



Barnett Shale Phase Two Special Inventory Workbook Overview

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Center
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Overview

- Purpose
- Who's Applicable
 - What if I'm not?
- Workbook Overview
 - How to get the Workbook
 - Workbook Navigation
 - Site-Specific Data
 - Emissions Totals Certification
 - Equipment to Include
 - Information Common to all Equipment types
 - Equipment Specific Information
 - I'm done, now what?
- Questions



Purpose

Phase Two will collect for emission sources:

- equipment and production information;
- air emissions authorizations;
- the proximity to the nearest off-site receptor (if within a ¼ mile); and
- annual 2009 emissions for nitrogen oxides (NO_x), volatile organic compounds (VOC), and hazardous air pollutants (HAP).



Who is Applicable?

- Site or lease located in one of the following 23 counties:
 - Archer, Bosque, Clay, Comanche, Cooke, Coryell, Dallas, Denton, Eastland, Ellis, Erath, Hill, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Shackelford, Somervell, Stephens, Tarrant, and Wise.
- Companies that had calendar year 2009 operations contacting oil and/or gas produced from the Barnett Shale formation(s)
 - Oil and gas production
 - Transmission
 - Processing
 - Related activities (such as saltwater disposal)



Who is Applicable?

- What if I'm not? -

- If a company is not applicable to the Phase Two, the company should:
 - complete and sign the "Emissions Totals Certification" form (included in the workbook),
 - attach an explanation, and
 - mail this form and explanation to the address listed in the letter.
- If multiple sites are not applicable, a "Emissions Totals Certification" should be completed for each site.
- If you previously indicated for Phase One that you were inapplicable, please contact us.



Who is Applicable?

- What if I'm not? -

- What if I'm applicable, but my site did not have any emissions?
 - Complete and sign the "Emissions Totals Certification" form (included in the workbook).
 - You may indicate "idle" or "0" in the 2009 annual emissions totals section.
 - Attach an explanation.
 - Mail this form and explanation to the address listed in the letter.
- If multiple sites are idle, a "Emissions Totals Certification" form should be completed for each site.



Workbook Overview

Download Phase Two workbook from
www.tceq.state.tx.us/goto/ieas

Point Source Emissions Inventory

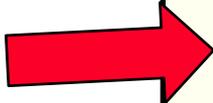
Summary data and other information related to the TCEQ's Point Source Emissions Inventory.

The Point Source Emissions Inventory is an annual survey of chemical plants, refineries, electric utility plants and other industrial sites that meet the reporting criteria in the TCEQ emissions inventory rule ([30 TAC §101.10](#) [Exit...](#)).

This Web page provides point source emissions inventory data along with tools and information of use to companies completing their annual questionnaires.

Many of the documents linked from this page are in Portable Document Format (PDF) or in Excel (xls) format, among others. (Help with [PDF](#).)

- [Barnett Shale Area Special Inventory: Phase One](#)
- [Barnett Shale Area Special Inventory: Phase Two](#)
- [Contacting the EAS \(PDF\)](#)
- [On-line Annual Emissions Inventory Report User's Guide \(PDF\)](#)
- [Frequently Asked Questions](#)





Barnett Shale Area Special Inventory, Phase Two

The Texas Commission on Environmental Quality (TCEQ) is requesting companies, including any affiliated subsidiaries, that own and/or operate leases and/or facilities associated with Barnett Shale oil and gas production, transmission, processing, and related activities to provide air emissions data and related information for calendar year 2009.

The completed and certified inventory data must be remitted to the TCEQ by December 31, 2010. Detailed information about this inventory and the information it is requesting can be found in the sample letter and enclosure link below.

Note: The TCEQ is conducting this special inventory under the authority of 30 Texas Administrative Code §101.10(b)(3). If the TCEQ has initiated a formal written request for this information, owners or operators are required to complete and submit this special inventory by the required date.

- [List of Inventory Counties \(PDF\)](#)
- [Sample Letter \(PDF\)](#)
- [Letter Enclosure \(PDF\)](#)
- [Barnett Shale Special Inventory, Phase Two Workbook \(Excel\)](#) (Please enable Macros when opening the workbook.)

The inventory will collect information on:

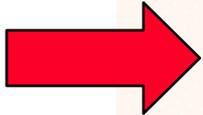
- equipment and production information for emission sources associated with Barnett Shale oil and gas production, transmission, processing and related activities;
- air emissions authorizations for these sources;
- the proximity of these sources to the nearest off-site receptor;
- annual 2009 emissions for nitrogen oxides, volatile organic compounds, and hazardous air pollutants;

Need Help?

