.com/ELD

For Pricing or Questions, Please Contact the Sales Department:

Manager of California sales:
Ben Getz, phone # 520-545-0239, or email Benjamin_Getz@Praxair.com

National Sales Manager
Tony Adamson, phone # 484-686-2817, or email Tony_Adamson@Praxair.com

For scheduling dates ,and questions, contact:
Mike Krammes phone # 520-545-0238, or email Michael_Krammes@Praxair.com

For design, construction layout, or material ordering questions, contact:
Andy Koch, phone # 520-545-0277, or email Andrew_Koch@Praxair.com

For technical questions, please contact:
David Rabb, phone # 520-545-0250, or email David_Rabb@Praxair.com

UST Operations Manager:
Mark Caldon, @ 520-545-0248; Cell 602-432-5639, or email Mark_Caldon@Praxair.com

Scheduling and Drawings:

1. See Site Conditions to determine which date the HSP's and Praxair should arrive onsite for the installation of the HSP's, pretest or the Enhanced Leak Detection assessment.

2. Scheduling is important to you, our client. With advance notice, we will be better able to service you on time so please provide us with a tentative start date the day you begin construction. Also, as schedule adjustments occur, please keep us informed. The day you set the tanks, please contact Praxair and give us a firm date for your ELD TracerTight test.

The contractor must order and install all Horizontal Sampling Probes (HSP). It is important that the HSP's are installed correctly. Praxair, will at no charge help you design the system. If you would like us to add the HSP's to your drawings, please send your CAD drawings to **ELD@TracerResearch.com** with the necessary instructions. These drawings should contain all data about the underground piping. Please do not send drawings about any other portion of the system. We must completely understand how the system is constructed to design the test procedure for your system. The contractor must download the details from our web site to install the HSP's.

Important Notes:

1. **Do not use helium onsite before a pretest.** Using helium before PSI arrival reduces our abilities to locate leaks.
2. **Do not put fuel in any part of the system.** Placing fuel in the tanks before the test is completed will add additional time to the test protocol which will increase cost.
3. **Systems that will not tolerate a full vacuum (29"of mercury) will increase cost of the** test, by requiring the test period to be extended. We recommend using components that can tolerate a full vacuum. If non-metal S/S braided flex connectors and/or if other components that may not tolerate a full vacuum are installed follow the guideline and install ball valves as needed. **Praxair must be advised if non-vacuum compatible components are used**. (See attachment for differences.)
4. We must know what components are used on site in order to have the proper testing equipment. Please give us this information ASAP.
5. **Scheduling is important to you our client**. The more advance notice we receive, the better our ability will be to service you on time. Please give Praxair a tentative start date the day you begin construction. As schedule adjustments occur, please keep us informed. A week before you set the tanks, please contact Praxair and give us a firm date for your ELD TracerTight Pre-Test.
6. **There should be a construction crew onsite with all equipment, tools, and any supplies necessary to complete any repair**.

Site Conditions:

Pre-Test Evaluation

1) Praxair would like to arrive onsite after the secondary piping has been installed and approved by your regulatory agency. Do not start covering piping until the pre-test is completed.
2) Dispenser sumps shall be completed to the sheer valve.
3) Tank extraction plugs shall be installed and not leaking into the tank.
4) It is best not to complete tank sumps skirts to full height.
5) Tank sumps should be completed including spill buckets with all plumbing completed.
6) Tanks should be ready to pressurize to test pressure. If water ballast is used, do not fill tanks completely. Leave a 12" or greater air space in the top. This will allow us to evaluate the top of the tank only.
7) Have all piping in trenches supported by backfill so no stress is exerted on the piping. (Do not cover the sides of the piping.)
8) **Every secondary boot/fitting must have a test sampling port or bypass system installed.**
9) **It is mandatory to have a secondary test port boot at the far ends of each secondary section.**
10) **Third containment conduit must have test ports at each end of each containment section.**
11) All product/vapor return shear valves to be capped and primaries under 10 to 50 psi pressure and holding.
12) Vent piping, vent riser/s should be completed to finish height, must be capped, and under 10 to 50 psi pressure and holding.
13) All piping secondary lines shall have 5psi pressure.
14) For piping that includes Teflon flex connectors do the following:
    a) Install ¼" test ports with ball valves and ¼" barb fittings in all primary vent riser
    b) Install ¼" ball valves with ¼" barb fittings in the test ports of all primary product & return sheer valve test ports
15) Test ports are mandatory on diesel primary vent risers). See attachment.

