



# Uintah Basin Ozone Stakeholder Meeting

August 12, 2013

DEQ Board Room  
195 N 1950 W, Salt Lake City

# Summary of July 30, 2013 Meeting

- Topics
  - Overview of wintertime ozone in the Uintah Basin
  - Ozone Advance
  - Initial Emission Reduction Strategies
  - Best Management Practices – DEQ web-based resource and poster
  - Episodic Controls
- Materials posted at [www.deq.utah.gov/locations/uintahbasin/meetings.htm](http://www.deq.utah.gov/locations/uintahbasin/meetings.htm)
- Comments requested by August 30th

# Rulemaking – General Approval Order

- R307-401 requires new or modified sources to submit a notice of intent and receive an approval order prior to commencing operation
- Proposed rule R307-401-19 would allow the development of a general approval order that could be applied to similar sources
  - Air Quality Board proposed for public comment on July 3<sup>rd</sup>
  - Public comment period August 1<sup>st</sup> - 30<sup>th</sup>
  - Final adoption possible at October or November Board meeting
- Rule is not specific for oil and gas industry
- GAO for oil well sites is under development
  - If rule is adopted the GAO could be issued early next year

# General Permit



# Permitting Purpose



Public Health & Welfare



Economic Growth

National Parks



# Types of Permits

- New Source Review Permits
  - Pre-Construction Permits
- Title V Permits
  - Operating Permits
    - State & Federal Rules



# Source Types



# Permit-Exempt Sources

- Emissions are Less Than 5 Tons per Year
- Regulated by:
  - Rules



# Minor Sources

- Emissions are Less Than 100 Tons per Year
- Regulated by:
  - Rules
  - New Source Review Permits



# Major Sources

- Emissions are Greater Than 100 tons per year
- Regulated by:
  - Rules
  - New Source Review Permits
  - Title V Permits



# Areas



Attainment Area

vs.

Nonattainment Area

# Attainment Permits

- Best Available Control Technology
- Demonstration of Attainment/Maintenance of the National Ambient Air Quality Standards



# Nonattainment Permits

- Federal Clean Air Act Requirements for Major Sources
  - Lowest Achievable Emission Rate
  - Offsets
  - State-wide Compliance
  - Analysis of Alternatives



# Ozone Nonattainment Areas

- Major Source Thresholds:
  - Marginal or Moderate > 100 tons per year
  - Serious > 50 tons per year
  - Severe > 25 tons per year
  - Extreme > 10 tons per year



