

# Air Regulatory Issues

## Unconventional Gas and Light Tight Oil Developments – *Infrastructure Consequences*

Jason Zapalac  
2014 Gas/Electric Partnership  
February 5<sup>th</sup>, 2014



# Disclaimer

**This information does not represent opinions or positions taken by Anadarko. The information is intended to be an overview of the current air quality regulatory environment for educational use only.**



# Significant Air Quality Rules 2013-2014

- **Ozone NAAQS**
  - *Lower? Not immediate new rule, but impacts moving forward*
- **Tribal NSR**
- **Oil and Gas Rule (Subpart OOOO)**
  - *Reconsideration*
  - *Upcoming impacts*
- **DDDDD NESHAP**
- **State Actions**
  - *Colorado Reg 7*
  - *TCEQ MSS*
  - *NM GPC 6*
- **Industry Emission Studies**



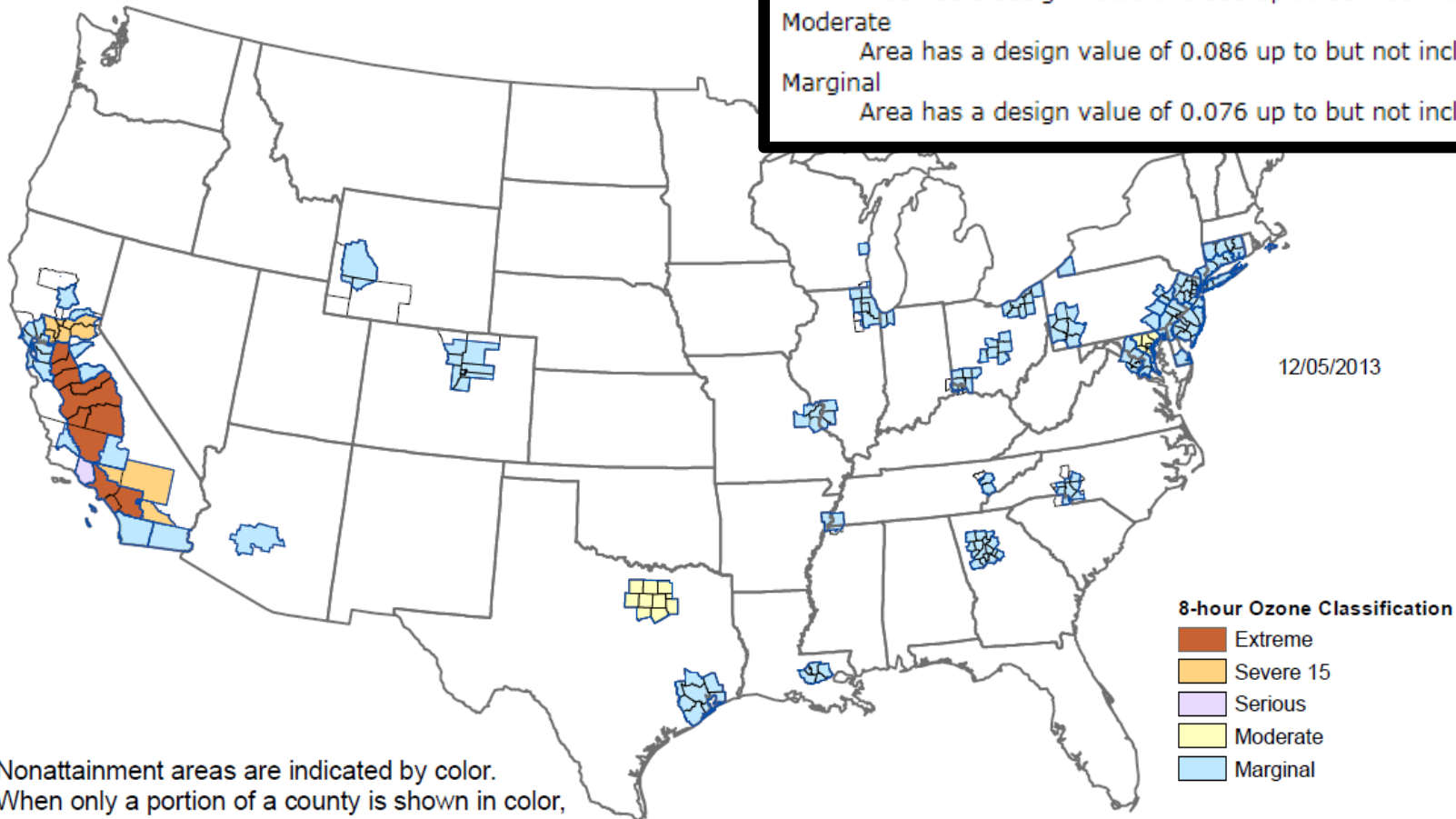
# Ozone Standard

▪ **Current Standard: 0.075 ppm**

## 8-Hour Ozone Nonattainment

### 2008 8-Hour Ozone Classifications

- Extreme**  
Area has a design value of 0.175 ppm and above.
- Severe 17**  
Area has a design value of 0.119 up to but not including 0.175 ppm
- Severe 15**  
Area has a design value of 0.113 up to but not including 0.119 ppm
- Serious**  
Area has a design value of 0.100 up to but not including 0.113 ppm.
- Moderate**  
