

# WESTERN INSPECTION AND ENFORCEMENT ISSUES



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## Western Inspection & Enforcement Issues

- Background on Colorado's status and growth
- Non-Attainment Status Issues
- Regional Efforts
- Oil & Gas Industry Growth and Impact
- New Sources Impacting Inspections & Enforcement



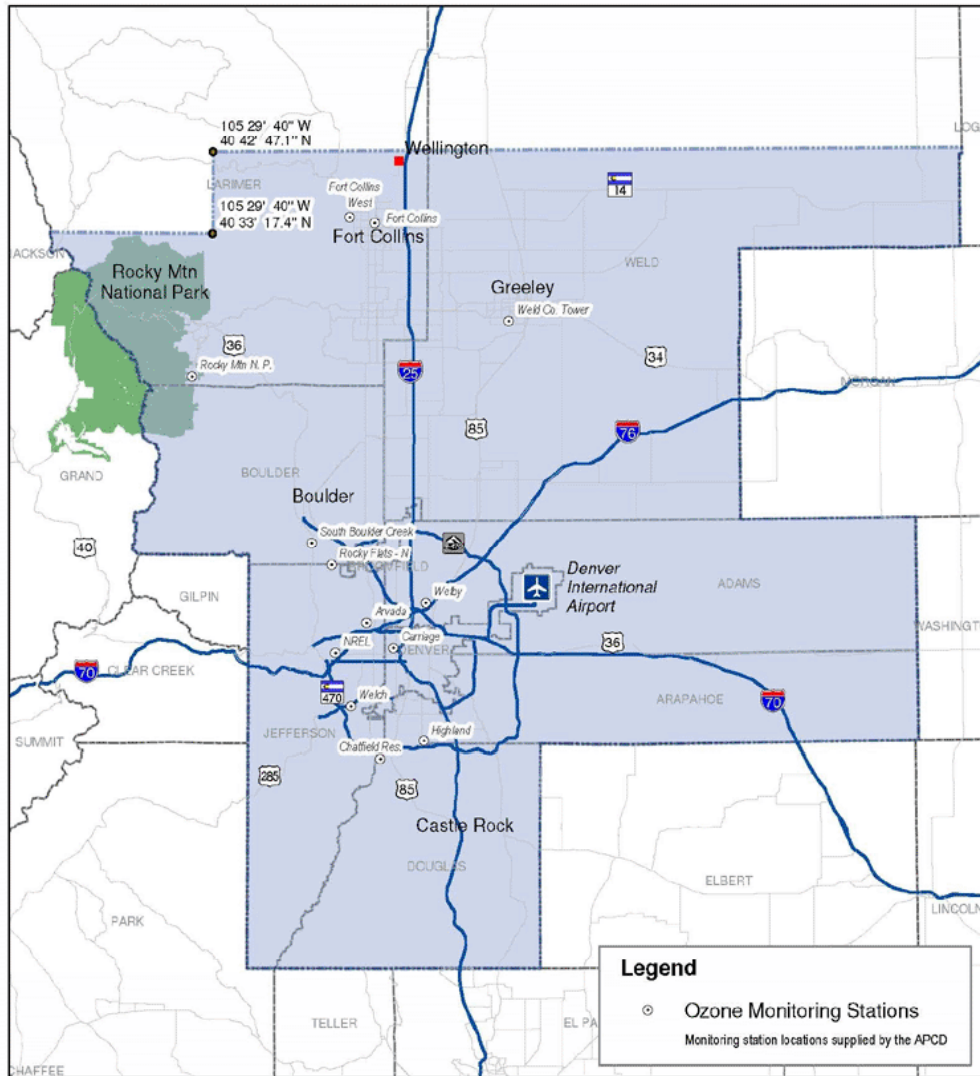
## Background on Colorado's Status and Growth

- Colorado had several non-attainment areas in the state in the past
- Denver first urban area in country with numerous violations to be redesignated to attainment status in 2002
- Entire state in attainment in 2005



## Background on Colorado's Status and Growth

- With rising ozone levels under the 8-hr standard, CO entered into an EAC for ozone with EPA, which was approved in 2005
- New rules promulgated under EAC focused primarily on Oil and Gas
- Monitored ozone violations for 2005-2007 led to EPA/Colorado allowing EAC deferral to expire
- CO officially non-attainment for 8-hr ozone standard on 11/20/07



Denver-Boulder-Greeley-Fort Collins, Colorado  
Eight-Hour Ozone Control Area



## Non-Attainment Status Issues

- CO has low reporting levels for our inventory and minor source permitting
- Air Pollution Emission Notice (APEN)
  - Attainment: 2 tpy for any criteria pollutant
  - Non-attainment: 1 tpy for any criteria pollutant