# Lowest Achievable Emission Rate

- Most Stringent Limit that is Technically Feasible
- Costs NOT Considered



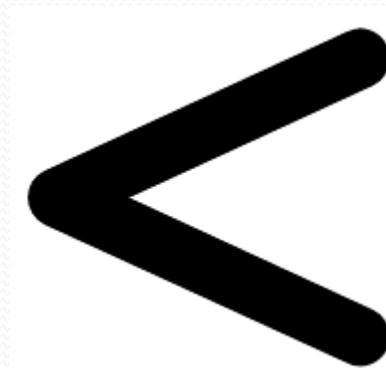
# Offsets

An Increase  
in Emissions

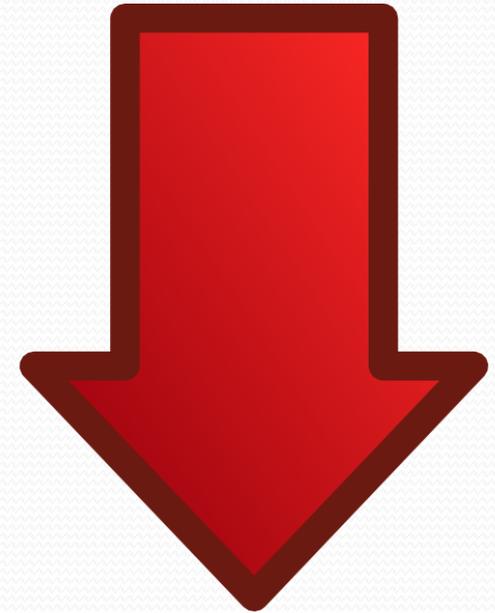


Source A

Must be Offset by



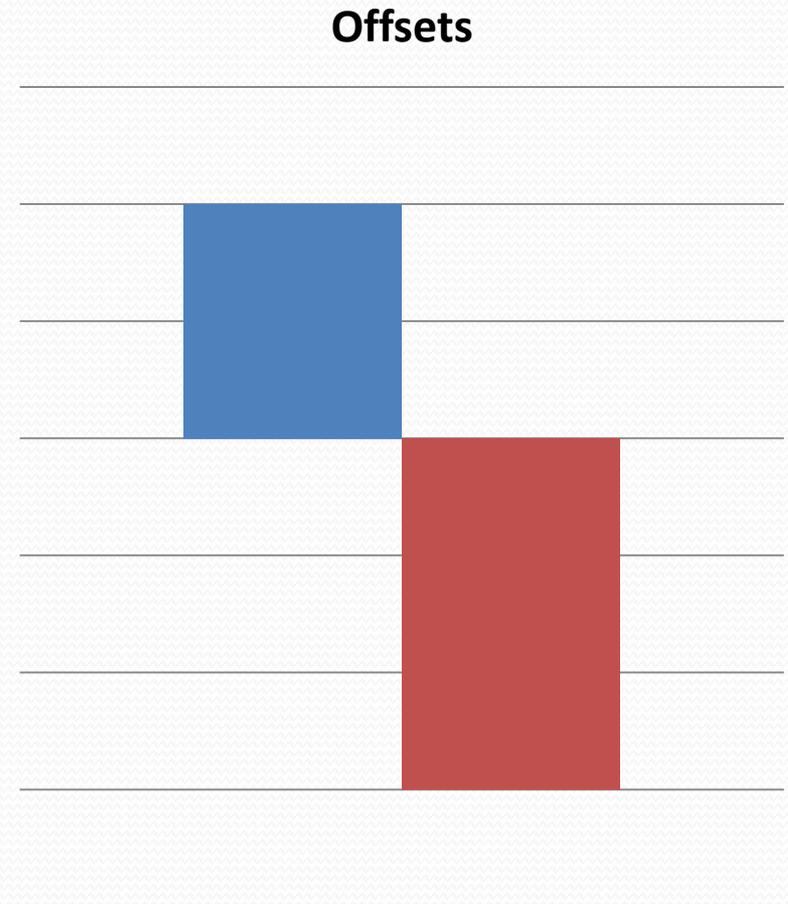
A Decrease  
in Emissions



Source B

# Offset Ratios

- Marginal = 1.10 to 1.0
- Moderate = 1.15 to 1.0
- Serious = 1.20 to 1.0
- Severe = 1.30 to 1.0
- Extreme = 1.50 to 1.0