Area has a design value of 0.086 up to but not including 0.100 ppm.
- Marginal**  
Area has a design value of 0.076 up to but not including 0.086 ppm.



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

# Ozone Standard Currently Under Review

- **Expected New Standard: 0.050-0.070 ppm**

- **Three Documents**

- *Two Risk Assessments*
- *One Policy Implication Assessment*
- *Comments due March 2014*

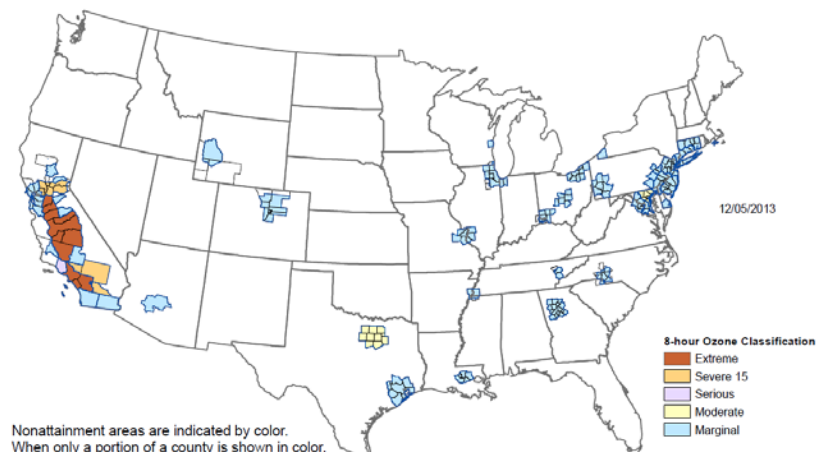
- **Timeline**

- *Draft standard by the end 2014*
- *Final in 2015*

- **Impacts**

- *Significantly more areas of non-attainment*
- *Costs*
- *Permitting*
- *NAAQS compliance*
- *May affect more Rural Areas*

8-Hour Ozone Nonattainment Areas (2008 Standard)



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.



## Tribal NSR

- **EPA Published Rulemaking**
  - *Included proposal for oil and gas permitting program*
  - *Extend permitting deadline 2015/2016*
- **Bought time to develop a permitting program**

**Result significantly impacts operations on Tribal Lands**



## Oil and Gas Rule (Subpart 0000)

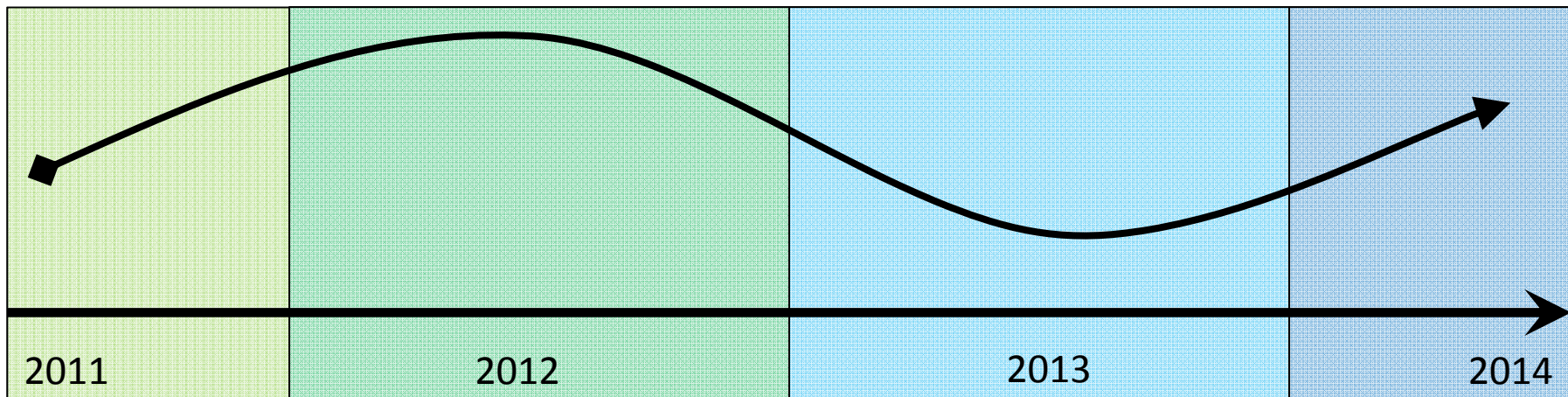
- **Hydraulically Fractured Gas Wells**
- **Centrifugal Compressors**
- **Reciprocating Compressors**
- **Continuous Bleed Pneumatic Controllers**
- **Storage Vessels**

