

# **TCEQ DFW Region Investigations of Oil & Gas Operations**

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# Types of Investigations

- Emission Events
- Emission Evaluations (Stack tests)
- Complaints
- Compliance
- Reconnaissance
- Monitoring Requests



# Emission Events & Emissions Evaluation Requirements

- 30 TAC §101.201 - Emissions Event Reporting and Recordkeeping Requirements
- Title 30 Part 1 Chapter 117 Subchapter D
- 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
- 40 CFR 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines



# Complaints

- Assess nuisance conditions
- Evaluate compliance with applicable rules and regulations as appropriate to address complaint allegation
- Also determine if in-depth investigation is warranted or if further monitoring or sampling is necessary



# Compliance Investigations

- Sites are identified based on risk. Factors that increase a site's risk level include monitoring data, observations, complaints or requests for monitoring.
- Investigation can focus on a specific area of a site, such as condensate/produced water tanks, or can be a comprehensive investigation of the entire site for all applicable rules and regulations.



# Reconnaissance

- Sites or areas where we have noted potential issues or have a higher level of interest are identified for reconnaissance
- Staff conduct periodic surveillance offsite with the GasFindIR camera, handheld analyzers, and canisters
- Multiple sites are viewed per route



# Monitoring Requests

- Receive requests from citizens and local government officials who have questions or concerns about what may be in the air
- Conduct monitoring with handheld equipment
- Obtain canister sample
- Provide information to requestor
- Proactive response



# Handheld Monitoring Instruments

- Provides short-term data – the equivalent of a snapshot of air quality for a specific time and place



- Short-term data allows the TCEQ to make assumptions about the potential for health effects after a short-term exposure to the monitored concentrations
- Short-term data also helps the TCEQ determine where to focus resources





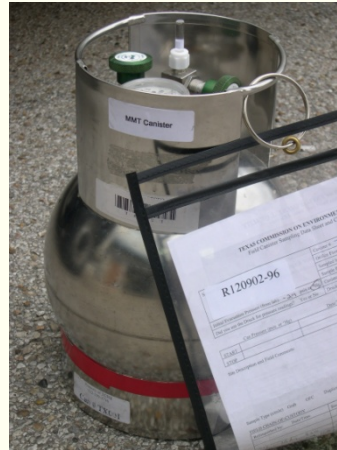
# GasFindIR Camera Image

- Image on left is without the camera
- Image on right is with the camera



# Passivated Stainless Steel Canister (Summa Canister)

- These canister results can be viewed on the TCEQ webpage.



# Where have emissions been observed with the GasFindIR?

- Frac Tanks
- Glycol Dehydration Units
- Pressure Relief Valves
- Vent Stacks
- Flares
- Condensate/Produced Water Tanks



# Common Problems

- Emissions from Fracing Operations
- Vent Pipes
- Valve Malfunctions
- Unlit Flares
- Hatch Seals
- Open Hatches on Tanks