## Non-Attainment Status Issues

- Construction Permits
  - Attainment:
    - 5 tpy VOCs and PM10
    - 10 tpy NO<sub>x</sub>, CO, SO<sub>2</sub>, TSP
    - 200 lbs/year lead
  - Non-Attainment:
    - 2 tpy VOCs
    - 1 tpy PM10
    - 5 tpy NO<sub>x</sub>, CO, SO<sub>2</sub>, TSP
    - 200 lbs/year lead



## Non-Attainment Status Issues

- Many new sources pulled into our reporting, permitting and inspection requirements
- New non-attainment area (8-hr) is much larger than the old area (1-hr)
- CO conducts more inspections than required by EPA's CMS
  - Most majors sources inspected annually
  - All SM inspected every 3 years
  - True minors inspected every 5 years





## Non-Attainment Status Issues

- Actions to deal with new status include:
  - Outreach/notification efforts by Oil & Gas Team and Small Business Assistance Program
  - User-friendly information posted on website
  - Enforcement discretion for APEN/permit threshold violations during outreach efforts



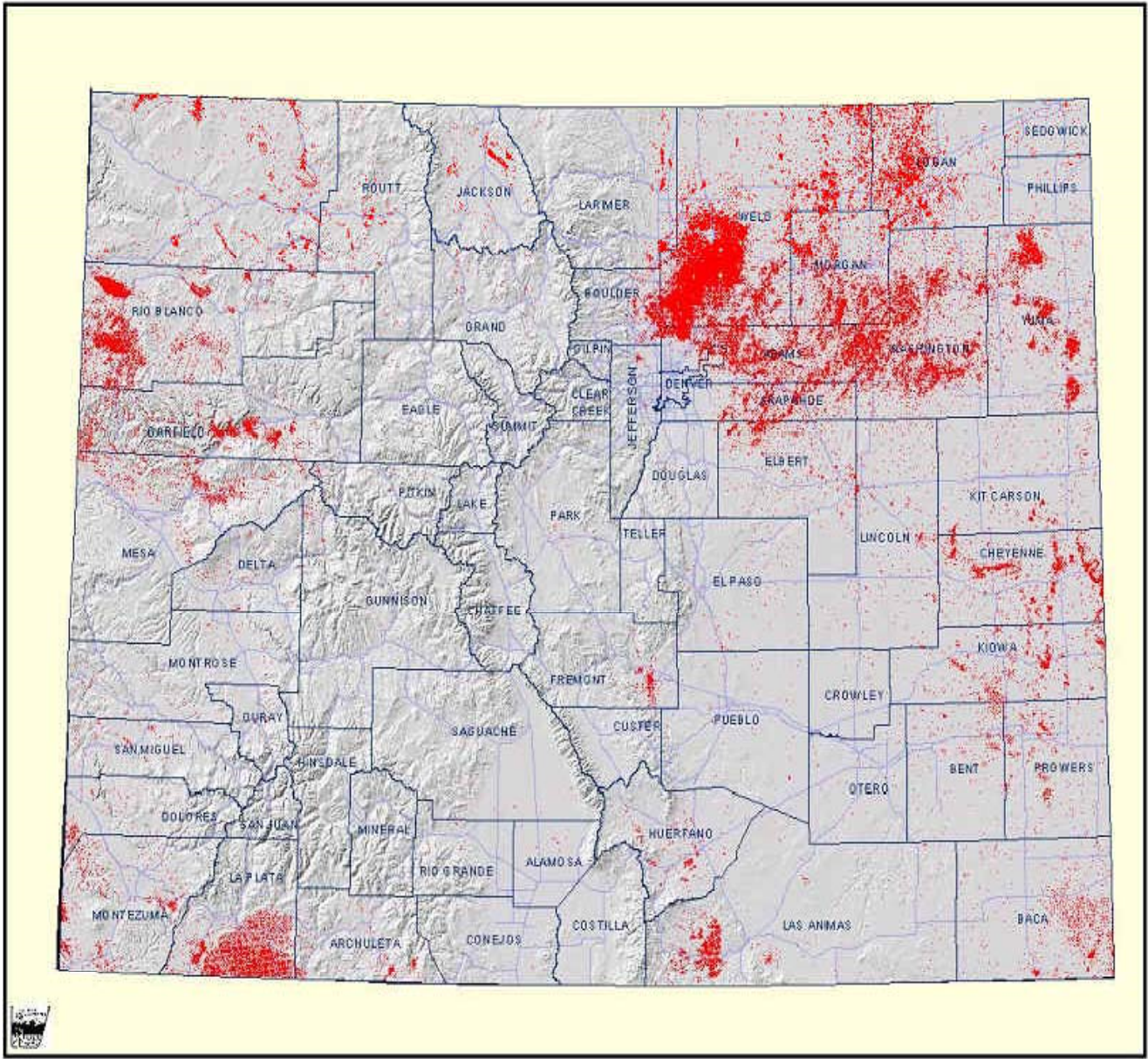
# Regional Efforts & Issues

- Regional Haze
  - CO has 12 Class I Areas
  - Minor impact on enforcement team
  - Help with technical issues surrounding BART analyses
- Four Corners Air Quality Task Force
  - Federal land mgrs, federal and state regulators, representatives from industry and tribal nations, and interested residents
    - CO enforcement representative participated
  - Discuss and make recommendations for dealing with the impacts of oil and gas production, existing and planned coal-fired power plants, growth and other factors on regional air quality
  - Final report issued in late 2007



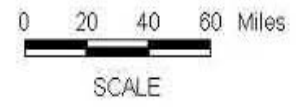
## Oil & Gas Industry Growth & Impact

- Colorado is the sixth largest natural gas producing state in the country, with the fifth largest natural gas reserve in the nation
- Largest coal bed methane reserve in the nation.
- All of the US gas producing basins are in decline, except for the Rocky Mtn Region
- Record number of applications for permits-to-drill issued in 2006 (5,904).
- Increase of 35% from previous record in 2005 (4,373).



