

EPA / States Oil & Gas Emissions Summit

EPA Offices
Research Triangle Park, NC
November 4-5, 2014

Pre-Summit Topics Survey & Summit Goals

Mark Gibbs
Oklahoma DEQ

Pre-Summit Topics Survey

EPA/States Oil and Gas Emissions Summit
Topics Survey
November 4-5, 2014
EPA RTP Offices

To help foster a productive dialogue, please complete this topics survey and return to Theresa Pella at tpella@censara.org by COB, Friday, October 24, 2014. Please identify the top five topics for your organization that you want to see discussed at the summit. The results will be summarized at the beginning of the summit (please advise if you prefer yours to be shared anonymously).



Topic	Priority (X)	Comment
Data		
1. What/how is data collected by state agencies		
2. What/how is data collected by federal agencies		
3. Impacts of duplicative reporting by industry		
4. Deriving better activity and emissions data from Industry		
5. What resources are available and how they are used – e.g.: EIA, HPDI, IHS EnerDeg, other resources (list)		
Emissions Inventories		
6. Gaps in understanding oil and gas emissions, e.g., poorly characterized sources		
7. Learn about range and variation of operational practices and associated emissions among super-major, independent, and small O&G producers across existing, re-developing, and new production basins-fields-formations		

Theme	Topic	Ranking
Data	4. Deriving better activity and emissions data from Industry	1
Emission Inventories	6. Gaps in understanding oil and gas emissions	2
Emission Inventories	8. Outdated or inaccurate activity data and/or emission factors	3
Emission Inventories	9. Upstream sources with extreme emissions rates - “fat-tails”	4
Emission Inventories	10. “Top-down” versus “Bottom-up” differences	5
Emission Inventories	7. Range and variation of operational practices and associated emissions	6
Communications	18. Improving data sharing among and between federal and state agencies	7
Regulations	12. Representativeness of the data and assumptions used in national rulemakings	8
Communications	20. Keeping up with rapidly changing industry practices	9
Data	5. Available data resources – e.g.: EIA, HPDI, IHS EnerDeq	10

Ranked First:

Topic #4 - Deriving better activity and emissions data from Industry

- Heterogeneity in Gas Composition Data
- More granular data specific to facilities and formations
- Rapidly changing industry practices
- Best way to get better data?
 - Use data already collected for regulatory programs or other reporting purposes
 - Operator surveys
 - Industry association studies

Ranked First:

Topic #4 - Deriving better activity and emissions data from Industry

■ Gaining Industry cooperation

"...all available resources are currently consumed with on-going compliance duties, preparing for September submittal of our first Greenhouse Gas Subpart W emission inventory report, and developing compliance programs for the recently finalized NSPS Subpart OOOO requirements for oil and gas emissions..."

"I'm really trying to understand why we have to provide this data when this is something we are working on for the EPA Greenhouse Gas Rule."

"Emission factors are out-of-date and unrepresentative of our company's equipment and practices."

Ranked First:

Topic #4 - Deriving better activity and emissions data from Industry

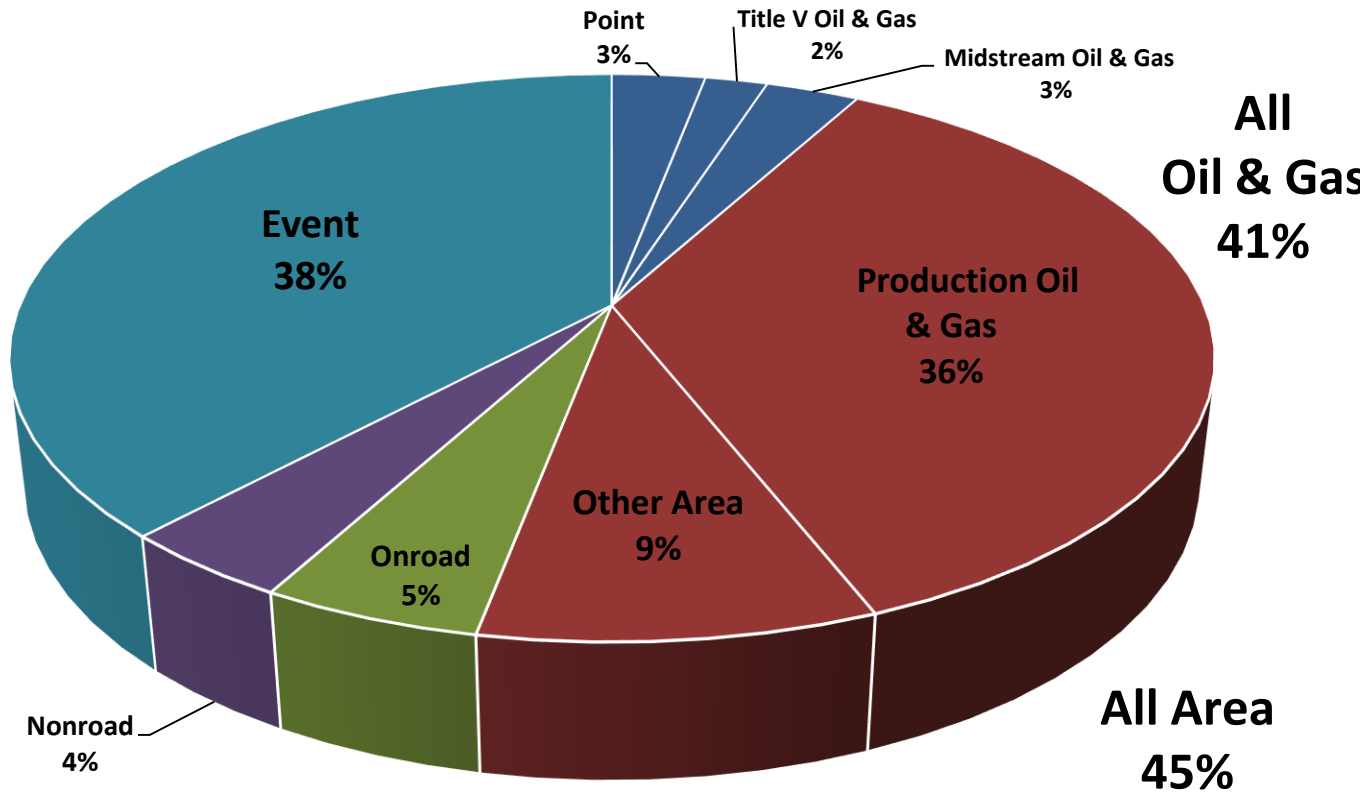
- Other ways to get better activity and emissions data?
 - State air permits
 - State Oil & Gas Commissions
 - Other federal agencies
 - New measurement and monitoring technologies

Ranked Second:

Topic #6 - Gaps in understanding oil and gas emissions

- What don't we know well?
 - Abandoned wells
 - Drilling & production site development
 - Field & formation specific data
 - Produced water tanks and ponds
 - Midstream emissions
 - Equipment distributions
 - Pneumatic devices, engines