NOTE: On systems (other than diesel) that are constructed with metal flex connectors test ports are not needed on the vent riser

16) Construction crew of a minimum of 2 personnel should be ready to complete repairs.
17) The construction crew should have spare parts, and all tools to complete any work/repair on any component of the fueling system.

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18) Notify the local regulatory agency as necessary
19) Every item in the pretest must be ready in addition to the items below.
20) All concrete and asphalt must be completed above the system.
21) Fuel system must be completed ready to startup with these few additions.
22) All electrical, communication, tank gauge, and interstitial monitoring systems wiring shall be completed inside of all sumps, pull boxes and man ways.
23) All fueling dispensers must be installed but not connected to the product/vapor piping.
24) Tanks should be ready to pressurize to test pressure. Water ballast must be completely evacuated from the tanks.

Piping and Boots

25) Review product needs at the end of this text for piping particulars.
26) It is mandatory to have a secondary test port boots at the far ends of each secondary section. All secondary containment boots/fittings in tank sumps, vent risers, and final dispenser sumps need to have test ports. (It is recommended that each boot have a test port so we can help in the leak location of any possible releases.)
27) Test ports are mandatory on each end of all tertiary or third containment conduits/ducts. When double wall piping is in a third or tertiary containment HSP's are not needed.

Product Needs

1) Flex Connectors:
   a) To save money and time use vacuum rated flex connectors in all areas (see attached photos).

2) Ameron Piping:
   a) It is suggested to have secondary fiberglass test boots on both size over size and LCX Ameron piping.
      i) Size Over Size Dualoy 3000/L Fiberglass Piping
         (1) In dispenser and tanks sumps, use Ameron part number:
            (a) 32387604 for 3"x2" fiberglass test boots
            (b) 43387604 for 4"x3" fiberglass test boots
      ii) LCX Coaxial Fiberglass Piping
         (1) In dispenser and tanks sumps, use Ameron part number:
            (a) 20469206 for 2" fiberglass test boots
            (b) 30469206 for 3" fiberglass test boots
            (c) 40469206 for 4" fiberglass test boots

3) Environ piping:

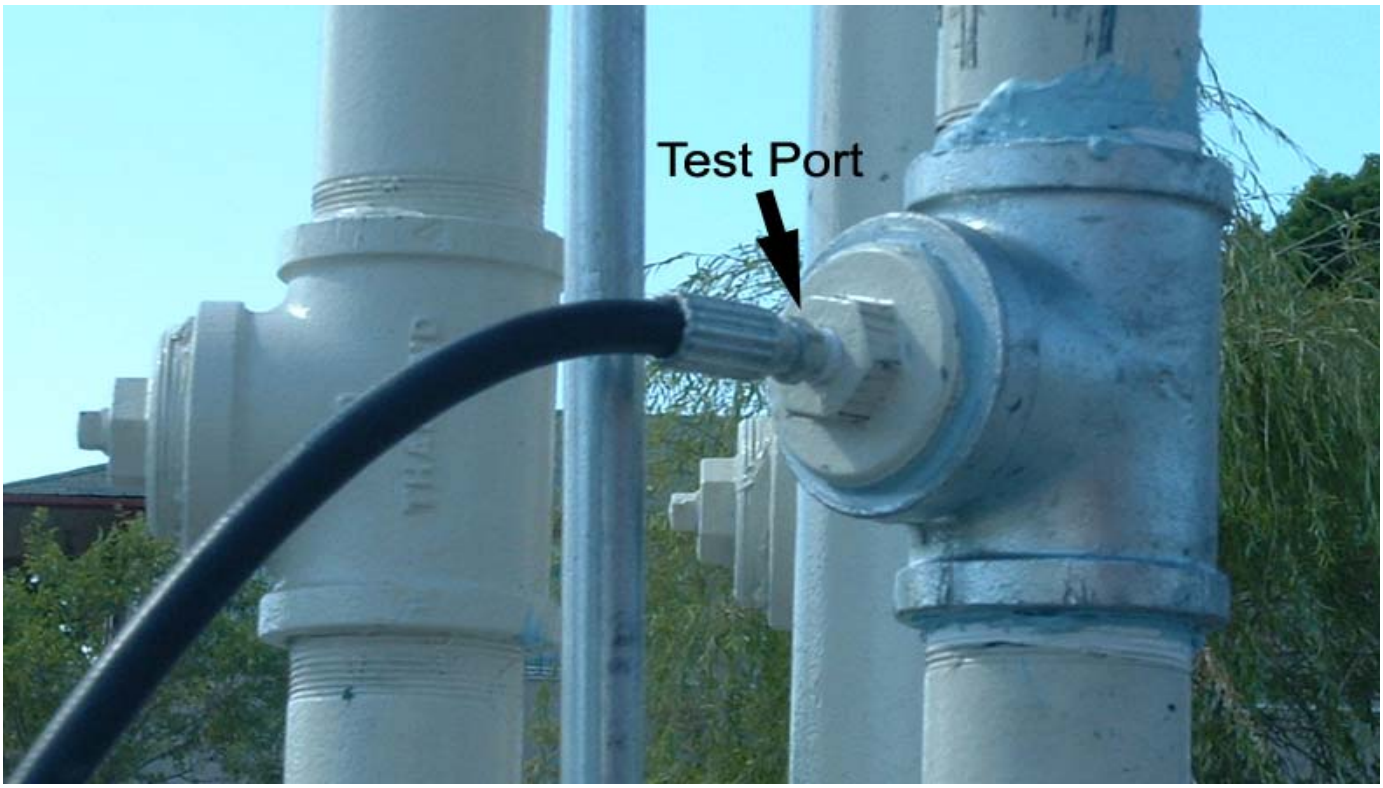
a) Coax Coupling System:

i) Mandatory to have secondary test ports on fittings at the end of each secondary section:

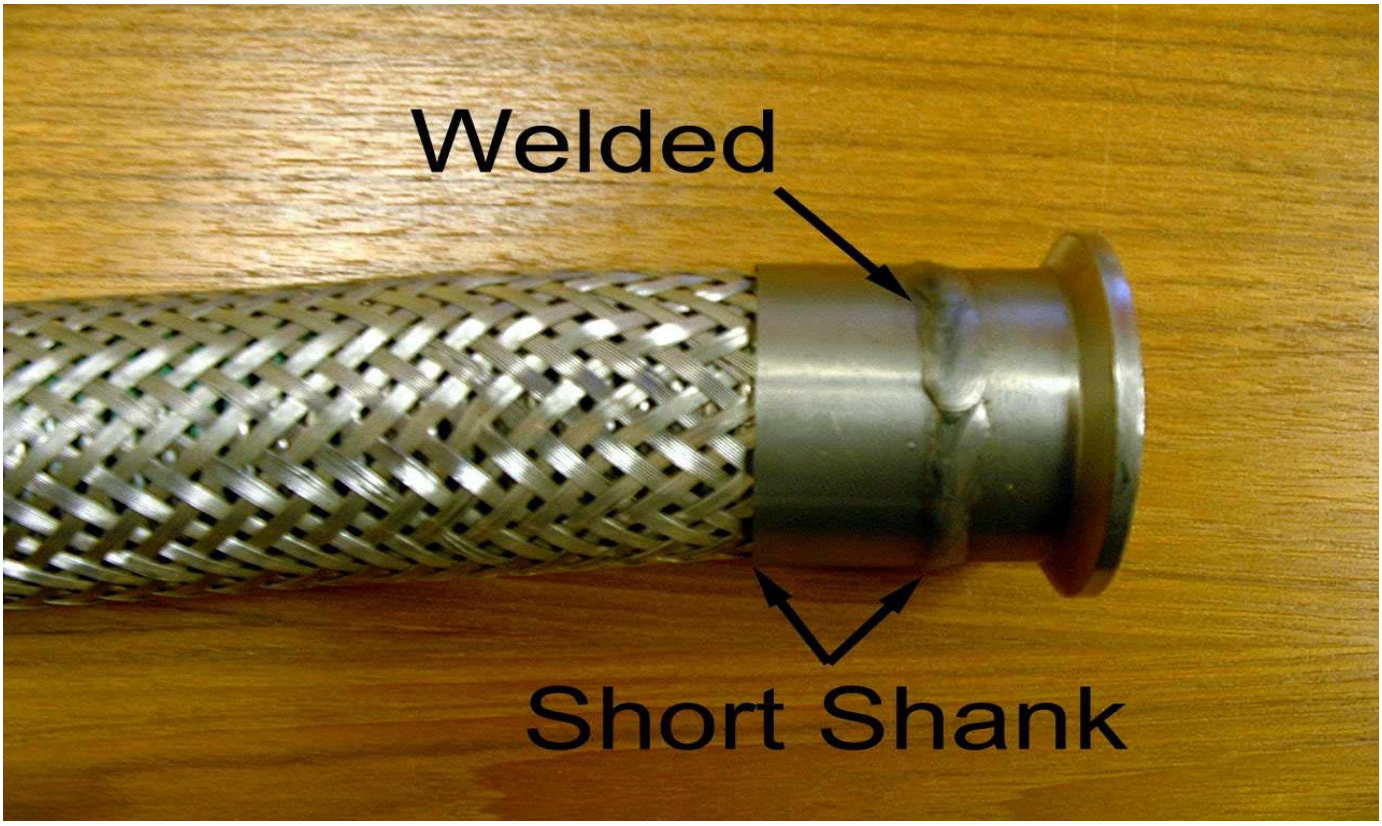
(1) Turbine sumps, use Coax Pipe Adapter part number CPA-1520 or CPA-2020.

