Update on TCEQ Oil & Gas Regulatory Activities in Texas

Texas Commission on Environmental Quality
Office of Compliance and Enforcement

August 27, 2019
Approximately 308,192 Active Oil and Gas Wells as of July 31, 2019
U.S. crude oil production

thousand barrels per day

Texas Crude Oil (Thousand Barrels per Day)
Month : May 2019
4,972 thousand barrels per day

Source: U.S. Energy Information Administration
U.S. natural gas production (gross withdrawals)

month cubic feet per day

2010 2012 2014 2016 2018

Texas Natural Gas Gross Withdrawals (Million Cubic Feet per Day)
Month: May 2019
27,283 million cubic feet per day

Source: U.S. Energy Information Administration
TCEQ’s Regulatory Role

• The Texas Commission on Environmental Quality’s (TCEQ’s) primary regulatory role with O&G is regulating air emissions and ensuring air quality, as well as any potential impact to water.

• Investigations performed in response to oil and gas activities in multiple programs.
Compliance Tools

Environmental Assistance Division

Publications

Regulatory Workshops

TCEQ Websites

Guidance Documents

On-site/Off-site Facility Assistance

General Education Events

Telephone Hotlines

Permitting Guidance & Workshops

“Environmentors”
TCEQ Office of Compliance and Enforcement
- Critical Functions -

- Conduct Compliance Investigations
- Investigate Complaints
- Review Emission Events Reported to TCEQ
- Issue Notices of Violation
- Issue Enforcement Orders
- Conduct ambient monitoring of air quality
- Respond to environmental emergency incidents
TCEQ Investigation Types

➢ Regularly scheduled investigation
➢ Complaint response investigation
➢ U.S. EPA or TCEQ initiative
➢ Spill response or emergency response
➢ Referral from another governmental entity
Air Investigation Activities
Upstream & Midstream O&G

FY12  FY13  FY14  FY15  FY16  FY17  FY18

Barnett Shale
Eagle Ford Shale
Permian Basin
All Other
Complaint Response

TCEQ responds to all complaints received under its jurisdiction:
• Considered a core mission of the agency
• Complaints are assigned a priority with corresponding investigation timeline
• Alleged health related issues are considered our highest priority
FY2018 Complaints Received
Upstream & Midstream O&G Sites

- Barnett Shale
- Eagle Ford Shale
- Permian Basin
- All Other Counties

- Air
- Water
- Waste
Reported Emissions
<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Emissions Events</th>
<th>Scheduled Maintenance</th>
<th>Scheduled Startup</th>
<th>Scheduled Shutdown</th>
<th>Excess Opacity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Petroleum and Natural Gas Extraction</td>
<td>1,990</td>
<td>32</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2,029</td>
</tr>
<tr>
<td>Natural Gas Liquid Extraction</td>
<td>435</td>
<td>34</td>
<td>7</td>
<td>9</td>
<td>6</td>
<td>491</td>
</tr>
<tr>
<td>Petroleum Refineries</td>
<td>259</td>
<td>14</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>303</td>
</tr>
<tr>
<td>Pipeline Transportation of Natural Gas</td>
<td>86</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>93</td>
</tr>
<tr>
<td>Fossil Fuel Electric Power Generation</td>
<td>24</td>
<td>12</td>
<td>3</td>
<td>1</td>
<td>29</td>
<td>69</td>
</tr>
<tr>
<td>Petrochemical Manufacturing</td>
<td>31</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>35</td>
</tr>
</tbody>
</table>
Quantity of Contaminants by Industrial Classification FY2017 & FY2018

- Crude Petroleum and Natural Gas Extraction: FY17 - 27.1 Million, FY18 - 20.3 Million
- Natural Gas Liquid Extraction: FY17 - 9.4 Million, FY18 - 10.2 Million
- Basic Organic Chemical Manufacturing: FY17 - 3.7 Million, FY18 - 10.0 Million
- Petroleum Refineries: FY17 - 6.1 Million, FY18 - 6.7 Million
- Pipeline Transportation of Natural Gas: FY17 - 2.4 Million, FY18 - 5.3 Million
Innovative Approaches & Outreach
Optical Gas Imaging Camera (OGIC)

• Using the OGIC, we can potentially locate under reported or unrecognized VOC source types

• The camera is capable of locating and imaging emissions from various sources of air pollution

• Documented images of emissions for follow-up
TCEQ Statewide OGIC By the Numbers

- 20 Cameras
- Approximately 100 certified operators
- 2 Level III Infrared Training Center certified thermographers
- 1 level II ITC certified thermographer
- Internal TCEQ certification program
- 2 to 4 flyovers per year
TCEQ has conducted multiple contractor-led aerial surveys or flyovers using a helicopter mounted with an optical gas imaging camera (OGIC) capable of detecting sources of air emissions:

- Effective screening tool;
- Evaluate large geographical areas;
- Allows TCEQ to focus resources on potentially problematic areas; and
- Thousands of individual tanks have been surveyed.
TCEQ’s Outreach Activities

- Publications, Web Info, & FAQs
- Local Government Workshops, Public Workshops, Town Hall Meetings & Open Houses
- Outreach to County Judges
- Coordination with Railroad Commission of Texas
- TCEQ Environmental Trade Fair – Oil & Gas Track
  - In May of each year
• Explains what production flares are and why they are necessary
• If a visible flame is really ok
• Why a flare smokes
• Contains links to additional resources and contact information for submission of complaints
Other Avenues to Compliance

✓ The Texas Audit Act is one avenue to helping an entity achieve voluntary compliance

✓ The TCEQ Program Support and Environmental Assistance Division also offers assistance through programs like the EnviroMentor Program and other compliance assistance options.
Audit Act Incentives

- Limited evidentiary privilege for certain information gathered in a voluntary self-audit.
- Immunity from administrative and civil penalties for certain violations voluntarily disclosed as a result of such an audit.
Immunity

- **Tex. Health & Safety Code §1101.151**
- Disclosed violations may be granted immunity from administrative or civil penalties:
  - Proper notice of intent to conduct an audit
  - Proper, voluntary disclosure of violations
  - Violations corrected in a reasonable amount of time
Audit Act

• **Most Common Violations:**
  • Failure to obtain the proper authorization
  • Failure to properly maintain emission control devices
  • Failure to maintain records
TCEQ Publication RG-173

• A Guide to the Texas Environmental, Health, and Safety Audit Privilege Act

• May be found on our website at:
TCEQ’s Oil and Gas Web Site


- Compliance information on air, water, waste, and spill issues

- Guidance documents for local governments

- Sign up for email updates for Oil & Gas
Thank you

Keith Sheedy, P.E.
512-239-1556
Keith.sheedy@tceq.texas.gov