0000: Gas Wells, Centrifugal, Reciprocating, Pneumatic Controllers, Tanks



# Oil and Gas Rule Timeline

- 2011 Initial Proposal
- 2012 Final Rule
- 2013 Reconsideration
- 2014 Reconsideration





# Hydraulically Fractured Gas Wells

Range	Date	Well Class	Compliance (Gas)	Compliance (Oil)	Compliance (Water)
Range 1	10/15/2012-12/31/2014	1,2,3	Venting is Deviation Flaring is Compliance Sales is Compliance	Liquids can go to frac tanks	
Range 2	On and after 1/1/2015	1	Venting is Deviation Flaring is Compliance Sales is Compliance	Liquids can go to frac tanks	
		2		Liquids must go to storage vessel	
		3	Venting is Deviation Flaring is Deviation Sales is Compliance		

## ■ Critical after 1/1/2015 – For Non-Wildcat Wells

- *Venting and Flaring are deviations*
- *Recovered liquids must be routed to a storage vessel*
- *Continue to maintain flowback logs*



# Hydraulically Fractured Gas Wells - Issues

- **2015 - Venting and Flaring are deviations (non-wildcat)**
  - *Sales line ready at flowback*
  - Costs, Scheduling, Manpower**
  - Pipeline downtime**
  
- **Recovered liquids must be routed to a storage vessel**
  - *Not considered a Storage Vessel: Vessels that are skid mounted or permanently attached to something mobile, and are intended to be onsite for less than 180 days.*
  - *Storage Vessel: contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water*
  - Facility readiness**
  - Capacity to handle water during the flowback period**



## Reciprocating Compressors – Not Located at a Well Site

- **Keep track of rod packing replacements – Recordkeeping**
  - *Counter Readings*
  - *Date*
  
- **Keep notice if compressors are modified or reconstructed**
  - *May bring the unit into 0000*



# Continuous Bleed Pneumatic Controllers

## Natural Gas Processing Plants

- Natural Gas Bleed, not allowed (use instrument air)

## Production and Gathering Facilities

- >6scfh (high bleed) must be tagged and reported – Recordkeeping
  - *Required to have a functional need [60.5390(a)]*
- <6scfh (low bleed) maintain manufactures documentation
- Only affects “new” – Constructed after 8/23/2011
  
- Identify your pneumatics!



# Affected Storage Vessels - Requirements

## ▪ 2012 Final Rule

- *95% Control*
- *Performance Testing*
- *Flow Monitoring*
- *Cover and CVS Requirements*

## ▪ 2013 Reconsideration

- *95% Control*
- *Periodic Inspections*
- *Cover and CVS Requirements*

## ▪ 2014 Reconsideration

- *Requirements?*

2013  
Requirements



2012  
Requirements

**What will be the Final Requirements?**



## Other OOOO Issues?

- Lot of issues still remain with the rule...

**Uncertainty of the Upcoming Reconsideration**

**Rule Issues (Certain Requirements)**



## Subpart DDDDD – Boiler Process Heater MACT

- **Large Boilers and Process Heaters at Major Sources**
  - *\*Many subcategories*
- **If use natural gas as fuel**
  - *Initial Notification*
  - *Tune-up Requirement* (periodic requirement)
  - *Energy Assessment Requirement* (one-time requirement)
  - *Requirements are initial and periodically*
    - One to three to five years
- **Other fuels**
  - *More extensive requirements*



# State Actions

- **Colorado Reg 7 (Proposed) – Non-Attainment**
  - *Methane Emissions disclosed in Permit*
  - *LDAR*
  - *Tank Controls*
  
- **Texas MSS**
  - *Authorization for activities*
  - *Recordkeeping*
  
- **New Mexico GP6 Issuance**
  - *Provides enforceable conditions for storage vessels (0000)*





# Emissions Studies

- **Public Perception**
- **Number of studies**
  - *Academia*
  - *NOAA*
  - *Industry Collaborations (EDF UT Production)*
- **Results have high variability**



# Discussion

# Questions?