An outreach event will be held in the Round Up Inn in the Amon G. Carter Jr. Exhibits Building at the Will Rogers Memorial Center in Fort Worth, Texas, on October 12, 2010. To register or for more information, please visit [the Oil and Gas Workshop Webpage](#).

An emissions calculator has been developed to provide assistance in calculating the air emissions for most sources. The use of this calculator is not required. [Barnett Shale Phase Two Emission Calculator \(Excel\)](#) (Please enable Macros when opening the workbook.)

Workbook



Calculator





Workbook Overview

Don't forget to enable macros

Microsoft Office Security Options

Security Alert - Macro

Macro

Macros have been disabled. Macros might contain viruses or other security hazards. Do not enable this content unless you trust the source of this file.

Warning: It is not possible to determine that this content came from a trustworthy source. You should leave this content disabled unless the content provides critical functionality and you trust its source.

[More information](#)

File Path: http://www.tceq.state.tx.us/...ntation/air/ie/pseiforms/bshale_workbook.xls

Help protect me from unsafe macros (recommended)

Enable this content

Disable all macros in the future

OK Cancel

Open the Trust Center

Choose form type:
<input checked="" type="radio"/> Site-specific data
<input type="radio"/> Emissions totals certification
<input type="radio"/> Blowdown and/or process vents
<input type="radio"/> Boilers
<input type="radio"/> Compressor engines
<input type="radio"/> Flares
<input type="radio"/> Frac tanks
<input type="radio"/> Glycol dehydrators
<input type="radio"/> Heaters
<input type="radio"/> Loading
<input type="radio"/> Piping component fugitive areas
<input type="radio"/> Separators
<input type="radio"/> Condensate storage tanks
<input type="radio"/> Crude oil storage tanks
<input type="radio"/> Produced water storage tanks
<input type="radio"/> Turbines
<input type="radio"/> Other



Workbook Navigation

- Use radio buttons to navigate to different forms.
- “Completed?” column is for you to track progress.

Select form type to complete emissions and related information:

Choose form type:

	Completed ?
<input checked="" type="radio"/> Site-specific data	No
<input type="radio"/> Emissions totals certification	No
<input type="radio"/> Blowdown and/or process vents	No
<input type="radio"/> Boilers	No
<input type="radio"/> Compressor engines	No
<input type="radio"/> Flares	No
<input type="radio"/> Frac tanks	No
<input type="radio"/> Glycol dehydrators	No
<input type="radio"/> Heaters	No
<input type="radio"/> Loading	No
<input type="radio"/> Piping component fugitive areas	No
<input type="radio"/> Separators	No
<input type="radio"/> Condensate storage tanks	No
<input type="radio"/> Crude oil storage tanks	No
<input type="radio"/> Produced water storage tanks	No
<input type="radio"/> Turbines	No
<input type="radio"/> Other	No



Workbook Navigation

Use buttons to navigate to indicated forms.

1	Return to navigation tab	Blowdown or Process Vent(s) Form
2	Please complete a separate column for each blowdown or process vent.	
3	Vent Identification Information	Blowdown or Process Vent 1
4	<u>Company's unique identification number for source</u>	
5	<u>Site, facility, or lease name</u>	site name
6	<u>Lease number(s)</u>	lease number
7	<u>County</u>	Choose from the following list:
8	Receptor Information Complete this section only if the nearest off-site receptor is within 1/4 mile.	
9	<u>Distance to nearest receptor in feet</u>	
10	<u>Describe receptor (Choose from list)</u>	
11	<u>Equipment emission point location: Latitude (decimal degrees)</u>	
12	<u>Equipment emission point location: Longitude (decimal degrees)</u>	
13	Blowdown or Process Venting Emissions	
14	<u>Total blowdown vented volume (scf/yr)</u>	
15	<u>Number of blowdown events in 2009 (number)</u>	
16	Blowdown or Process Control Device	
17	<u>Is a control device being used? (Select: Yes or No)</u>	
18	<u>Type of control device</u>	
19	<u>Control device volatile organic compound (VOC) efficiency (%)</u>	
20	Annual emissions, tons per year*	
21	<u>Total volatile organic compounds (VOC)</u>	
22	* In addition, complete the "HAPs >= 0.1 tpy" tab for this piece of equipment for each HAP equal >= 0.1 tpy.	
23		
24		
25		
26	NOTE: Please choose a print range before printing	
27		
28	Return to navigation tab	
29		
30		



Site-Specific Data

Site-Specific Data

Required for all sites.

