



South Coast Air Quality Management District

Rule 461: Gasoline Storage and Dispensing Facilities

AQMD Perspectives

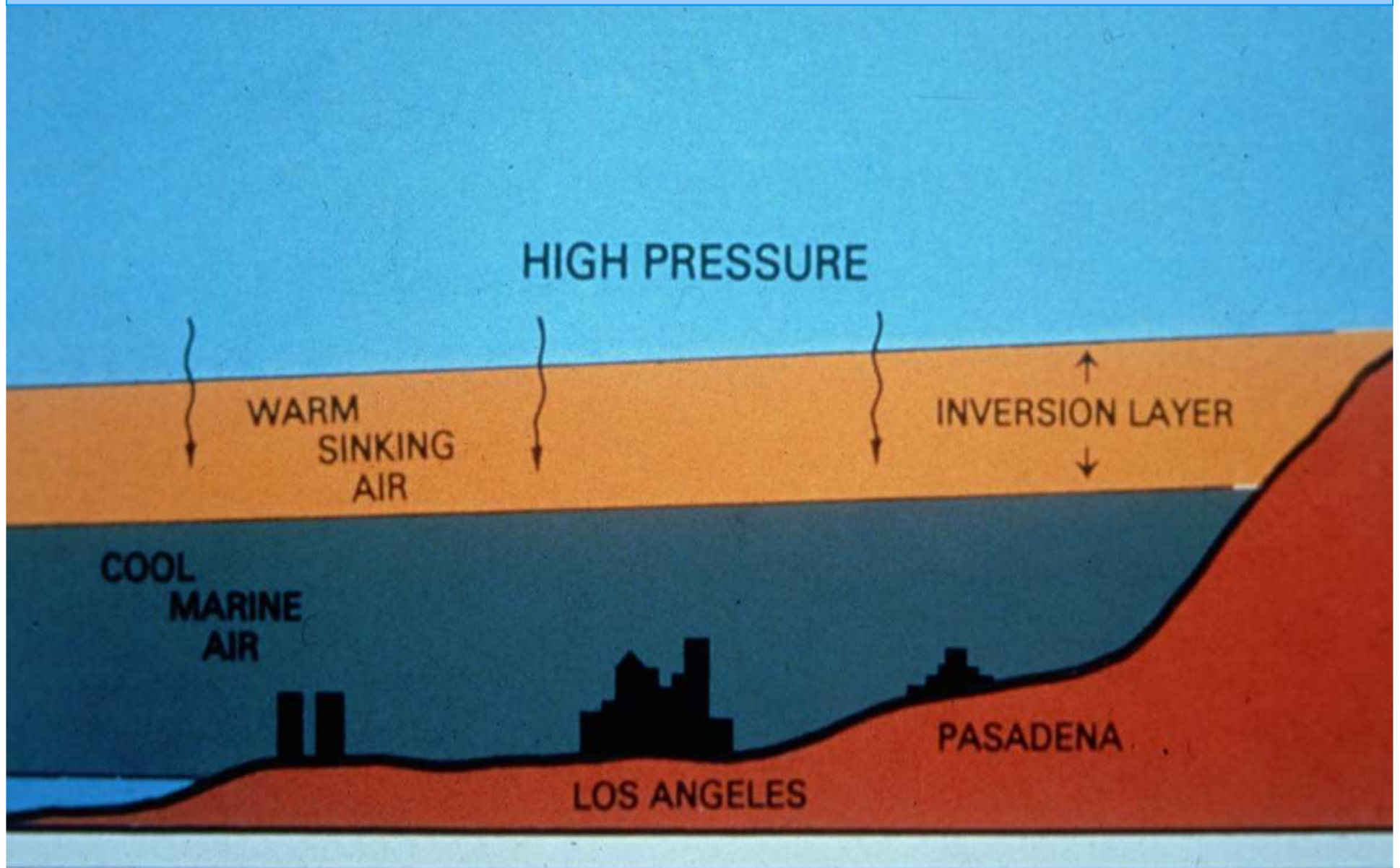
- Background Information
- ISD and EVR Installation Timeline and Status
- Air Quality Management Plan (AQMP)
- Rule 461 Amendment
- Compliance Activities

