Environmental Issues Facing The Oil and Gas Industry

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Agenda

• Spill Prevention, Control, and Countermeasures (SPCC)
• Ozone Non-Attainment
• GHG Reporting
• Other Issues (Aggregation, Tailoring rule)
## SPCC Compliance Dates for All Facilities

<table>
<thead>
<tr>
<th>A facility starting operation…</th>
<th>Must…</th>
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<tbody>
<tr>
<td>On or before August 16, 2002</td>
<td>• Maintain its existing SPCC Plan</td>
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<tr>
<td></td>
<td>• Amend and implement the SPCC Plan no later than <strong>Nov. 10, 2010</strong></td>
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<tr>
<td>After August 16, 2002 through <strong>Nov. 10, 2010</strong></td>
<td>• Prepare and implement the SPCC Plan no later than <strong>Nov. 10, 2010</strong></td>
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<tr>
<td>After <strong>Nov. 10, 2010</strong></td>
<td>• Prepare and implement a SPCC Plan <strong>before beginning operations</strong> *</td>
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</tbody>
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* Owners or operators of new oil production facilities must prepare and implement an SPCC Plan six months after the start of operations.

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SPCC Plan Preparation and Implementation

Timeframe for Oil Production Facilities

• A new oil production facility has six months after the start of operations to prepare and implement an SPCC Plan.
  – A new production facility is one that becomes operational after November 10, 2010.
  – “Start of operations” is indicated by the start of well fluid pumping, transfer via flowlines, separation, treatment or storage of crude oil, or other oil storage in capacities greater than the SPCC applicability threshold.

• The timeframe was chosen because oil production facilities are likely to stabilize within six months after the start of operations.
  – Applicable only to oil production facilities, because of their uniquely variable and uncertain initial flowrates

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Revision to General Secondary Containment Requirement

• Clarifies that the general secondary containment requirement is intended to address the *most likely oil discharge* from any part of a facility
• Allows active and passive secondary containment

New text: “… In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design.”

• Modifies §112.7(c) to expand the list of example prevention systems for onshore facilities
  – Additional examples: drip pans, sumps, and collection systems
Non-Transportation-Related Tank Trucks

• In 2006, EPA exempted mobile refuelers from the sized secondary containment requirements applicable to bulk storage containers.

• This exemption is now extended to non-transportation-related tank trucks at a facility subject to the SPCC rule.

• Does not include mobile/portable containers that generally operate in fixed locations at a facility

• The general secondary containment requirements still apply
Ozone Non-Attainment

• Federal Ozone Standards
  – 1971 EPA Established 1-hour standard of 0.08 ppm
  – 1979 EPA revised 1-hour standard to 0.12 ppm; 371 counties designated non-attainment in 1991
  – 1997 EPA revised ozone standard to 8-hour set at 0.08 ppm (averaging makes standard 0.084 ppm)
  – 2008 EPA revised 8-hr standard to 0.075 ppm (Advisory council recommended 0.60-0.70 range)
  – 2009 EPA agrees to reconsider 2008 standard and provides notice that standard will be in 0.60-0.70 ppm range)
  – 2009 EPA also announces that there will be a secondary standard to protect public welfare
Ozone Non-Attainment

Today's AQI Forecast
Tuesday, June 22, 2010

Click on a state for more information

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Ozone Non-Attainment
2006-2008 Average 8hr values

- New Mexico Bernalillo 0.071
- New Mexico Dona Ana 0.077
- New Mexico Eddy 0.07
- New Mexico Grant 0.064
- New Mexico Lea 0.069
- New Mexico Luna 0.058
- New Mexico San Juan 0.076
- New Mexico Sandoval 0.07
Latest Comparison of 8-hour Ozone Data to the NAAQS

8-hour Ozone Trends
Four Corners Area
3-year running design values

- Substation
- Bloomfield
- Ignacio
- Bondad
- Mesa Verde
- Grand Canyon
- Canyonlands
- Petrified Forest
- Navajo Lake
- NAAQS

Years

2008 data preliminary; Ignacio/Bondad data only through 6/08

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2018 Base Case

July 18, 2005 22:00:00
Min = 0 at (1,1), Max = 84 at (73,51)

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2018 Base Case

Figure 4-2. OSAT source apportionment results for Navajo Lake monitoring location in July.

Figure 4-3. OSAT source apportionment results at Farmington monitoring location in July.

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Future Action

• EPA will finalize new 8 hour ozone standard in late August 2010
• State will make determination of attainment for all NM counties by January 2011 (2006-2008 data or latest data)
• If non-attainment exists, State must propose revised SIP by December 2013 on how to reduce pollution to meet standard
• Given that levels are only marginally reaching or exceeding the standard, compliance likely to be required within 3 years of SIP amendment
NMOGA/IPANM Action

• Encourage state to utilize most current ozone monitoring data in determining attainment status of state

• Work with NMED to propose control strategies that apply to all sources and not just oil and gas and power plants

• Work with NMED to propose controls on oil and gas that are reasonable
  – Engines are already subject to NSPS so no proposed new controls needed
  – VOC controls should be flexible to allow companies to chose most economic (e.g., pneumatics, green completions, etc.)
2010 GHG Reporting

- Traditional reporting entities
  - Title V Sources
- Oil and Gas Industry Additional Sources
  - Any permitted source
  - Any Notice of Intent (NOI) source
2010 GHG Reporting