**LEGEND:**

- Oil / Gas Well
- Highway

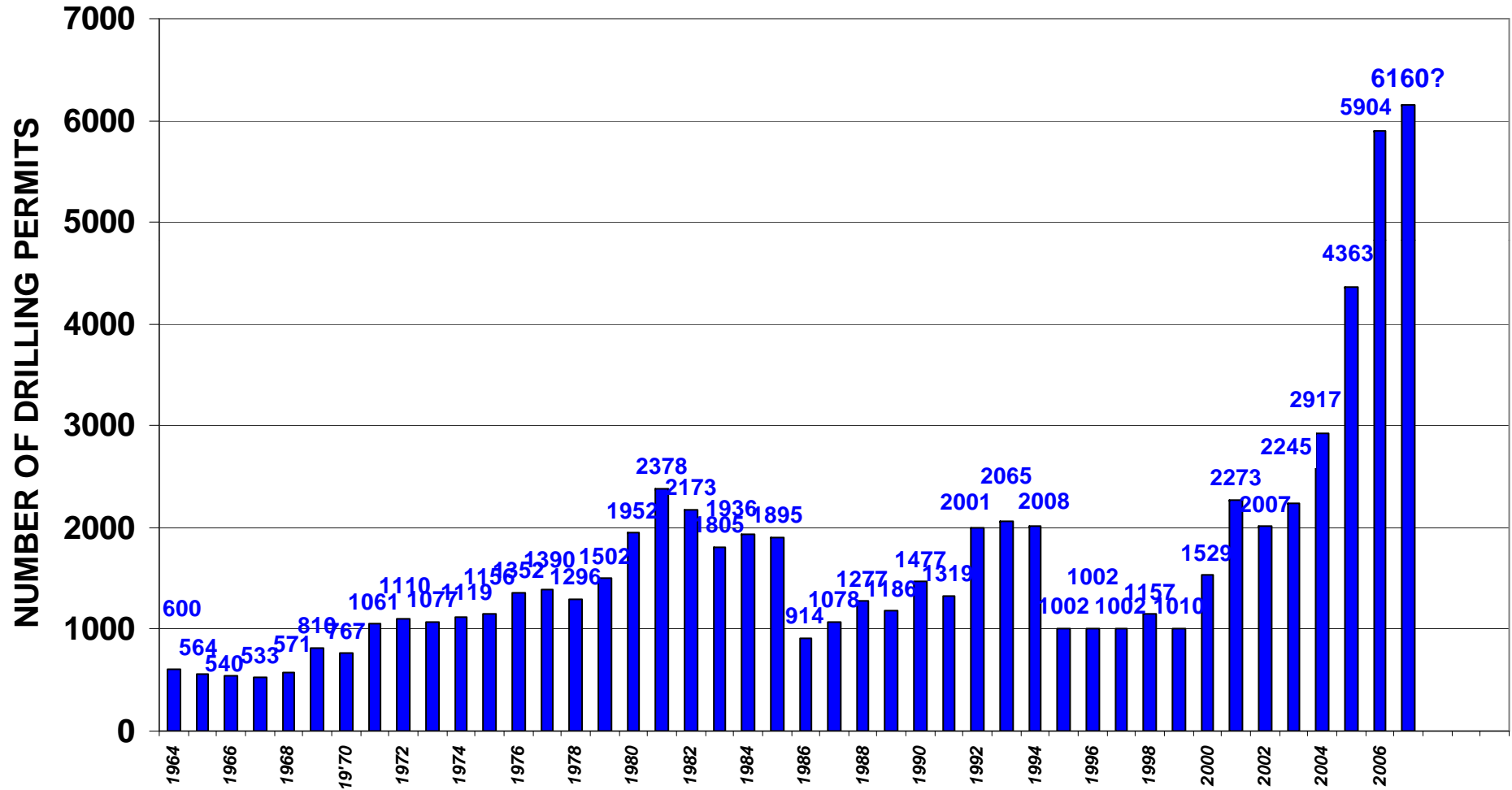


**OIL AND GAS WELLS  
IN COLORADO**