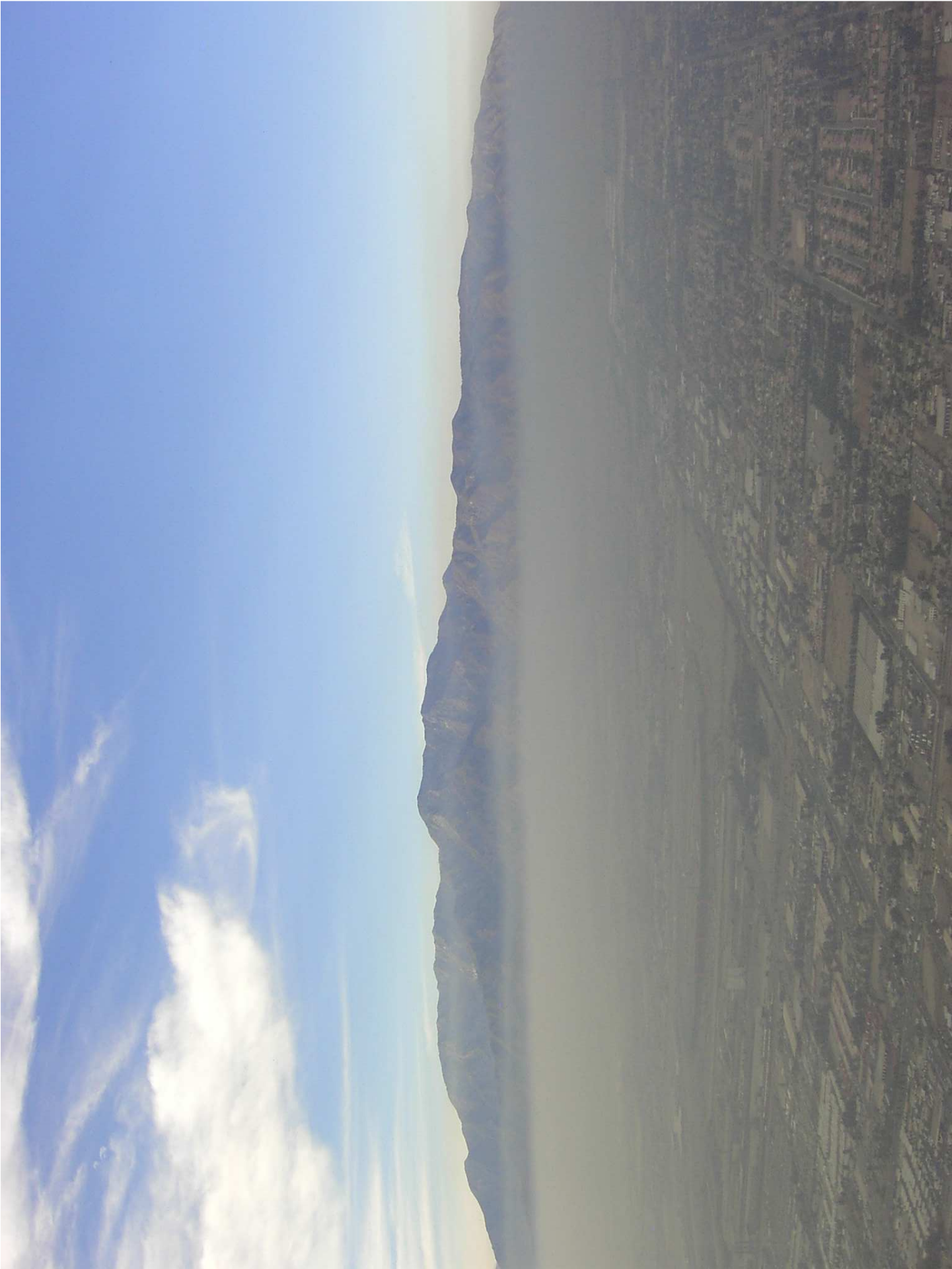
South Coast Air Basin

- Basin Population 17 Million
- Number of Vehicles 12 Million
- Retail GDF 3,400
- Non-Retail GDF 1,500
- ***Approximately 7 Billion Gallons of Gasoline Dispensed Annually into Motor Vehicles***



