



LEAK DETECTION SERVICES

California Enhanced Leak Detection (ELD)



Service Provided by CGRS, Inc.

California ELD

What is ELD?

ELD is a test method that ascertains the integrity of an underground storage tank (UST) system by the introduction and external detection of a substance that is not a component of the fuel formulation stored in that UST system [Cal. Code Regs., Title 23, § 2644.1, subd. (a)(1)].

California ELD Method

- Capable of detecting a leak at 0.005 gph in both liquid and vapor phase
- Third Party Certified
- Listed with the NWGLDE <http://www.nwglde.org/>
- Listed with the SWRCB
- All testing must be performed by a California certified tank tester

http://www.swrcb.ca.gov/ust/leak_prevention/lgs/docs/161_5.pdf

California ELD Requirements

Well Proximity



New Construction



Well Proximity Testing Requirement

Owners/operators of UST systems installed prior to July 1, 2003 and located within 1,000 feet of a public drinking water well must perform ELD.

Tracer Tight®

Well Proximity Testing Requirement

UST systems with secondary containment that were installed before July 1, 2003 and are located within 1,000 feet of a public drinking water well, one-time ELD testing is Required.

Well Proximity Testing Requirement

UST with single wall components must have ELD performed no later than 18 months following receipt of notification from the State Water Board and be repeated every thirty-six (36) months thereafter.

Well Proximity Testing Process

Owner/Operator Responsibility:

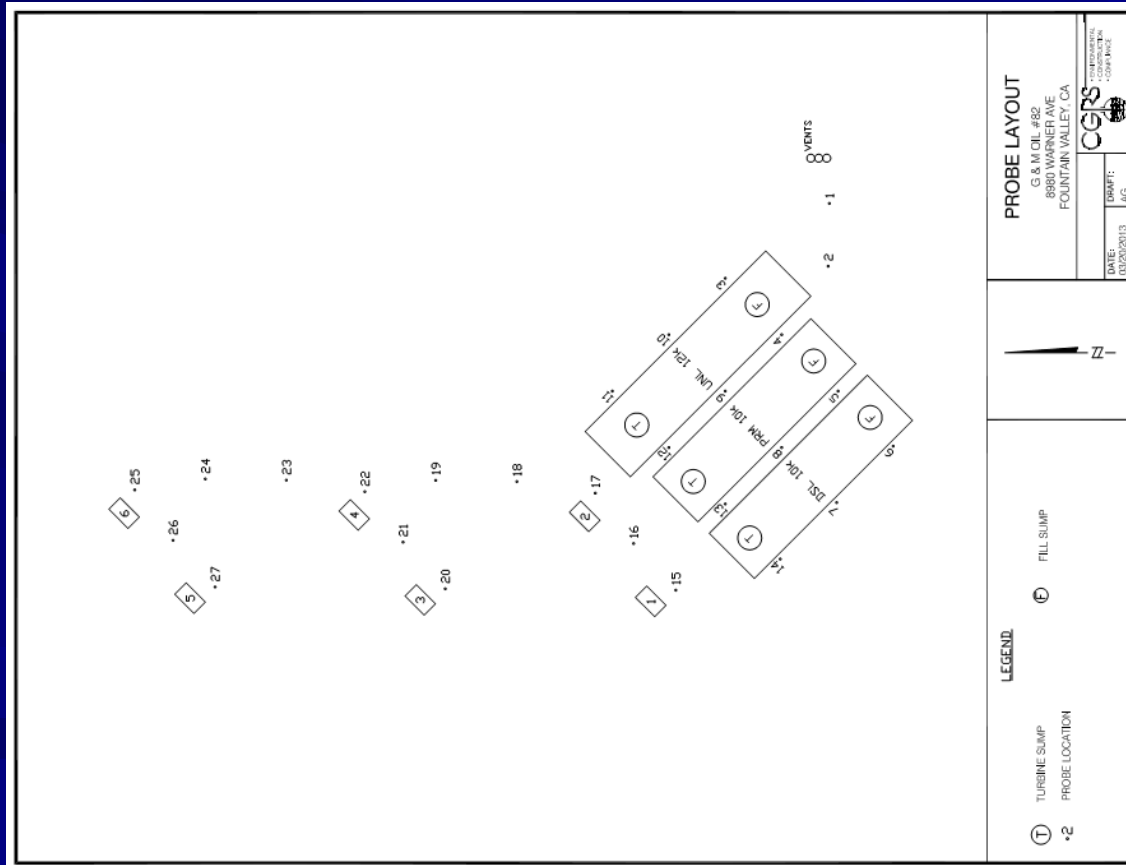
1. ELD Program Plan Approval: Have a written program of ELD (testing program plan) reviewed and approved by the local agency within six (6) months.
2. ELD testing must be performed within 18 months
3. ELD Test Notification: Notify the local agency at least 48 hours prior to conducting the ELD test.

Well Proximity Testing Process

1. Helium Pre-Test and Repairs
2. Tracer Probe Installation
3. Inoculation
4. Leak Simulation
5. Sampling / Analysis



Well Proximity Testing Concept



Well Proximity Testing Concept



New Construction ELD Testing Requirement

- LG 162-1 – July 1, 2003
- Newly installed UST systems become subject to Enhanced Leak Detection requirements

http://www.waterboards.ca.gov/ust/leak_prevention/lgs/docs/162_1.pdf

New Construction ELD Requirement

- Newly installed UST systems must pass ELD testing when construction is complete – concrete poured and dispensers set.
- Must have a passing result prior to receiving an operating permit.
- QAQC – for new UST installations!