# State-Wide Compliance

- Demonstration for All Major Sources
- All Permit Limitations
- All Applicable Standards



# Alternatives

- Sites
- Sizes
- Production Processes
- Environmental Controls



Benefits outweigh Costs

# Title V Permits

- Annual Inspections & Self-Reporting
- Civil & Criminal Penalties for Noncompliance
- Annual Inventories & Fees
- Increased EPA Involvement



# Ozone Nonattainment Areas

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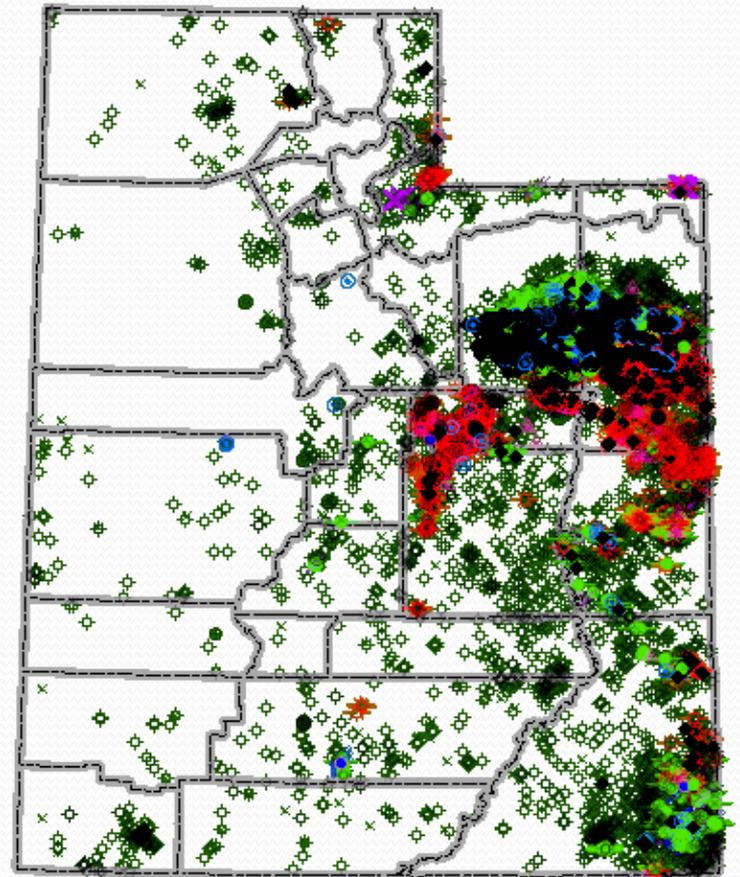