Inversion Layer Traps Smog Near Ground Level





EVR & ISD Implementation Dates

| | New or Major Modifications | Existing Facilities |
|--|---------------------------------------|----------------------------|
| Phase II EVR | April 2005 | April 2009 |
| ISD > 1.8 million gal/year 38% (1,292 GDFs) | September 1, 2005 | September 1, 2009 |
| | September 1, 2006 | September 1, 2010 |
| > 600,000 gal/year 56% (1,904 GDFs) | | |

•By September 1, 2010, 94% of Facilities will be required to have ISD

Current Vapor Recovery System Installation Status

- Retail Gasoline Dispensing
Facilities (GDFs) – '07

| | |
|-----------------------|-------|
| – Balance | 2,915 |
| – Gilbarco VaporSaver | 35 |
| – Hirt | 7 |
| – Healy G-70-191 | 222 |
| – Healy VR-201-A | 146 |
| – Healy VR-202-A | |
| • Applications | 219 |
| • Installed | 75 |
| – Totals | 3,400 |



• **By April 1, 2009, ~4,700 total (1,500 are non retail) Facilities will need to upgrade to EVR Phase II**

2007 AQMP Control Measure (FUG – 02)

- Improve Implementation of EVR
- Rule 461 Amendments
 - Enhance ISD Alert Range and Require Alert Prior to Vapor Recovery System Failure
 - Allow Use of Reset Only After Repairs Complete
 - Require ISD for All Gasoline Dispensing
 - Require Automatic Dispenser Shutdown at Low Fuel Flow (Fuel Filter Blockage)

Why Do We Need ISD

- 7 Billion Gallons of Gasoline Transferred Twice
 - Phase I (Underground Storage Tanks)
 - Phase II (Motor Vehicles)
- 3,400 Retail GDFs
- Real Time Diagnostic Capabilities
 - Vapor Recovery System Monitored Throughout the Day
 - Provide data for necessary Repairs/Maintenance
- Prevent Problems with:
 - Vapor Recovery Installations Contrary to CARB Executive Orders
 - Poor Vapor Recovery Tests and Minimum Repair Strategy (Minimum Repair Trends)

AQMD Approaches

Encourage Early Compliance By:

- Notices to Facility Operators
- Incentives for Early Compliance
- Mandatory Planning and Scheduling (e.g. Increment of Progress)

Rule Amendments

- Early Compliance with EVR and ISD
- Planning and Scheduling
- AQMP Measures for Additional Emission Reductions
- Process to Start in Early Fall 2007