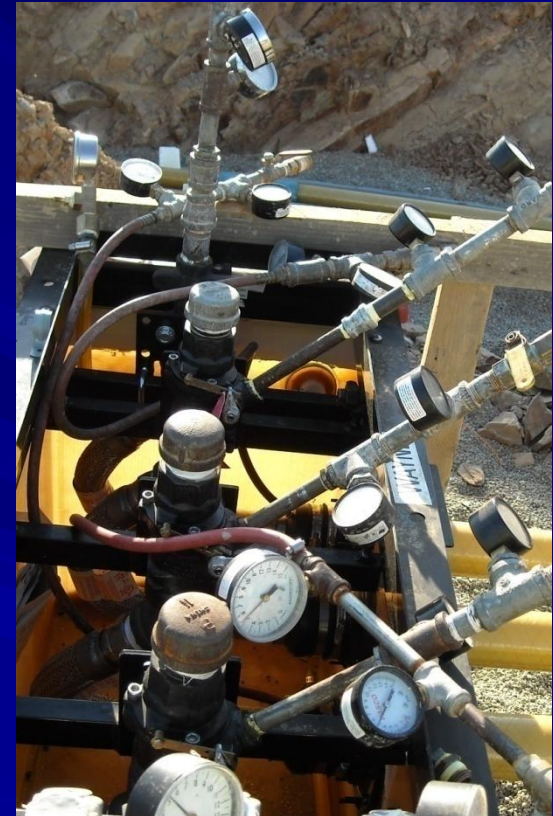
New Construction ELD Process

1. System Installation (buried portion)
2. Contractor Rough Testing
3. ELD Pre-Testing (prior to backfilling)
4. Complete Installation
5. Final ELD Testing



Contractor Pre-Testing

- Pressure Decay
- Soap Bubble
- Vacuum Decay



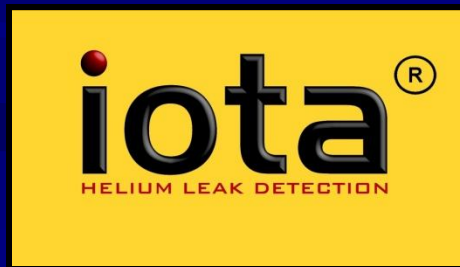
Helium Pre-Testing

- Test the newly installed system with helium when completed, prior to backfilling.