• Report is required by July 2011 for 2010 calendar year
• All GHG emissions for permit can be aggregated into one report
• All GHG emissions for NOI can be aggregated into one report
Example GHG Report for Permitted Facility

• You have a permitted facility that has 2 engines, two heaters, and a tank battery
• Determine GHG emissions from engines, heaters, and tank battery by having fuel analysis and either metered fuel or engineering estimates of fuel usage
• Determine GHG emissions from fugitive and venting sources not listed on permit by utilizing gas analysis and applying either AP-42 or engineering calculations for venting
Example GHG Report for NOI Facility

• You have two NOIs, one covering 100 units of engine type A and another covering 30 units of engine type B
• Determine GHG emissions for each NOI covering the engine types, by utilizing fuel analysis and either metered fuel or engineering estimates of fuel usage
• GHG emissions from heaters, fugitives and venting sources not listed on NOI are not required
Other Issues - Aggregation

- Aggregation has to do with the process of including all emission units that are associated with a common activity under one permit.
- Traditionally, this has meant including all units that are:
  - Contiguous and adjacent to each other, and
  - Under common ownership or control, and
  - Have the same industrial grouping (SIC and NAIC codes)
Example of Aggregation

Satellite Compressor - CDP

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Other Issues - Aggregation

- The issue arose from an Environmental NGO challenging Colorado’s proposed renewal of a Title V permit that did not aggregate the emissions from the wells to the compressor station.
- EPA notified Colorado to reconsider the permit renewal based upon an inadequate assessment on whether aggregation is appropriate for that facility.
- Colorado revised their permit analysis to address EPA concerns but did not require aggregation of the emissions from the individual well sites to the compressor station emissions.
Other Issues - Aggregation

- The New Mexico Environmental Department was advised by US EPA to address how it was to address aggregation for oil and gas facilities
- NMED consulted with NMOGA and IPANM and provided preliminary drafts of its guidance
- NMOGA and IPANM provided comments and suggested revisions to these drafts
- NMED now has guidance on this issue on its web page entitled “Single Source Determination Guidance”
Other Issues – Tailoring Rules

• EPA is in the final stages of revising its PSD and Title V rules on how to address GHG emissions
• The initial proposed threshold of 25,000 metric tons per year would have dramatically increased the number of facilities applicable to Title V and PSD
Other Issues – Final Tailoring rule

• **Phase I**
  – January 2, 2011 to June 30, 2011
  – No new permitting actions due solely to GHG emissions during this time period; only sources undertaking permitting actions anyway for other pollutants will need to address GHG
  – PSD permitting applicability:
    • Anyway sources will be subject to the PSD requirements only if they increase GHG emissions by 75,000 tpy CO2e or more
    • Title V permitting applicability:
      – Only those sources currently with title V permits will address GHGs, and only when applying for, renewing or revising their permits

• No sources will be subject to CAA permitting requirements based solely on GHG emissions

• Covers sources responsible for 65% of total national stationary source GHG emissions
Other Issues – Final Tailoring rule

• Phase 2
  – July 1, 2011 to June 30, 2013
  – Sources subject to GHG permitting requirements under step 1 will continue to be subject to GHG permitting requirements
  – In addition, sources that emit or have the potential to emit GHGs at or above 100,000 tpy CO2e will also be subject to GHG permitting requirements as follows.
  – PSD permitting applicability – triggered with construction that increases emissions
    • A newly constructed source (which is not major for another pollutant) will not be subject to PSD unless it emits 100,000 tpy or more on a CO2e basis
    • A modification project at a major stationary source will not be subject to PSD unless it results in a net GHG emissions increase of 75,000 tpy or more on a CO2e basis

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Other Issues – Final Tailoring rule

• Phase 2

  – Title V permitting applicability
    • A GHG emission source (which is not already subject to title V) will not be subject to title V unless it emits 100,000 tpy or more on a CO2e basis.
    • These newly subject sources must apply within 1 year after becoming subject to the program, unless the permitting authority sets an earlier deadline.
    • This means that newly subject sources must apply for a title V permit on or before July 1, 2012 (which is one year from July 1, 2011).

  – Covers sources responsible for nearly 70% of total national stationary source GHG emissions
Other Issues – Final Tailoring rule

• Phase 3
  – The rule establishes an enforceable commitment to complete another rulemaking no later than July 1, 2012.
  – We will propose or solicit comment on a possible step 3 of the phase-in plan
    • EPA will consider, during the implementation of step 2, whether it will be possible to administer GHG permitting programs for additional sources.
    • EPA will establish that step 3 would take effect on July 1, 2013 so that permitting authorities and sources can prepare for any additional GHG permitting action.
    • Step 3, if different from step 2, will not require permitting of sources with GHG emissions below 50,000 tpy CO2e
  – We also commit to explore a wide range of streamlining options on which we plan to take comment in the step 3 proposal
  – In addition, we plan to solicit comment on a permanent exclusion of certain sources from PSD, title V or both

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Other Issues – Final Tailoring rule

– Further Action

EPA will not require permits for smaller sources until April 30, 2016 or later

• The rule establishes an enforceable commitment for EPA to complete a study within 5 years projecting the administrative burdens that remain for small sources after EPA has had time to develop (and states have had time to adopt) streamlining measures to reduce the permitting burden for such sources

• We will use this study to serve as the basis for an additional rulemaking that would take further action to address small sources, as appropriate. We are making an enforceable commitment to complete this rulemaking by April 30, 2016

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