Compliance Activities

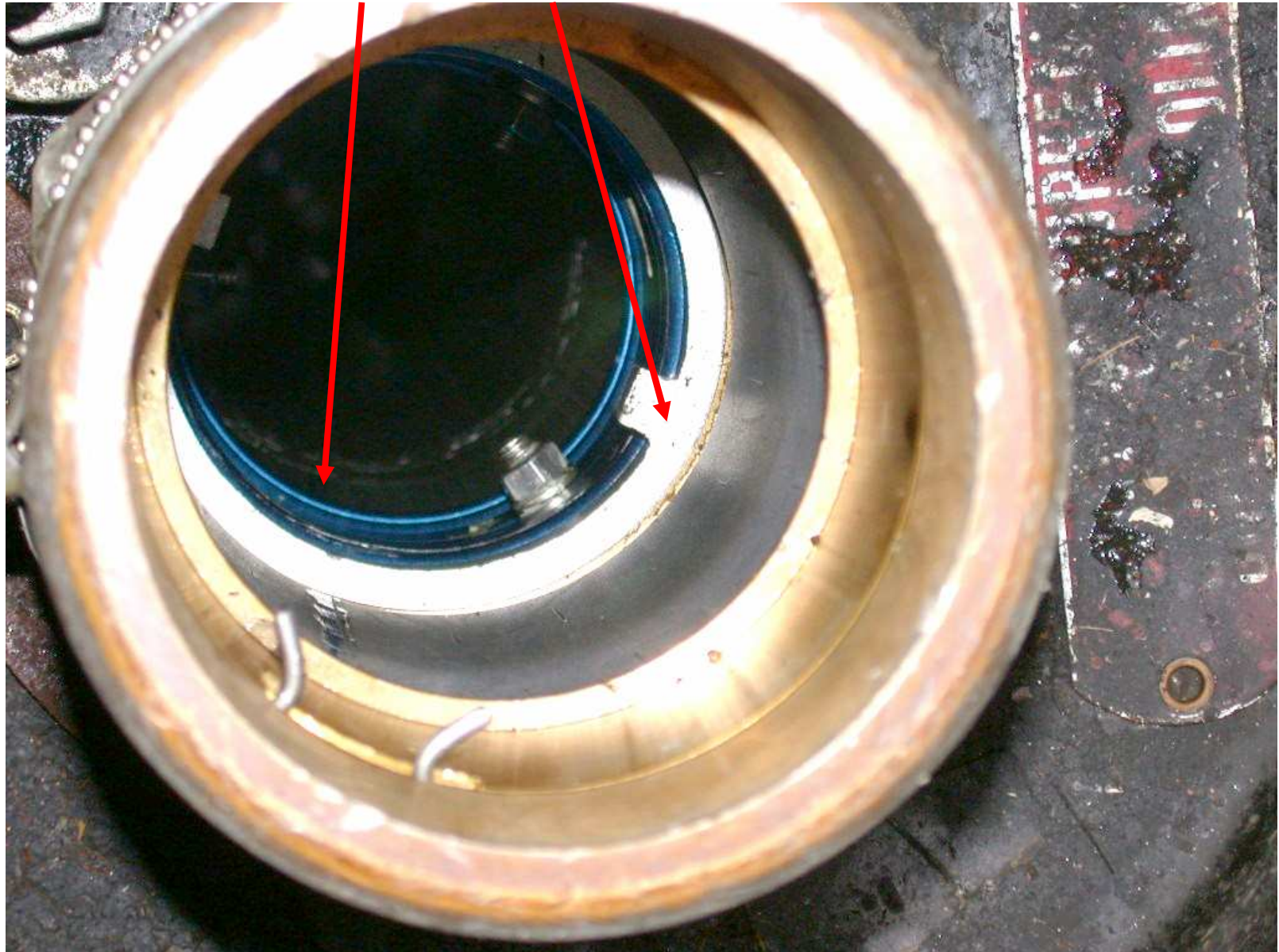
Lou Roberto, Supervising Inspector

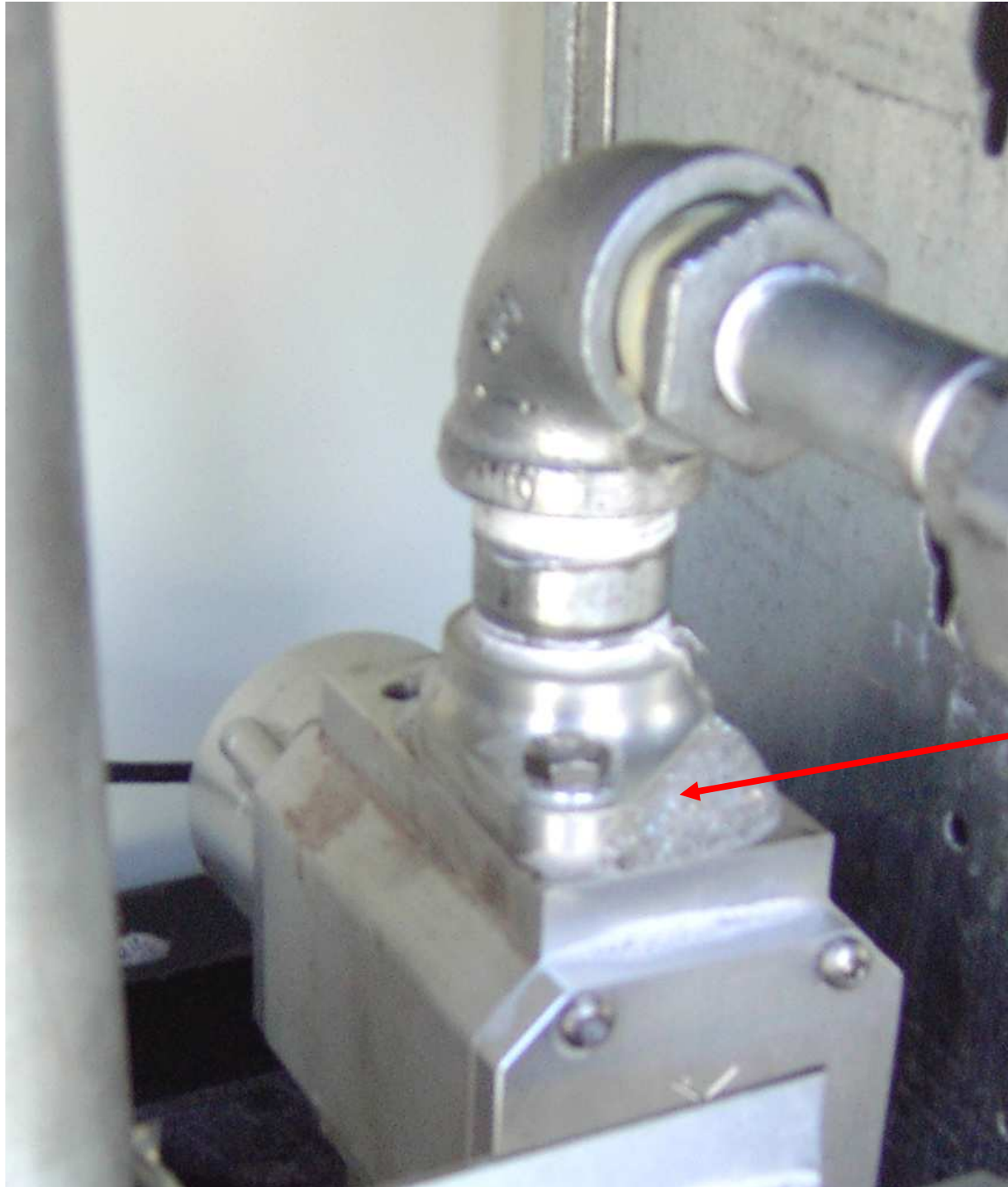
Compliance Activities

- Vapor Recovery System Installation/Maintenance Issues
- Vapor Recovery System Testing Issues
- ISD Alarm Re-Sets without Maintenance
- Balance System Concerns