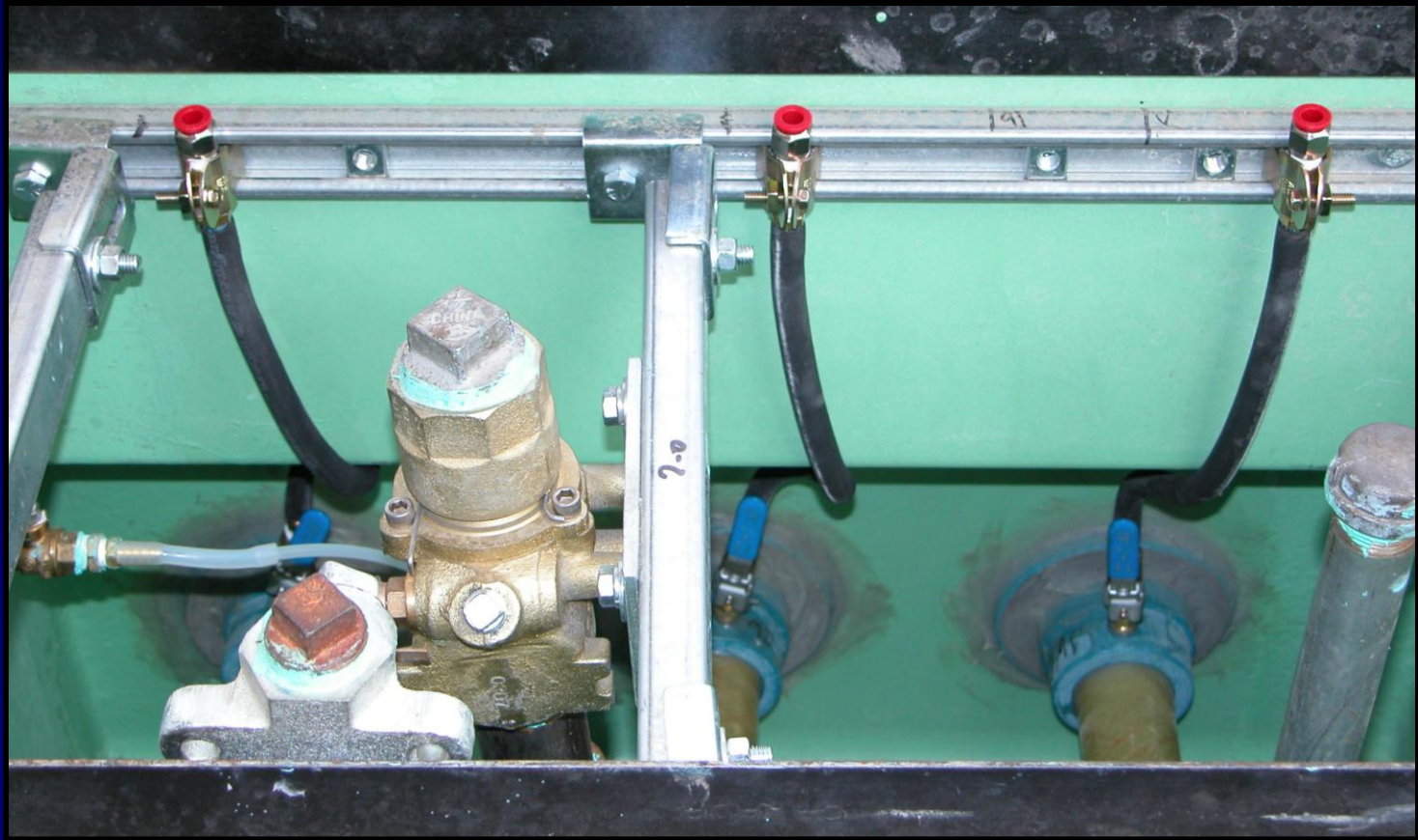


Final ELD Testing

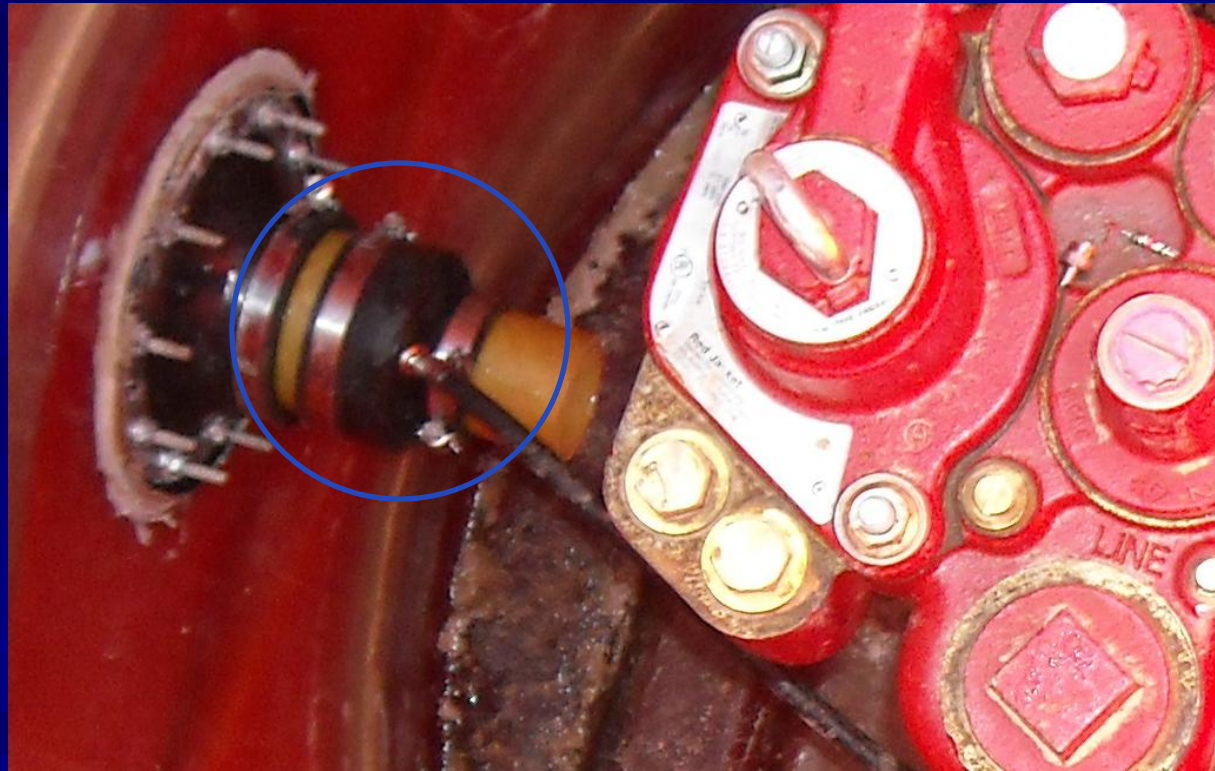
- Installation is completed
- Ground surfacing installed
- Dispensers set and connected
- Ready to receive fuel