# General Permit



# Oil & Gas Source Evaluation

- ~ 11,000 Producing Wells in the State
- Preliminary Estimate:
  - ~25% – 35% in DAQ Jurisdiction
  - Remainder in EPA Jurisdiction



# Oil & Gas Wells

- Oil Wells

- Permit Exempt < 5 tons per year Emissions
- Preliminary Estimate:
  - Production > ~4,500 barrels/year
  - ~1,000 Wells



- Gas Wells

- Evaluating Equipment
- Evaluating Emissions



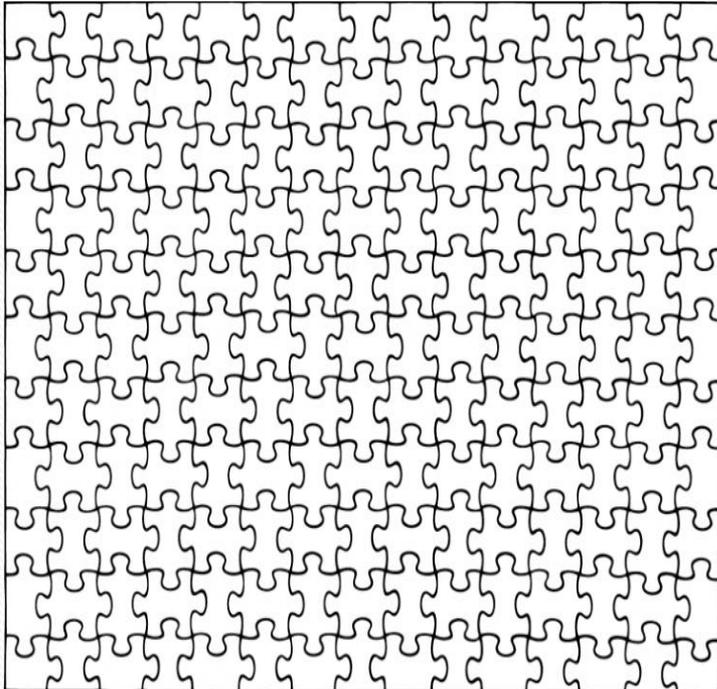
# General Permit Purpose

- Alleviate Administrative Burdens

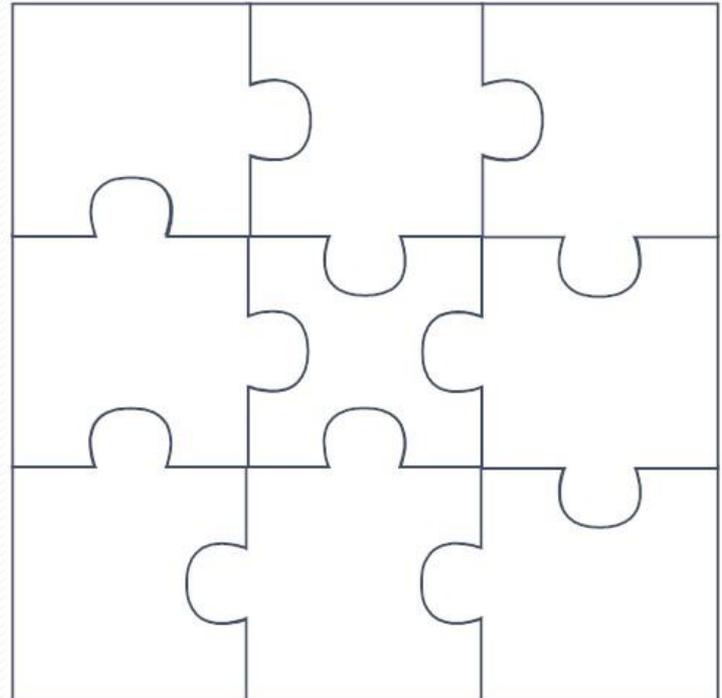


# Permitting Process

Standard

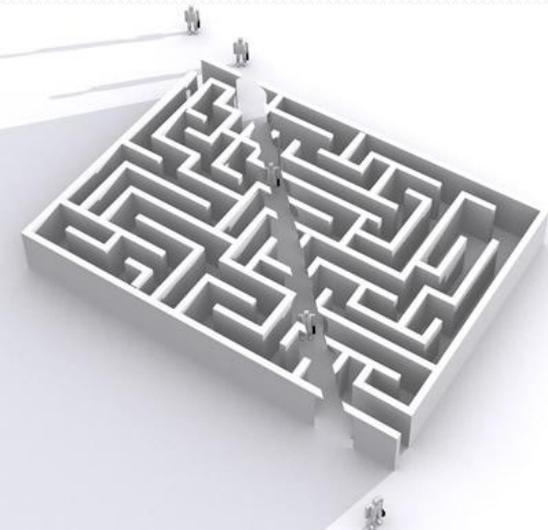


General



# Pros.

- Lower Permitting Costs
- Reduced Permitting Time
- Streamlined Process
- Consistent Requirements
- Voluntary



# Cons.

- Additional Monitoring Requirements
- Additional Recordkeeping Requirements
- Minimal Source Input
- No Flexibility