OPW & CNI Phase I EVR Components

Installation / Maintenance



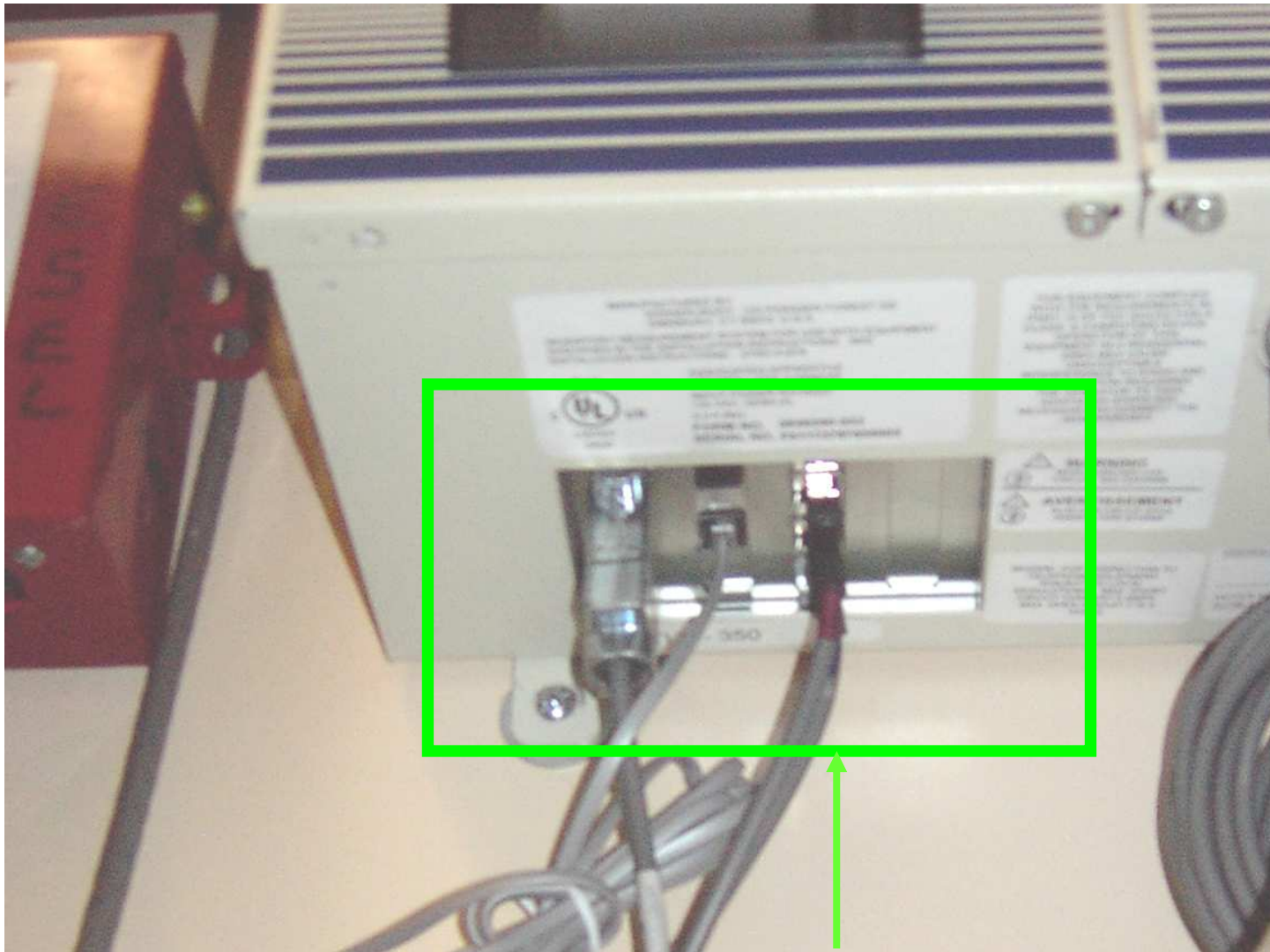


Vapor Flow Meter Leak

Installation / Maintenance



Valve Closed
Installation / Maintenance

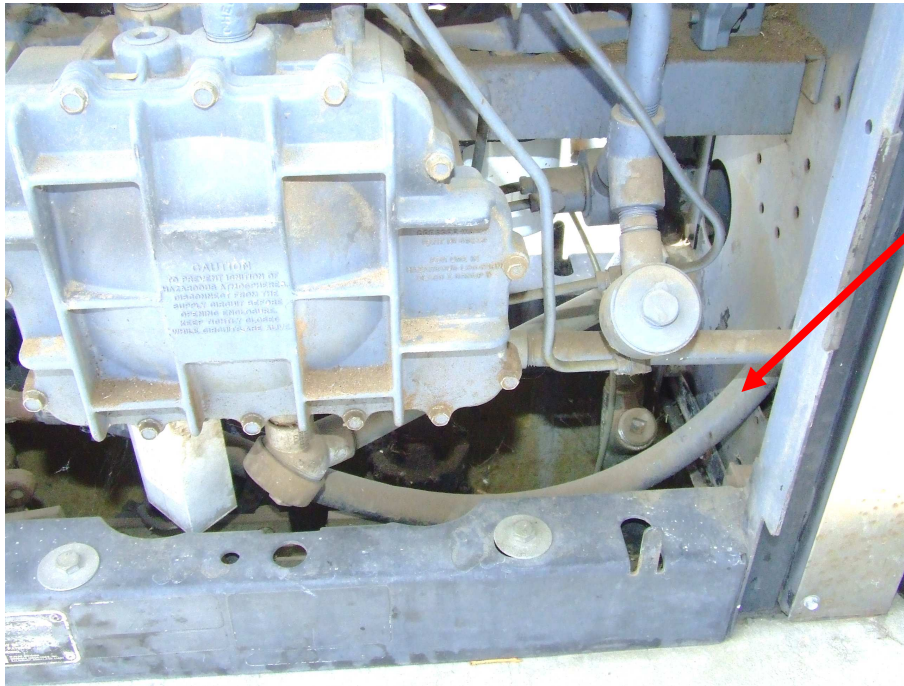


No Dedicated RS-232 Port Installed

*** CARB Advisory Number 357**



Testing Concerns

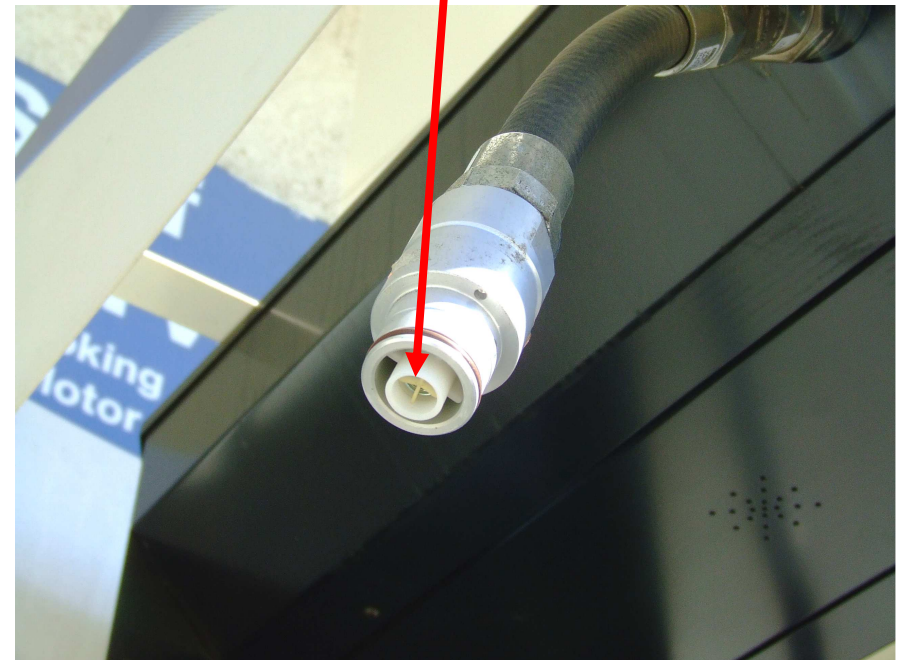


Balance System

- Vapor Return Line



Vehicle Drive-Offs





ISD Monitor Warning Alarms

OCT 10, 2006 12:08 PM

7-11 33610

PANORAMA CITY CA 91402

ISD ALARM STATUS REPORT

WARNING ALARMS

| DATE | TIME | DESCRIPTION | READING | VALUE |
|----------|----------|---------------------------------|------------|-------|
| 06-09-18 | 00:00:09 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 2.05 |
| 06-09-17 | 00:00:09 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 2.14 |
| 06-09-16 | 00:00:09 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 2.14 |
| 06-08-21 | 00:00:26 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 3.20 |
| 06-08-14 | 00:00:09 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 1.37 |
