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

<table>
<thead>
<tr>
<th></th>
<th>New or Major Modifications</th>
<th>Existing Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase II EVR</td>
<td>April 2005</td>
<td>April 2009</td>
</tr>
<tr>
<td>ISD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 1.8 million gal/year</td>
<td>September 1, 2005</td>
<td>September 1, 2009</td>
</tr>
<tr>
<td>38% (1,292 GDFs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 600,000 gal/year</td>
<td>September 1, 2006</td>
<td>September 1, 2010</td>
</tr>
<tr>
<td>56% (1,904 GDFs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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
ISD & Warning Alarms
<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>DESCRIPTION</th>
<th>READING</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>06-09-18</td>
<td>00:00:09</td>
<td>CONTAINMENT GROSS OVER PRESSURE</td>
<td>WEEKLY 95%</td>
<td>2.05</td>
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<td>WEEKLY 95%</td>
<td>3.20</td>
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<td>WEEKLY 95%</td>
<td>1.37</td>
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<td>CONTAINMENT GROSS OVER PRESSURE</td>
<td>WEEKLY 95%</td>
<td>2.86</td>
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</table>
## ISD Monitor Warning Alarms

**IVO100**  
**OCT 5, 2006 11:49 AM**

WOODLAND HILLS, CA

**ISD ALARM STATUS REPORT**

### WARNING ALARMS

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>DESCRIPTION</th>
<th>READING</th>
<th>VALUE</th>
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</thead>
<tbody>
<tr>
<td>06-10-03</td>
<td>10:00:09</td>
<td>A/L RATIO DEGRADATION</td>
<td>FP12 BLEND3</td>
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<tr>
<td>06-10-03</td>
<td>10:00:09</td>
<td>A/L RATIO GROSS BLOCKAGE</td>
<td>FP12 BLEND3</td>
<td>BLKD</td>
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<tr>
<td>06-10-01</td>
<td>10:00:09</td>
<td>A/L RATIO GROSS BLOCKAGE</td>
<td>FP 5 BLEND3</td>
<td>BLKD</td>
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<td>A/L RATIO DEGRADATION</td>
<td>FP 5 BLEND3</td>
<td>0.00</td>
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<tr>
<td>06-09-26</td>
<td>00:00:09</td>
<td>A/L RATIO GROSS BLOCKAGE</td>
<td>FP 5 BLEND3</td>
<td>BLKD</td>
</tr>
<tr>
<td>06-08-07</td>
<td>00:00:17</td>
<td>VAPOR CONTAINMENT LEAKAGE</td>
<td>CFH@2 INCHES WC</td>
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<td>06-08-06</td>
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<td>CFH@2 INCHES WC</td>
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<td>CFH@2 INCHES WC</td>
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## ISD Monitor Warning Alarms

IV0100  
AUG 1, 2006 10:52 AM

IRVINE, CA. 92616

### ISD ALARM STATUS REPORT

GROSS & DEGRD  TEST SHUTDOWN & MISCELLANEOUS EVENTS

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>DESCRIPTION</th>
<th>ACTION/NAME</th>
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</thead>
<tbody>
<tr>
<td>06-06-27</td>
<td>11:44:29</td>
<td>CONTAINMENT VAPOR LEAKAGE</td>
<td>TEST MANUALLY CLEARED</td>
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<tr>
<td>06-06-27</td>
<td>11:44:25</td>
<td>CONTAINMENT GROSS &amp; DEGRD</td>
<td>TEST MANUALLY CLEARED</td>
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<tr>
<td>06-06-27</td>
<td>11:43:54</td>
<td>PUMPS MANUALLY RE-ENABLED</td>
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<tr>
<td>06-06-19</td>
<td>15:32:59</td>
<td>COLLECTION TEST HH06 GRADE</td>
<td>TEST MANUALLY CLEARED</td>
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<td>06-06-19</td>
<td>15:32:39</td>
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<tr>
<td>06-06-19</td>
<td>15:32:29</td>
<td>CONTAINMENT</td>
<td>TEST MANUALLY CLEARED</td>
</tr>
</tbody>
</table>
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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  • (909) 396-2378 gkasper@aqmd.gov
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