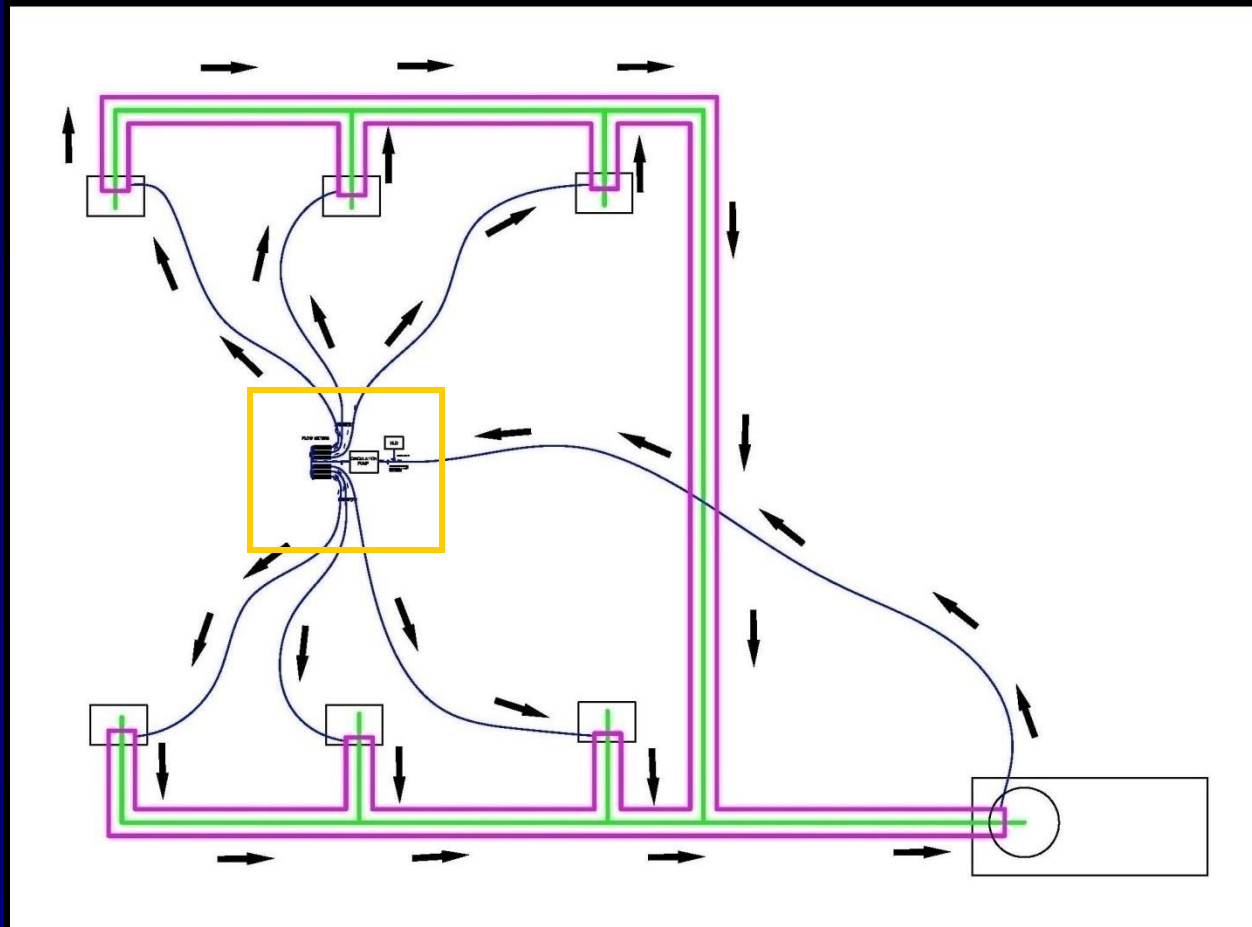
Test setups at the dispenser



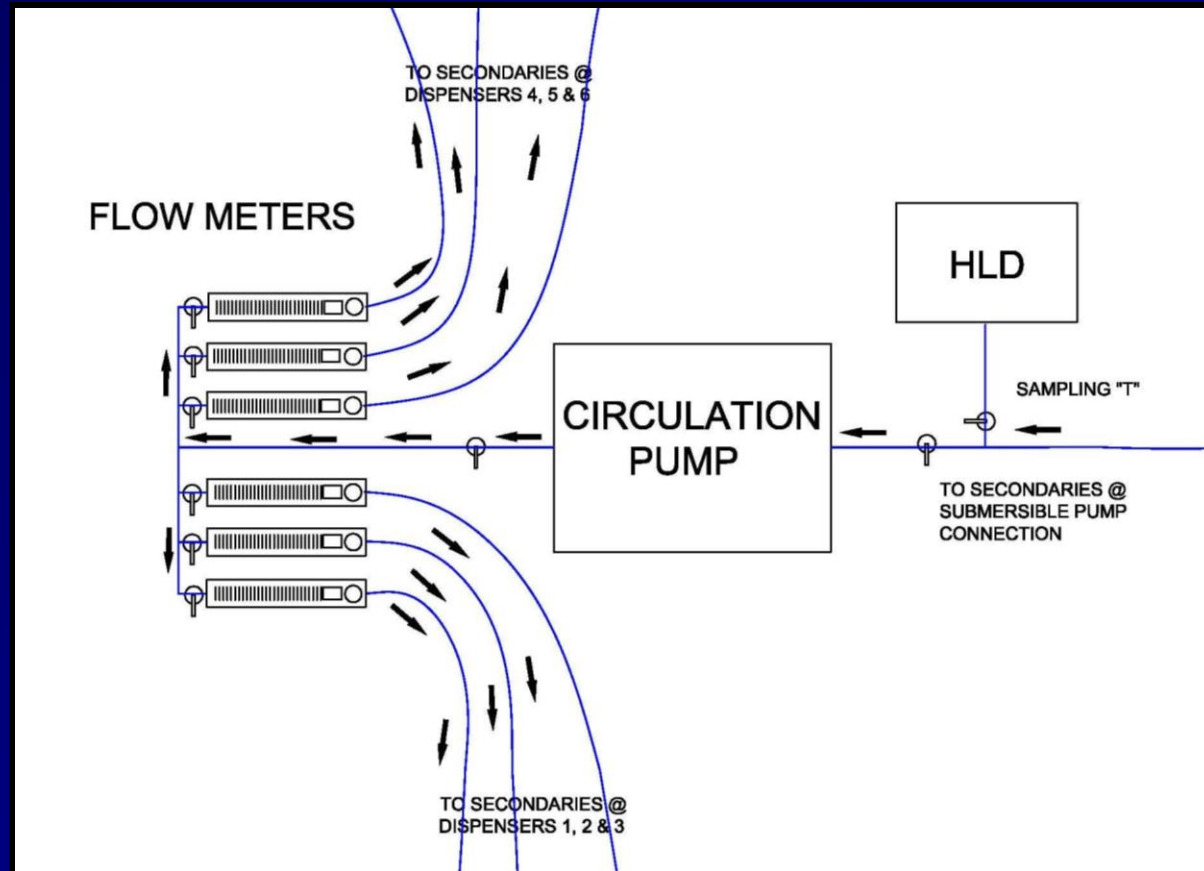
Connection at the turbine



Piping Systems



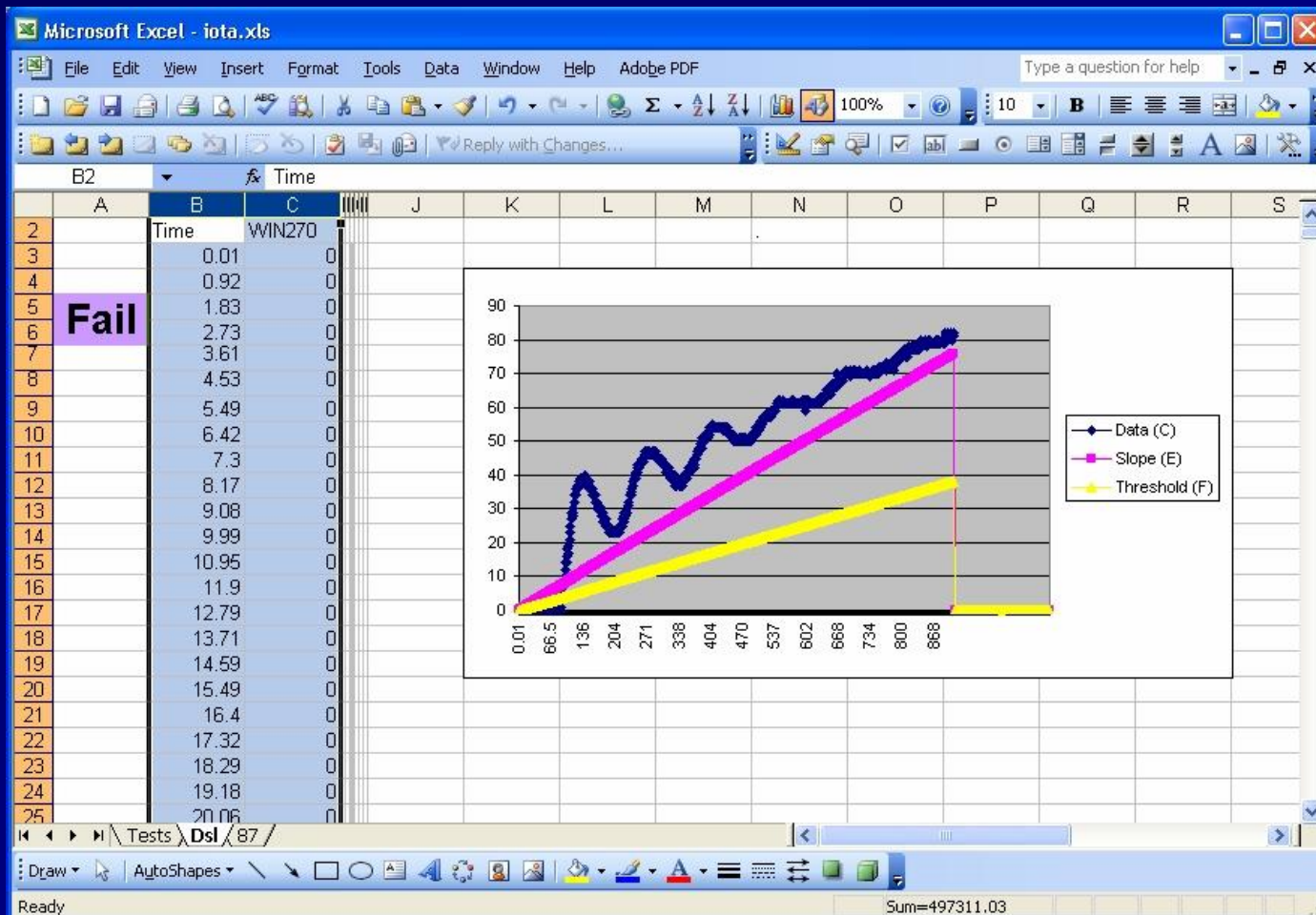
Test Manifold Detail



Air Management System



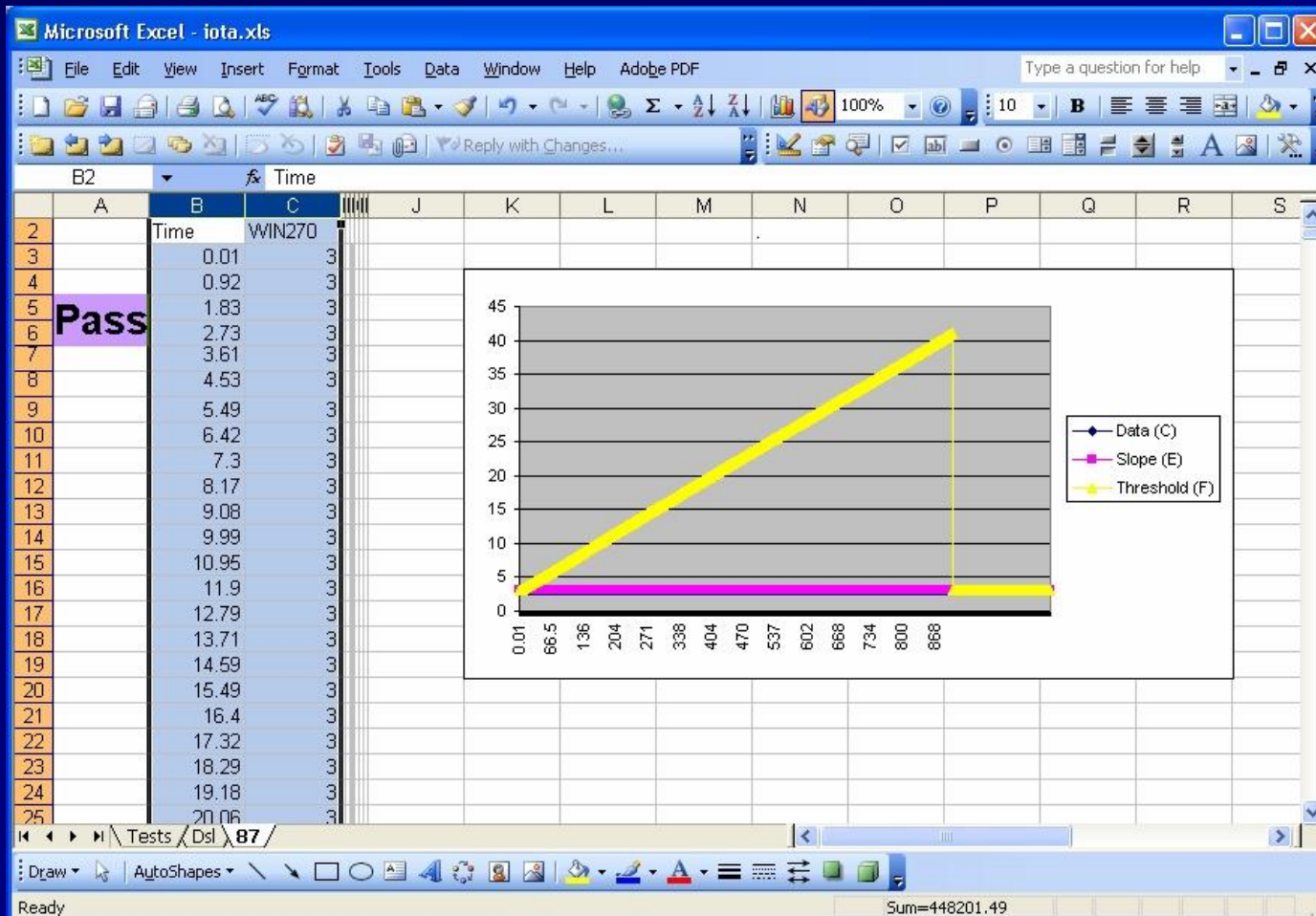
0.005 gph Leak



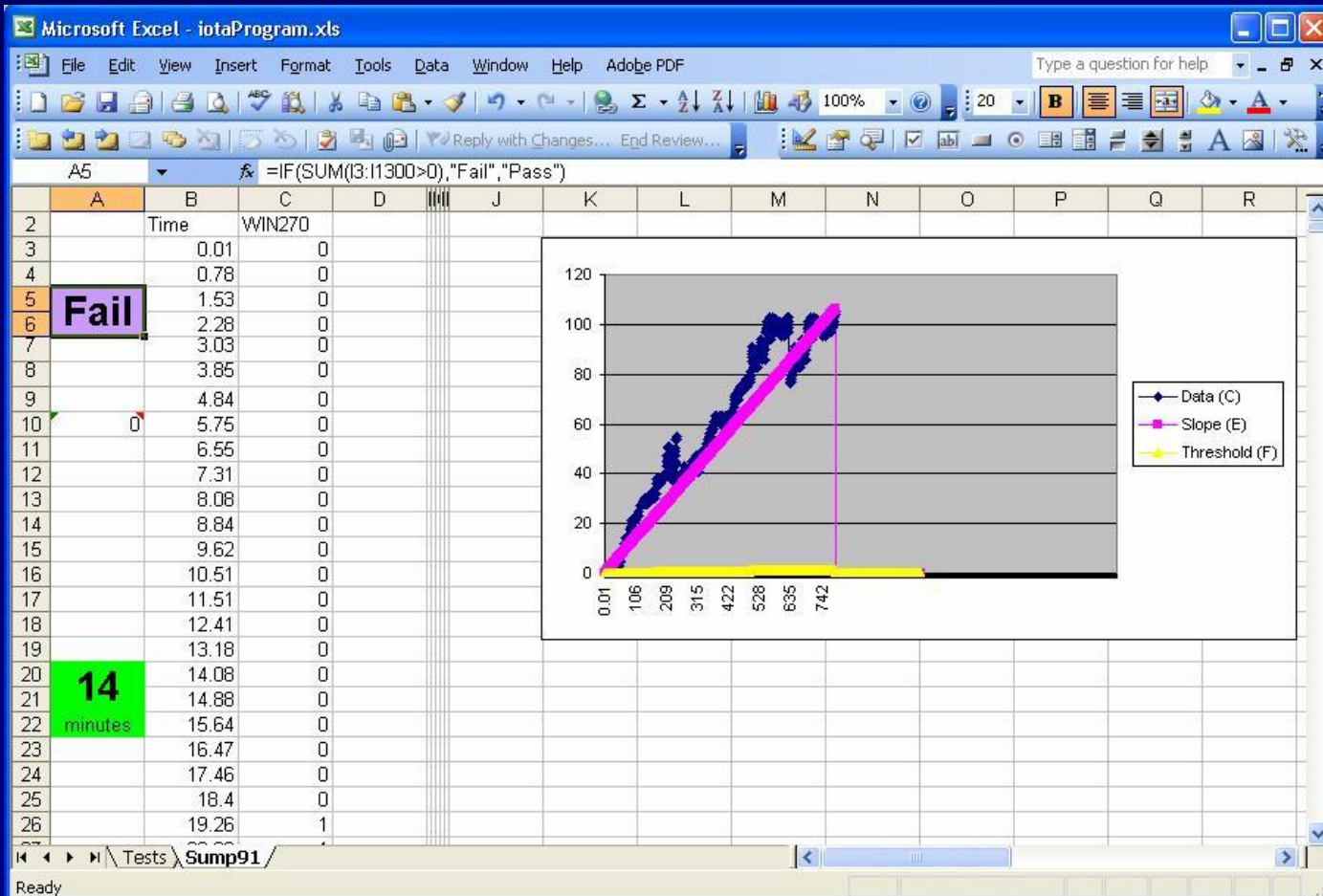