| 06-08-01 | 00:00:09 | CONTAINMENT GROSS OVER PRESSURE | WEEKLY 95% | 2.86 |

ISD Monitor Warning Alarms

IV0100

OCT 5, 2006 11:49 AM

WOODLAND HILLS ,CA

ISD ALARM STATUS REPORT

WARNING ALARMS

| DATE | TIME | DESCRIPTION | READING | VALUE |
|----------|----------|---------------------------|-----------------|-------|
| 06-10-03 | 10:00:09 | A/L RATIO DEGRADATION | FP12 BLEND3 | 0.00 |
| 06-10-03 | 10:00:09 | A/L RATIO GROSS BLOCKAGE | FP12 BLEND3 | BLKD |
| 06-10-01 | 10:00:09 | A/L RATIO GROSS BLOCKAGE | FP 5 BLEND3 | BLKD |
| 06-09-26 | 00:00:09 | A/L RATIO DEGRADATION | FP 5 BLEND3 | 0.00 |
| 06-09-26 | 00:00:09 | A/L RATIO GROSS BLOCKAGE | FP 5 BLEND3 | BLKD |
| 06-08-07 | 00:00:17 | VAPOR CONTAINMENT LEAKAGE | CFH@2 INCHES WC | 8.58 |
| 06-08-06 | 00:00:21 | VAPOR CONTAINMENT LEAKAGE | CFH@2 INCHES WC | 8.68 |
| 06-07-26 | 00:00:09 | VAPOR CONTAINMENT LEAKAGE | CFH@2 INCHES WC | 26.29 |
| 06-07-25 | 00:00:09 | VAPOR CONTAINMENT LEAKAGE | CFH@2 INCHES WC | 27.56 |
| 06-07-18 | 00:00:09 | VAPOR CONTAINMENT LEAKAGE | CFH@2 INCHES WC | 25.07 |

