

Barnett Shale Phase Two Special Inventory Data

Overview

The Texas Commission on Environmental Quality's (TCEQ) conducted a special inventory to determine emissions from upstream and midstream oil and gas operations in the Barnett Shale. This inventory gathered detailed information about stationary Barnett Shale oil and gas emissions sources, including operational data and authorization information. The TCEQ requested companies with 2009 production or transmission of oil or gas from the Barnett Shale formation report ozone precursor and hazardous air pollutant emissions from emissions sources located at sites or leases in 23 counties located in the Barnett Shale formation.

How complete are the Barnett Shale Phase Two Special Inventory data?

The Barnett Shale Phase Two Special Inventory collected information from over 8,500 sites in 23 counties located in the Barnett Shale formation. As of September 1, 2011, approximately 98% of the sites had been uploaded into the TCEQ Barnett Shale special inventory database. Summary data is extracted from this database for posting on the Web site. All summary data posted on the Web will specifically note the percentage of sites reporting.

What data are included in the Barnett Shale Phase Two Special Inventory?

The Barnett Shale Phase Two Special Inventory requested:

- equipment and production information for *stationary* emissions sources associated with Barnett Shale oil and gas production, transmission, processing, and related activities;
- air emissions authorizations for these stationary sources;
- coordinates for sources located within a quarter-mile of the nearest off-site receptor; and
- 2009 emissions for nitrogen oxides (NO_x), volatile organic compounds (VOC), and hazardous air pollutants (HAPs).

Please note that the Barnett Shale special inventory data does NOT contain emissions data from:

- point sources that reported to the 2009 point source emissions inventory per 30 Texas Administrative Code §101.10;
- portable or mobile emissions sources, such as drilling rigs or other non-road engines;
- well completion emissions, including emissions during the flowback period;
- well testing emissions;
- oil and gas sources that are not associated with the Barnett Shale formation;
- other emissions associated with well drilling and completion activities; or
- open-top fracturing liquid containers (tanks) on site less than six months.

Were any sites not required to report to the Barnett Shale Phase Two Special Inventory?

For more information on Barnett Shale Phase Two Special Inventory applicability requirements, please see the guidance document posted at:
http://www.tceq.texas.gov/assets/public/implementation/air/ie/pseiforms/bshale_faq.pdf

Are revisions included in the data posted on the Web?

The database that contains the Barnett Shale Phase Two Special Inventory data is a dynamic database: the TCEQ is reviewing, improving, and updating the special inventory data.

Reporting companies also submit revisions to the TCEQ to improve the accuracy of reported data. Data contained in the database and posted on the Web is subject to revision or update at any time. Published data will contain the revision date on which the last data update occurred.

For which year were Barnett Shale Phase Two Special Inventory emissions data reported?

The Barnett Shale Phase Two Special Inventory requested emissions data for the 2009 calendar year or a consecutive 12-month period that began in 2009.

What counties comprise the Barnett Shale special inventory area?

The list of counties inventoried can be found at:

http://www.tceq.texas.gov/assets/public/implementation/air/ie/pseiforms/bshale_counties.pdf. Please note that the Barnett Shale formation extends north, west, and south from the City of Dallas, covering 5,000 square miles. Drilling permits for wells located in the Barnett Shale formation continue to be issued in the 23 inventory counties as well as new counties. Drilling permits had been issued in 24 counties in North Texas as of 2010.

How did companies develop emissions estimates for the Barnett Shale Phase Two Special Inventory?

Companies were requested to use the best method available to determine 2009 emissions. In general, emissions determined using measurement and/or testing data were preferred to emissions-factor based methods. Companies were requested to determine emissions using site-specific data. An emissions calculator

<<http://www.tceq.state.tx.us/implementation/air/industei/psei/psei.html#barnett2>> was developed to assist companies with emissions estimates.

How will the Barnett Shale Phase Two Special Inventory data be used?

The TCEQ will use the Barnett Shale Phase Two Special Inventory data to:

- improve emissions inventories;
- establish baseline emission levels;
- calculate emission reduction targets;
- develop control strategies to achieve required emission reductions;
- enhance the data inputs used in the photochemical modeling process, which predicts the effectiveness of proposed control measures in meeting the national ambient air quality standards;
- analyze trends for state implementation plan development as required by the Federal Clean Air Act;
- evaluate the cost and benefits of different environmental policies;
- support investigations;
- support permit reviews, including assessing modifications;
- support rule development;
- evaluate future monitoring sites, and
- assist in the analysis of monitored data.

What Barnett Shale Phase Two Special Inventory data are available on the TCEQ Web site?

County-level emissions summary data are currently available on the TCEQ Web site in two formats: 1) county-level totals by pollutant category (NO_x, VOC, and HAPs); and 2) county-level totals by pollutant category (NO_x, VOC, and HAPs) and emissions profile type (e.g., compressor engine, condensate storage tank, etc.). Due to the volume of data collected, only summary data is available on the Web site. Please contact Danielle Nesvacil at (512) 239-2102 or bshaleei@tceq.texas.gov to request more detailed inventory data.