(2) At final dispenser termination, use Coax elbow (90') part number CEF-1515-T or CEF-2020-T

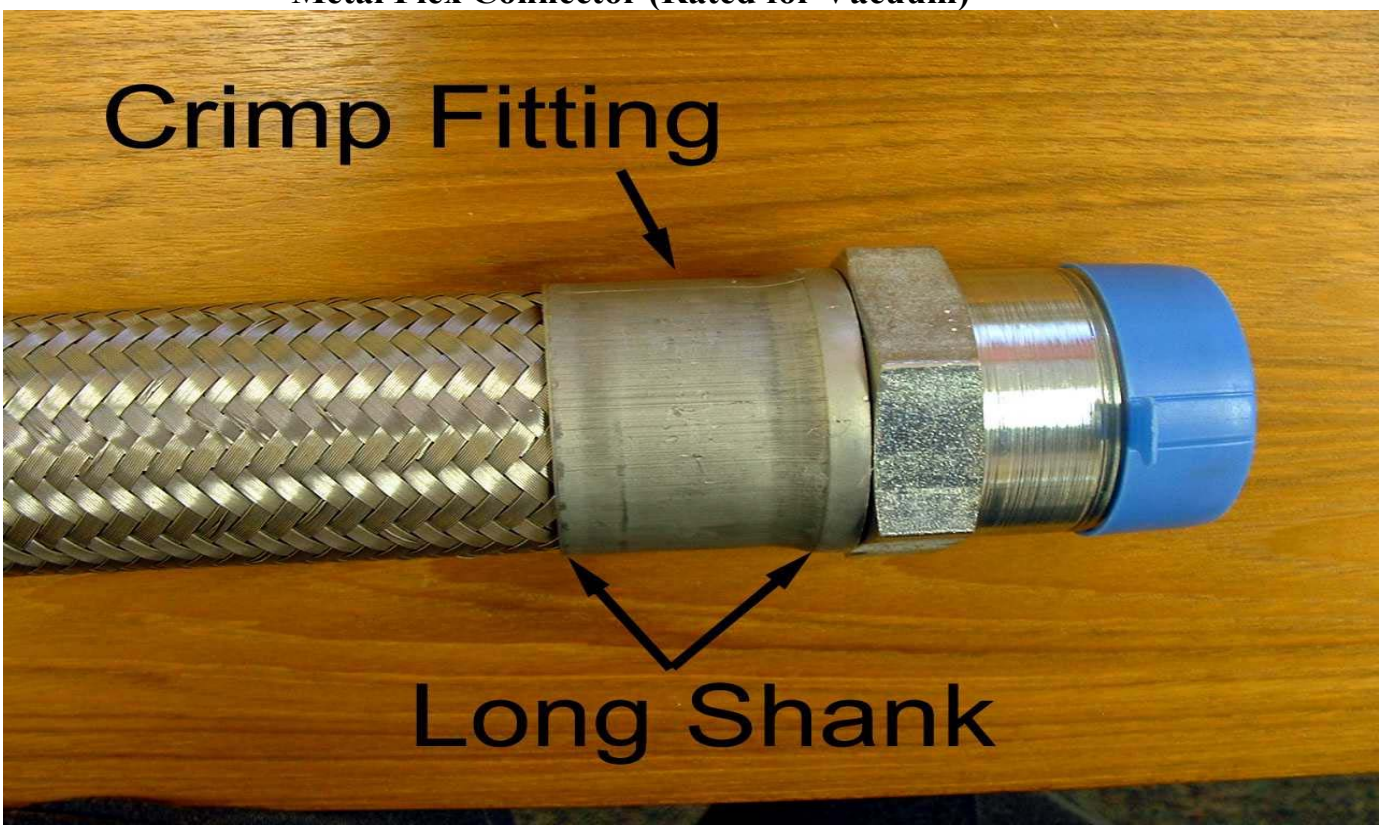
(3) At midpoint dispenser use Coax Tee's part number CTF-1515-T or CTF-2020-T



Test Ports on Vent Risers



Metal Flex Connector (Rated for Vacuum)



Non-Metal Flex Connector