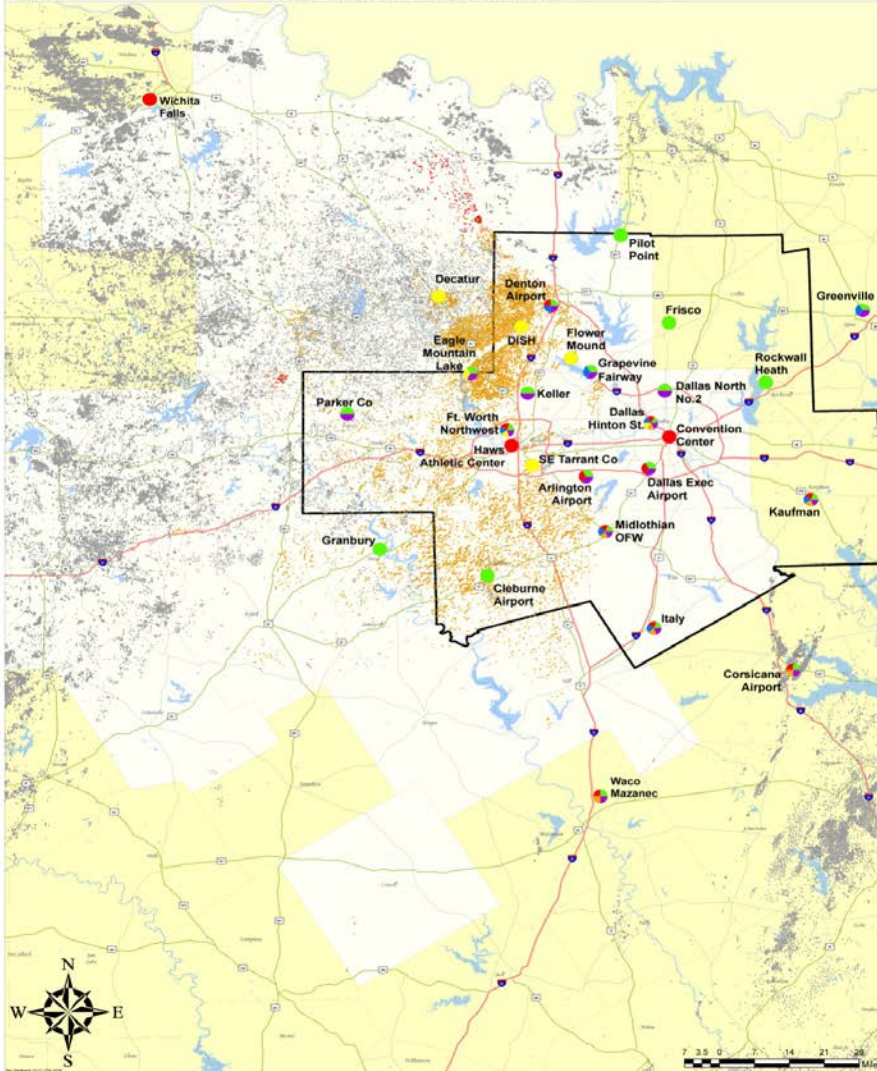
# Long-Term Stationary Monitoring

- Effort to supplement two existing Auto GCs (in Dallas and Fort Worth)
- First, five additional GC's were added near Eagle Mountain Lake, in the Town of Dish, the Town of Flower Mound, the City of Decatur, and the Town on Everman
- An additional 4 Auto GC's are slated for placement in the Barnett Shale within the next 12 months
- Real-time data from the Auto GC's is available on the TCEQ webpage



# 2010 North Texas Air Monitors

- Legend**
- Barnett Shale Formation Yields
  - Network East Field
    - CO
    - O<sub>3</sub>
    - CO/Se
  - Other Texas Counties
  - Barnett Shale Counties
  - FW Nonattainment Counties
- Monitors 2010**
- CO
  - O<sub>3</sub>
  - PM<sub>2.5</sub>
  - PM<sub>10</sub>
  - VOC
  - SO<sub>2</sub>
  - NO<sub>x</sub>
- Source Data:** Barnett Commission of Texas, Jan. 2010; W&A  
 National Commission on Toxic Air Pollution, Barnett Shale Counties (Dec. 2008)  
 TCEQ Field Operations - Air Monitoring Sites (April 2010)  
 The map was generated by the TCEQ Geomatics Unit. All rights reserved. For information concerning this map, contact the TCEQ Quality Center at (512) 261-5650.



# Typical Citations

- 30 TAC 101.4 for Nuisance
- 30 TAC §111.111 for Visible Emission
- 30 TAC §106.4 for PBR General Requirements
- 30 TAC 116.110(a) for Authorization



# Authorizations

- Permit by Rules
- New Source Review Permit

The new PBR 30 TAC 106.352 for Oil & Gas Handling and Production Facilities was approved and became effective April 2011. This PBR has more stringent requirements.





# Contact Information

Information about Barnett Shale Activities

<http://www.tceq.state.tx.us/implementation/barnettshale/bshale-main>

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