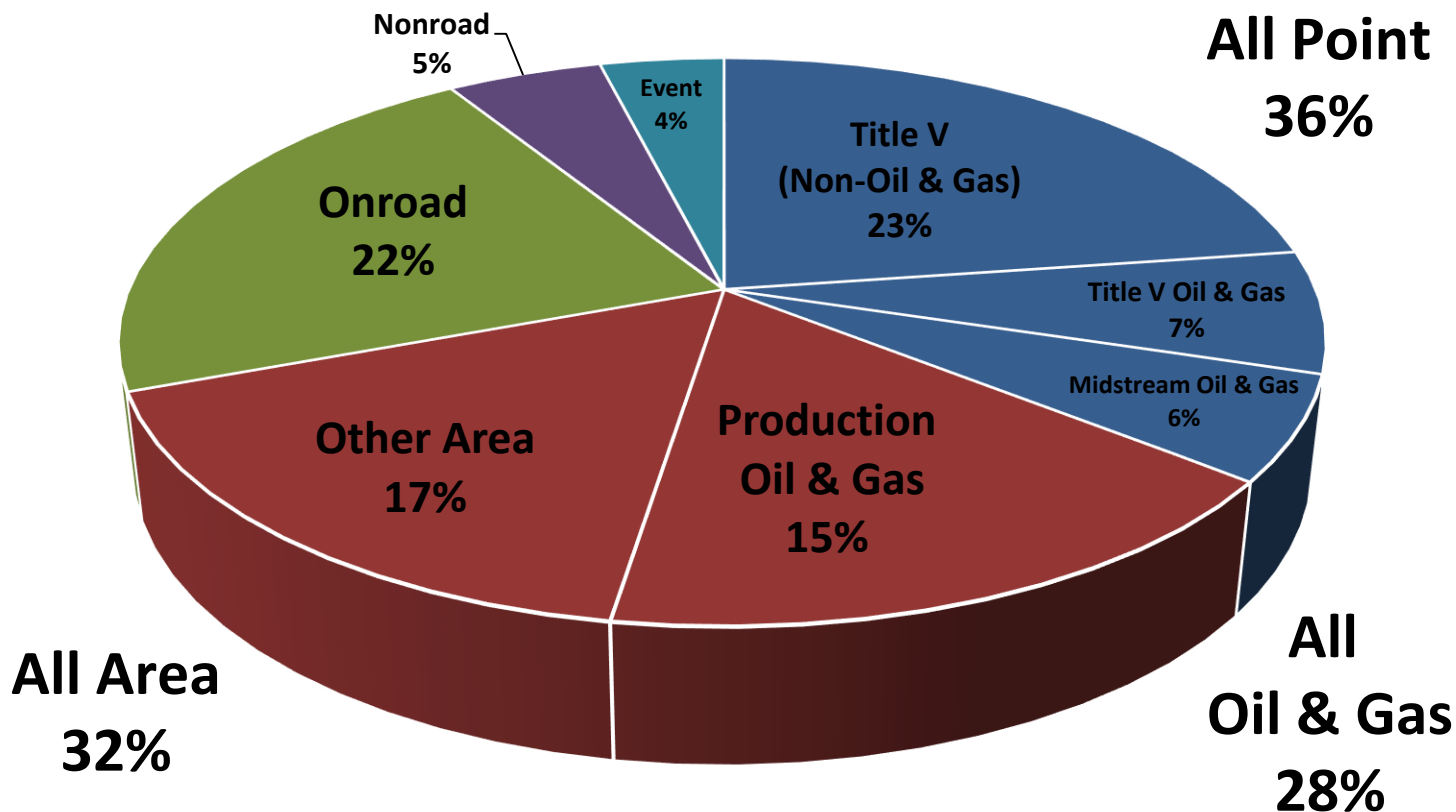
OK 2011 NEI VOC



	TONS	PROPORTION OF ALL SOURCES
Point	46,554	8%
Area	287,938	45%
Onroad	35,528	5%
Nonroad	27,815	4%
Event	243,573	38%
All Sources	641,407	

	TONS	PROPORTION OF ALL SOURCES
All Point	46,554	8%
Title V Oil & Gas	11,813	2%
Midstream Oil & Gas	18,255	3%
Area	287,938	45%
Production Oil & Gas	231,250	36%
All Sources	641,407	

OK 2011 NEI NOx



	TONS	PROPORTION OF ALL SOURCES
Point	162,220	36%
Area	145,935	32%
Onroad	100,940	22%
Nonroad	24,650	5%
Event	20,193	4%
All Sources	453,937	

	TONS	PROPORTION OF ALL SOURCES
All Point	162,220	36%
Title V Oil & Gas	30,166	7%
Midstream Oil & Gas	28,765	6%
Area	145,935	32%
Production Oil & Gas	66,435	15%
All Sources	453,937	

Ranked Third:

Topic #8 - Outdated or inaccurate activity data and/or emission factors

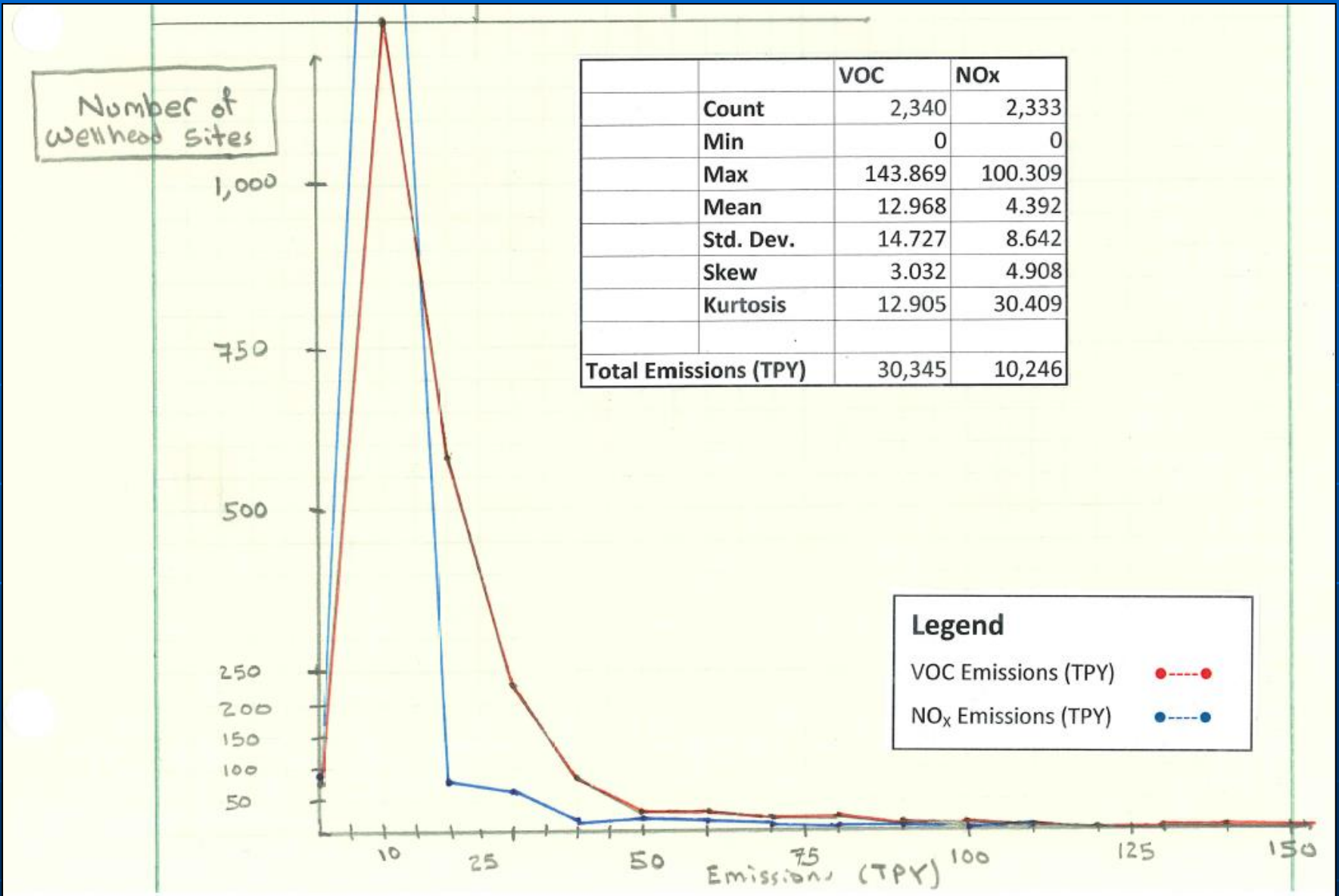
- Over reliance on old studies
 - e.g., 1996 GRI work
 - Limited scope of older studies
- Impact of OOOO?
- Current industry practices
 - Represented correctly in GasStar reports?
- How to prioritize and update the emission factors in greatest need of improvement?

Ranked Fourth:

Topic #9 – Upstream sources with extreme emission rates – “fat-tails”

- “The point of an EI is to estimate actual emissions, not emissions when everything is working properly.”
- Potential for large impact on emissions estimates
- How to effectively characterize?
 - Imagery collection and analysis
 - New technologies

2013 Oklahoma Wellhead Facility Emissions



Key Questions

- How do we characterize and manage emissions from about 1,000,000 oil & gas wells nationwide?
- What is the regulatory strategy for the upstream and midstream O&G sector that everyone shares?
- What is the time horizon for that strategy?
- Who is to be involved in the data collection and analysis?

Important Considerations

- Gas vs. oil wells – an artificial dichotomy?
- Current vs. future emissions
 - Tracking vs. planning
- Reservoir decline vs. new formations & production methods
- Command and control regulation vs. promoting best practices
- Ensuring efficient, effective reporting
- Robust, transparent emission estimates
 - Account for temporal and spatial heterogeneity

Challenges

- Barriers to sharing and disseminating information - Regulatory Silos
 - Issues with publishing information promptly
 - Adherence to certain emission factors and methods
 - Long process to change reporting requirements and protocols
 - Focus only on one specific regulatory program – avoiding the big picture
 - Inefficiencies in reporting programs – collecting data only for what's needed for a particular program

Challenges

- Obstacles to implementing a comprehensive strategy for oil & gas emissions
 - Limited resources
 - Coordinating efforts across offices and agencies
 - Who are the decision makers who can make this happen?

Suggested Post-Summit Strategic Plan

- Deliverables at end of 12, 24, 36 months
- Status report at April 2015 EI conference
- Workgroups for each of the deliverables, periodic updates to National O&G Emissions Committee
 - 12 months - Better, more complete, more representative inputs to achieve better current emissions estimates
 - 24 months – integrate databases and lower/remove barriers to unify all O&G data
 - 36 months – Defensible method for air agencies to use to project future O&G emissions

National Oil & Gas Emissions Committee

- Participants from EPA Offices, MJO's, States, Locals
- Calls are at 2 PM Eastern on Second Thursday of each month
- Email mark.gibbs@deq.ok.gov to be added to the mailing list