# Best Available Control Technology

Energy

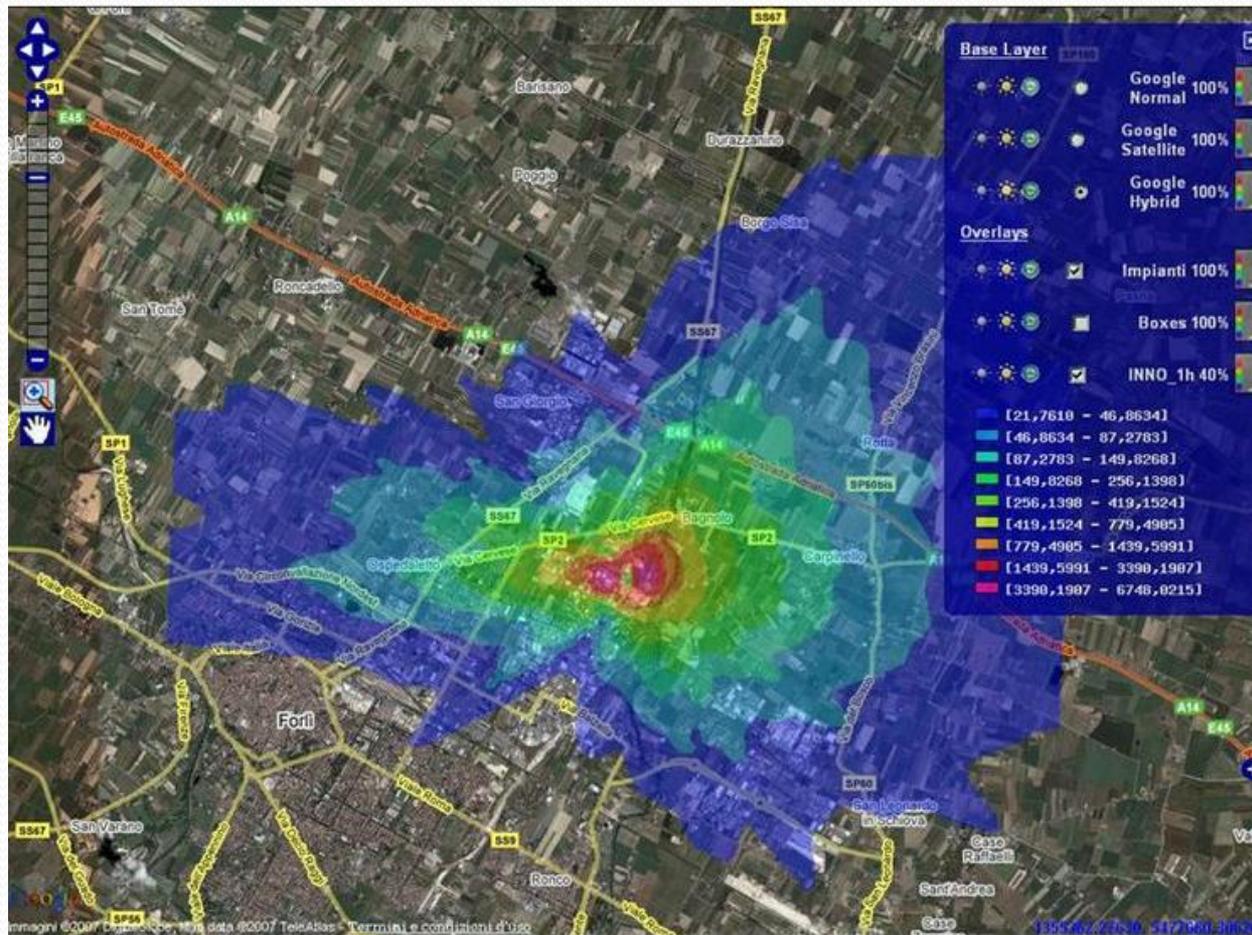


Economic



Environmental

# Air Quality Demonstration



# General Permit: Crude Oil Tank Battery



# Division of Oil, Gas, & Mining

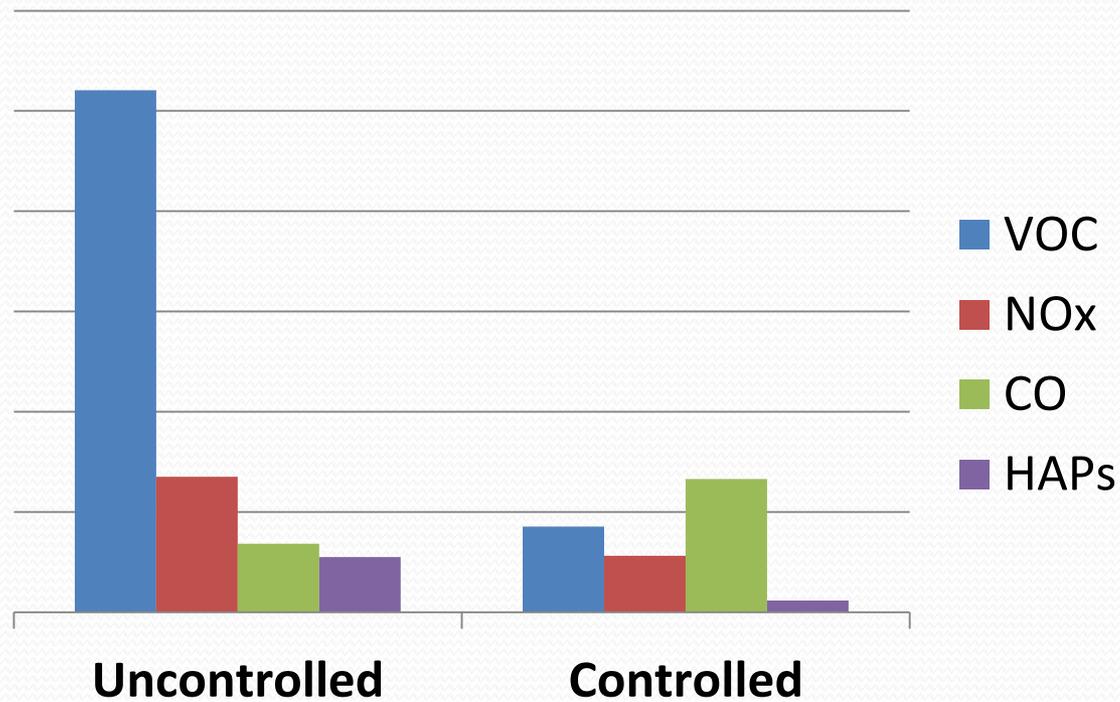
- Coordinate Information
- Eliminate Redundancies
- Simplify Permit Applications