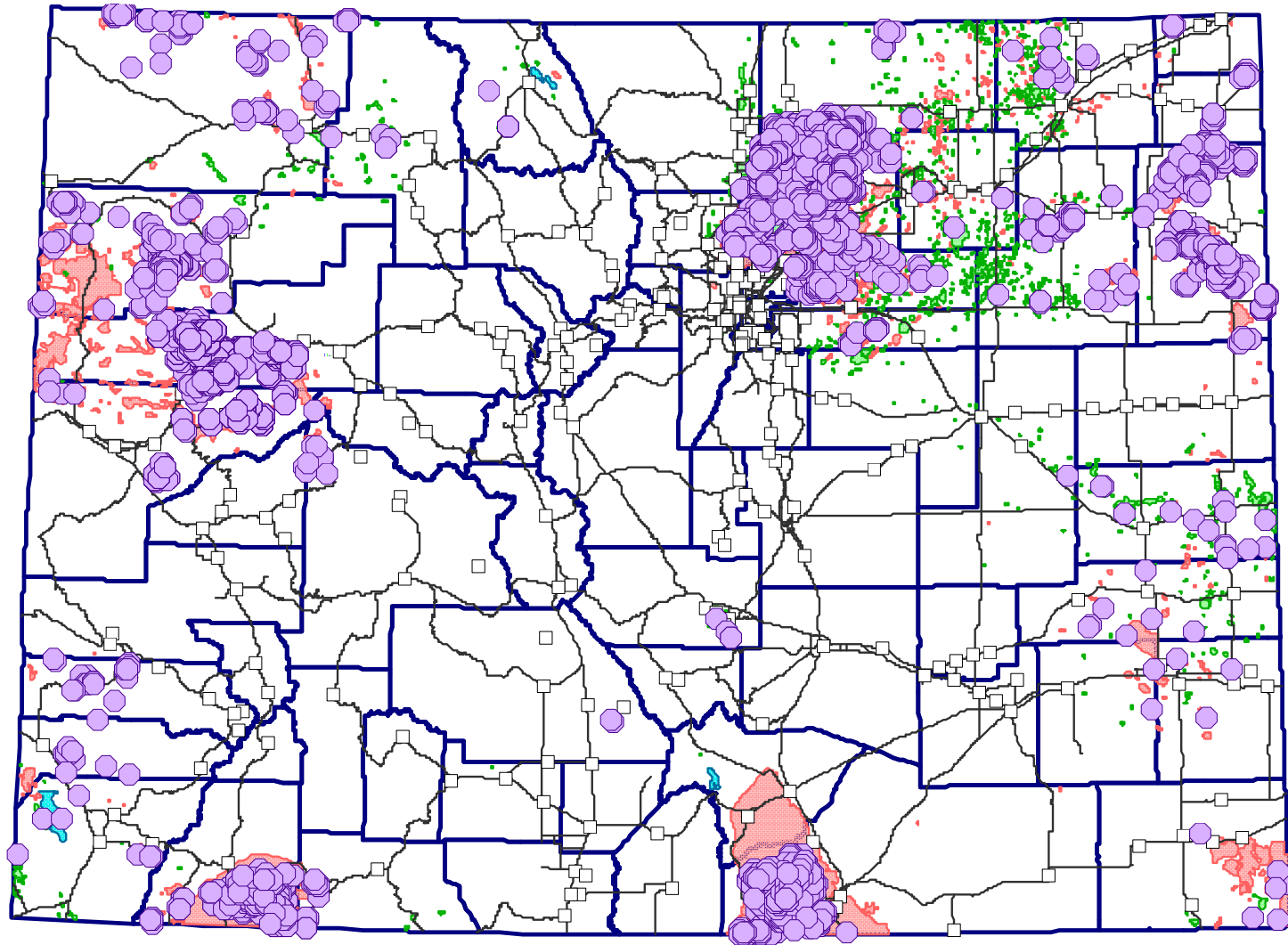


Prepared by: Jim Hume, © 2000, November 2, 1998  
 Reference: Courtesy of the COG