0.005 gph as vapor



No Leak Test



Typical Leak



Test Certification



5444 Dry Creek Road
Sacramento, CA 95838
800-288-2657

Test Certification Post Installation Enhanced Leak Detection (ELD)

Location: CGRS Project #: 3-5447-11325-7711

7-Eleven 32241 - Market Number 2133
4101 Calloway Drive
Bakersfield, CA 93308

Test Date: November 12, 2007
CGRS Techs: Tony Oddo
Adam Geiger

This document certifies that the systems listed below at the above referenced location have been tested and passed the Iota® VaporTite V005 tightness test. CGRS further certifies that the Iota® VaporTite V005 meets the post installation testing requirements for newly installed underground storage tank systems as per the California Health and Safety Code, Chapter 6.7, section 25290.1(j)(3).

Post Installation ELD Test Results

Reg NL (87)	Primary Containment System	Pass
Prem NL (91)	Primary Containment System	Pass

IOTA Tech Signature:

Paul "Tony" Oddo CA Tester No 05-1703

11/12/2007

Date

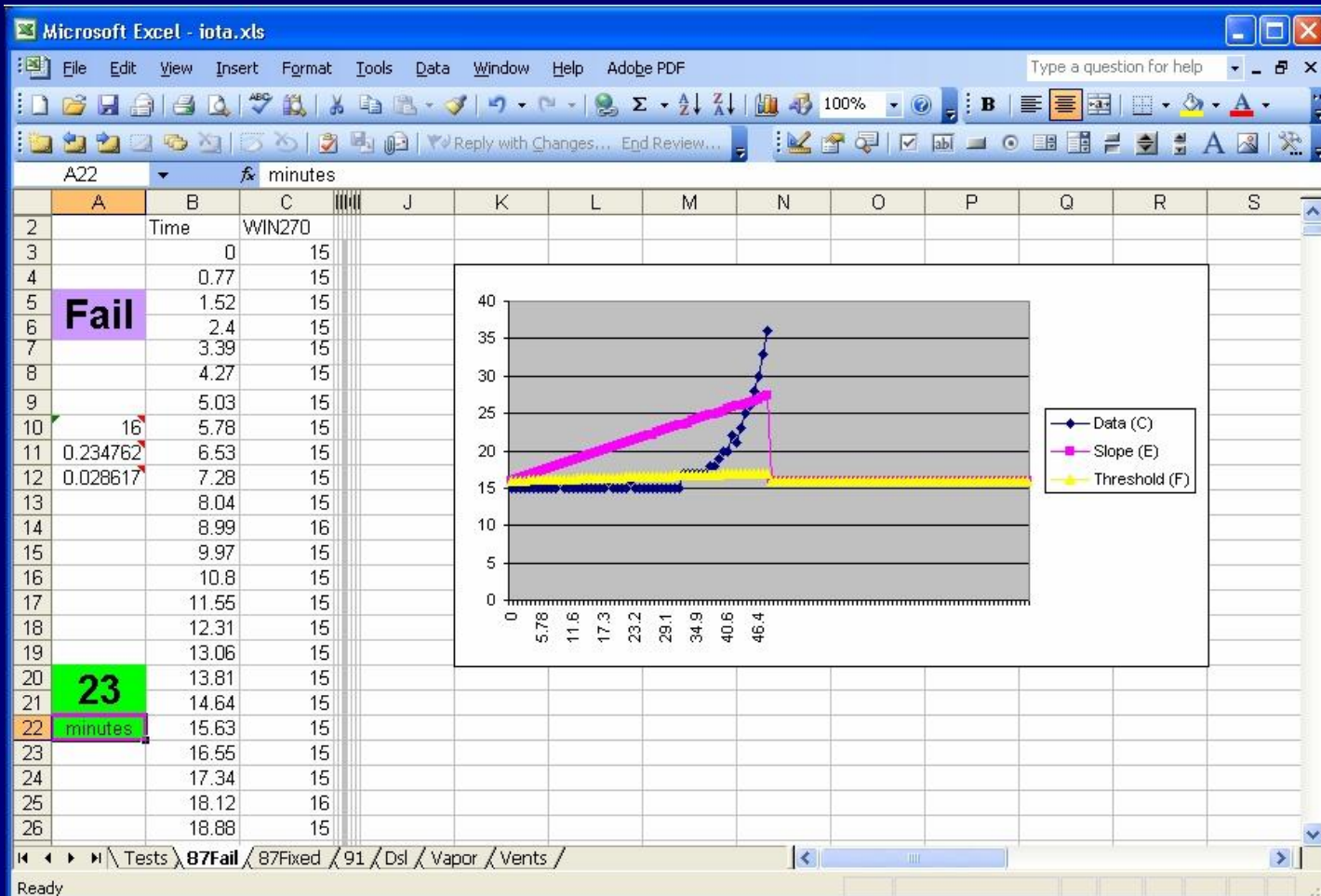
Reviewed by:

Chris Murphy - CA Operations Manager

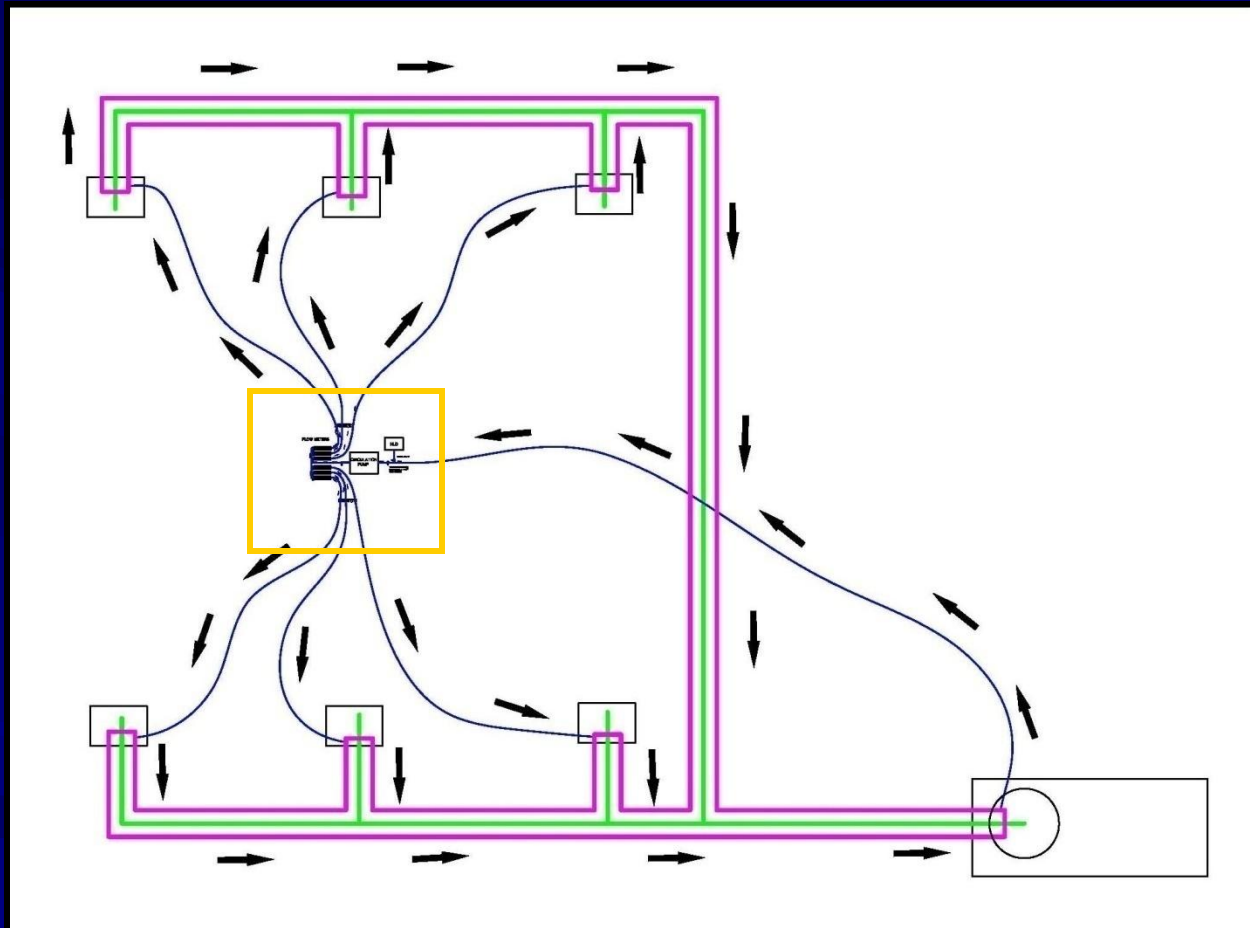
12/3/2007

Date

Typical Leak



Leak Locate





LEAK DETECTION SERVICES

Thank you for your time!



Service Provided by CGRS, Inc.