ISD Monitor Warning Alarms

IV0100
AUG 1, 2006 10:52 AM

IRVINE,CA. 92616

ISD ALARM STATUS REPORT

GROSS & DEGRD TEST SHUTDOWN & MISCELLANEOUS EVENTS

| DATE | TIME | DESCRIPTION | ACTION/NAME |
|----------|----------|----------------------------|-----------------------|
| 06-06-27 | 11:44:29 | CONTAINMENT VAPOR LEAKAGE | TEST MANUALLY CLEARED |
| 06-06-27 | 11:44:25 | CONTAINMENT GROSS & DEGRD | TEST MANUALLY CLEARED |
| 06-06-27 | 11:43:54 | PUMPS MANUALLY RE-ENABLED | |
| 06-06-19 | 15:32:59 | COLLECTION TEST HH06 GRADE | TEST MANUALLY CLEARED |
| 06-06-19 | 15:32:39 | CONTAINMENT VAPOR LEAKAGE | TEST MANUALLY CLEARED |
| 06-06-19 | 15:32:29 | CONTAINMENT | TEST MANUALLY CLEARED |



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

PERMIT TO CONSTRUCT/OPERATE

page 1
Permit No.
N080106
A/N 987654

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner
or Operator:

SCAQMD DLR, JACK LIAW, JACK'S NOV-FREE STATION, DBA
21865 COPLEY DRIVE
DIAMOND BAR, CA 91765

ID 999999

Equipment Location: 21865 COPLEY DRIVE, DIAMOND BAR, CA 91765

Equipment Description:

Fuel Storage and Dispensing Facility Consisting of:

- 1) 8 - GASOLINE BELLOWS-LESS NOZZLES DISPENSING 24 PRODUCTS EQUIPPED WITH PHASE II VAPOR RECOVERY SYSTEM, HEALY PHASE II EVR SYSTEM INCLUDING VEEDER-ROOT ISD SYSTEM (VR-202-A).
- 2) 1 - GASOLINE UNDERGROUND STORAGE TANK, 12,000 GALLON CAPACITY, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM OPW (VR-102-F), 1 METHANOL COMPATIBLE.
- 3) 1 - DUAL COMPARTMENT UNDERGROUND GASOLINE/DIESEL STORAGE TANK, 18,000 GALLON CAPACITY, 1 METHANOL COMPATIBLE, CONSISTING OF:
 - A) ONE 12,000 GALLON GASOLINE COMPARTMENT, EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM OPW (VR-102-F).
 - B) ONE 6,000 GALLON DIESEL COMPARTMENT, NOT EQUIPPED WITH PHASE I VAPOR RECOVERY SYSTEM.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT WAS ISSUED, UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. ALL PERMIT CONDITIONS APPLICABLE TO THE EQUIPMENT DESCRIBED IN THE PREVIOUS PERMIT TO OPERATE R-N010104 SHALL REMAIN IN EFFECT UNTIL THE NEW OR MODIFIED EQUIPMENT IS CONSTRUCTED AND OPERATED AS DESCRIBED IN THIS NEW PERMIT. THIS PERMIT TO CONSTRUCT/OPERATE SHALL BECOME INVALID IF THE MODIFICATION AS DESCRIBED IN THE EQUIPMENT DESCRIPTION HAS NOT BEEN COMPLETED WITHIN ONE YEAR FROM THE ISSUE DATE. IF THE MODIFICATION HAS NOT BEEN COMPLETED WITHIN ONE YEAR FROM THE ISSUE DATE OF THE PERMIT, A WRITTEN REQUEST SHALL BE SUBMITTED TO THE AQMD (ATTENTION: RANDY MATSUYAMA) TO REINSTATE THE PREVIOUSLY INACTIVATED

SAMPLE

If a second alarm occurs indicating that the same problem still exists and gasoline is terminated, the ISD system may be reset to allow for vehicle fueling to resume only if:

- A. Fueling points are isolated; or
- B. Order for Abatement issued; or
- C. All required repairs to correct the problem that triggered the failure alarm have been completed.

Balance System Observations

- Monitor Pressure/Vacuum Profile during Motor Vehicle Fuelling
- Zero or Near-Zero Readings Indicate Potential Leaks In Vapor Recovery System
- Balance Systems Require a Slight Vacuum to be Effective



Balance Defects & System Failure



Small Hole in Whip Hose



Leaking Hose Connection

Concerns / Issues

- Installation Problems (ICC Certification Examination)
- Current Maintenance Practices (Daily/Weekly/Monthly)
- Repairs After ISD Alarms
- ISD Data Acquisition
- Balance System Compliance

- Questions ?

Rule 461 Contacts

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