# HISTORIC ANNUAL COLORADO DRILLING PERMITS 09-04-07



# RECENT COLORADO OIL AND GAS WELL PERMITS 09-04-07





## Oil & Gas Industry Growth & Impact

- Sources in inventory
  - 10,500 sources in inventory for inspection
  - 205 major; 734 SM (194 SM80); 9,561 minor
- Oil & Gas sources in inventory
  - 5,724 sources in inventory for inspection
  - 97 major; 134 SM (63 SM80); 5,493 minor
  - 4,326 minor source condensate tanks



## Oil & Gas Industry Growth & Impact

- More activity means more emissions
  - VOCs, NO<sub>x</sub>, CO and fugitive dust
- More activity means more permits, inspections and planning efforts
- Projections for 15-fold growth over next 20 years
- In response, APCD formed the Oil & Gas Team in June 2006





# APCD's Oil & Gas Team

- 11 member team, including a permanent supervisor
- 2 additional FTE planned for FY08/09
- Goal to holistically address issues related to growth in oil and gas industry, emissions, permitting and compliance
- Core functions include: assessment, planning, permitting, inspection/compliance and process improvement



# APCD's Oil & Gas Team

## ■ Innovations

- Standardized engine permits, templates and forms
- General permit in development for engines
- Self-certification pilot for condensate tanks
  - Pilot project in one county
  - Certification request currently out to sources



# APCD's Oil & Gas Team

- Innovations (continued)
  - Kaizen Event for minor source permitting
    - Held week of 6/2/08
    - Included APCD representatives from all aspects of permitting process, including enforcement
    - Industry stakeholders also participated
    - Roll-out of new process currently underway



# Oil & Gas Regulatory Initiatives

- VOC, NO<sub>x</sub> and CO regulations promulgated
  - Condensate tanks in EAC area required to reduce emissions on company-wide basis
    - Poor compliance rates in 2005, 2006 & 2007
  - Statewide emissions control requirements for glycol dehydrators, new & relocated engines, and condensate storage tanks
    - 7/1/07 compliance date for engines
    - 5/1/08 compliance date for glycol dehydrators and tanks



# Oil & Gas Regulatory Initiatives

- House Bill 1341

- Evaluation of permits to drill for health and environmental impacts
- Rule development is currently ongoing – CDPHE, including APCD, is participating with the Colorado Oil and Gas Conservation Commission (COGCC)
- Rule implementation mid-2008 and beyond



# New Sources Impacting Inspection and Enforcement

## ■ Condensate tanks

- New report thresholds pulling in more tanks
- Company wide and individual site compliance assessments are resource intensive

## ■ Pneumatic valves

- Industry recently notified APCD of 55,000 valves in use in the NA area
  - 8-12,000 possibly above reporting thresholds (1 tpy VOC)
- APCD working on replace or report policy for this summer



# New Sources Impacting Inspection and Enforcement

## ■ Evaporation ponds

- Primarily for produced water from well sites
- VOC, BTEX, and methanol emissions
  - Some major for VOCs and HAPs
- APCD, including enforcement staff, gathering emissions data and developing RACT requirements

## ■ Land farming

- Sludge from evaporation ponds, etc., & land applying material
- Recently received performance test data indicating VOC emissions over 800 tpy for one facility
- Division currently reviewing data accuracy



## New Sources Impacting Inspection and Enforcement

- Railcar Transloading
- Recently discovered activity throughout the state, including NA Area and in populated areas
- Loading of sweet Colorado crude, also known as condensate, from tanker trucks directly into railcars without permits or controls





## New Sources Impacting Inspection and Enforcement

- Characteristics of CO crude, price of crude and local market demands are driving the activity
- Most companies moving the crude to Cushing, OK
- Environmental, health and safety concerns
- Issued cease & desist orders to a large producer, several trucking companies, and the railcar loading company



## New Sources Impacting Inspection and Enforcement

- Colorado sweet crude has higher vapor pressure than gasoline, so very high emissions associated with activity
- Activities witnessed had little or no controls
- Regulations in place requiring controls for railcar loading in old non-attainment area and RACT for new, larger non-attainment area
- Considering taking requirements statewide to address environmental and safety concerns









## Western Inspection & Enforcement Issues

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