# Feedback & Input



# Estimate of Emissions

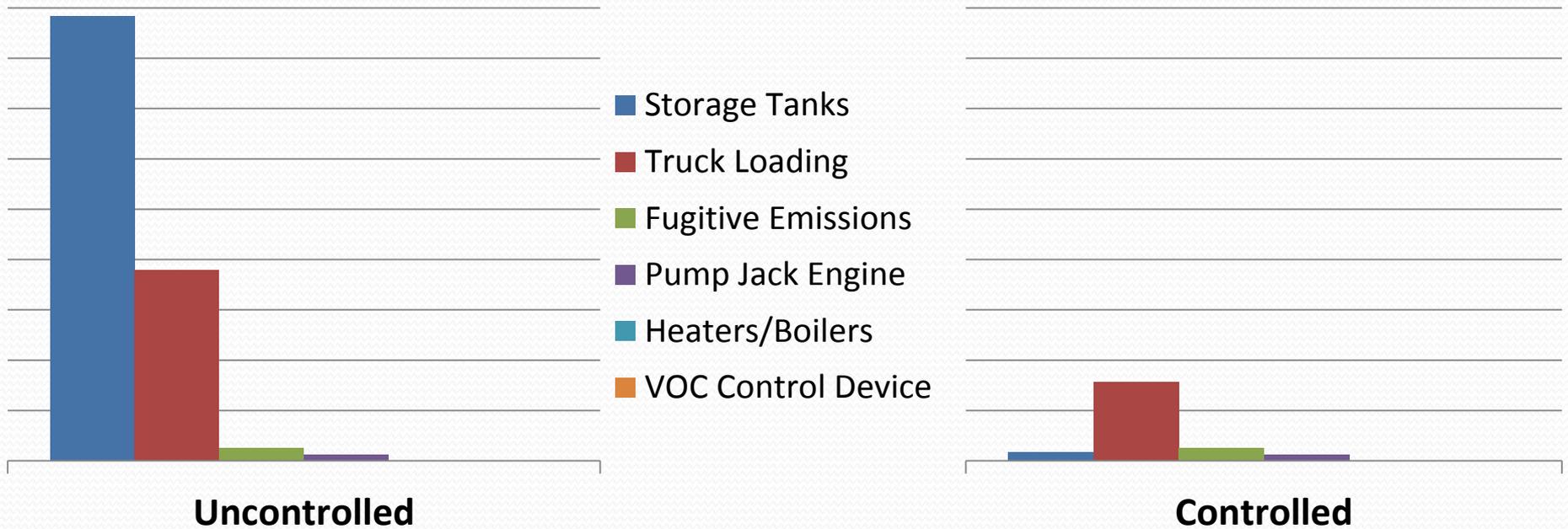


# Applicability

- 80% – 90% of Oil Wells
- Less than ~20,000 barrels per year
- Produced Gas is Captured



# VOC Emission Sources



> 83% VOC Reduction

# Tank Requirements

- Install a VOC Control Device
- Inspect the Tanks
- Maximum Tank Capacity



# VOC Control Device Requirements

- Minimum Control Efficiency
- Proper Maintenance
- No Visible Emissions
- Minimum Stack Height



# Truck Loading Requirements

- Submerged/Bottom-Fill Loading



# Leaks (Fugitive Emissions)

- Leak Detection And Repair
  - Infrared Camera Inspections
  - Evaluation of Leaks



# Engine Requirements

- Natural Gas-Fired Only
- Current Engine Emission Standards
- Maximum Horsepower Rating
- Minimum Stack Height



# Boiler/Heater Requirements

- Natural Gas-Fired Only
- Maximum Burner Rating
- Minimum Stack Height



# Other Requirements

- Visible Emission Limits
- Monitoring Requirements
- Recordkeeping Requirements



# Provide Input on Adequacy of:

- Equipment Specifications
- Production Limits
- Level of Control
- Recordkeeping

Also:

- NAAQS Demonstration



# Retrofits for Existing Sources

- How much will it cost to replace/retrofit old equipment?
- How long will it take to replace/retrofit old equipment?



# Still Under Consideration:

- General Permit for Gas Wells?
- Rule versus Permit?
- Change Exemption Threshold?



# Questions

- Please submit input & feedback by Friday, August 30th

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