Select form type to complete emissions and related information:

Choose form type:

	Completed ?
<input checked="" type="radio"/> Site-specific data	No
<input type="radio"/> Emissions totals certification	No
<input type="radio"/> Blowdown and/or process vents	No
<input type="radio"/> Boilers	No
<input type="radio"/> Compressor engines	No
<input type="radio"/> Flares	No
<input type="radio"/> Frac tanks	No
<input type="radio"/> Glycol dehydrators	No
<input type="radio"/> Heaters	No
<input type="radio"/> Loading	No
<input type="radio"/> Piping component fugitive areas	No
<input type="radio"/> Separators	No
<input type="radio"/> Condensate storage tanks	No
<input type="radio"/> Crude oil storage tanks	No
<input type="radio"/> Produced water storage tanks	No
<input type="radio"/> Turbines	No
<input type="radio"/> Other	No



Site-Specific Data

	A	B	C	D	E	F	G	H
1	Return to navigation tab	Site, Facility, or Lease Information						
2								
3	1. Company name:							
4	2. Site, facility, or lease name:	site name						
5	3. Lease number(s):	lease number						
6	4. Site centroid latitude (in decimal degrees):							
7	5. Site centroid longitude (in decimal degrees):							
8	6. Physical description of location:							
9	7. County:	Choose from the following list:						
10	8. Railroad Commission district number:							
11	9. Type of operation:	Choose one:						

“Site, facility or lease name”, “Lease number(s)”, and “County” will be prefilled into equipment tabs for you from this sheet.



Site-Specific Data Hyperlinked Instructions

	A	B	C	D	E	F	G	H
1	Return to navigation tab	Site, Facility, or Lease Information						
2								
3	<u>1. Company name:</u>							
4	<u>2. Site, facility, or lease name:</u>	site name						
5	<u>3. Lease number(s):</u>	lease number						
6	<u>4. Site centroid latitude (in decimal degrees):</u>							
7	<u>5. Site centroid longitude (in decimal degrees):</u>							
8	<u>6. Physical description of location:</u>							
9	<u>7. County:</u>	Choose from the following list:						
10	<u>8. Railroad Commission district number:</u>							
11	<u>9. Type of operation:</u>	Choose one:						

Click any underlined field to be hyperlinked to the instructions for that field.

Example: Physical description of location

	A	B	C	D	E	F	G	H
1	Return to Site Info tab	Site Form Instructions						
2								
3	General Information:							
4	Company name:	The official name of the company responsible for submitting the emissions inventory.						
5	Site, facility, or lease Name	Enter the site, facility, or lease name. If this facility reports to the TCEQ, use the facility name reported to the TCEQ. If lease name is entered, please use the lease name as reported to the Texas Railroad Commission.						
6	Railroad Commission lease number(s)	Enter the lease number(s) as reported to the Texas Railroad Commission. To list more than one lease number, separate each number with a comma.						
7	Site centroid latitude	The latitude of the facility/lease or regulated entity's centroid, in decimal degrees. Use North American Datum of 1983 (NAD83) coordinates.						
8	Site centroid longitude	The longitude of the facility/lease or regulated entity's centroid, in decimal degrees. Use North American Datum of 1983 (NAD83) coordinates.						
9	Physical description of location	The driving directions to the site from the nearest city.						



Site-Specific Data

13	Air Authorization(s) Data							
14	10. Have TCEQ air authorizations been obtained for any of the equipment present on the lease?						Choose one:	
15	11. If yes, complete the table below							
16	If all the equipment at the site is authorized under only one authorization, complete 11a below.							
17	11a. Type of Authorization (Choose from list)	Status	Number	Year Authorization was Claimed or Issued				
18	Choose from the following list:	Choose one:						
19	If there are multiple authorizations at the site, complete 11b below for each authorization (Add rows as needed).							
20	11b. Type of authorization (Choose from list)	Status	Number(s)	Year authorization was claimed or issued	Equipment under this authorization			
21	Choose from the following list:	Choose one:						
22	Choose from the following list:	Choose one:						
23	Choose from the following list:	Choose one:						

Air Authorizations for site?

- One for entire site? Complete 11a
- Multiple authorizations? Complete 11b



Site-Specific Data

35	12. Is any of the equipment present on the lease associated with a TCEQ regulated entity reference number (RN) or air account number?	Choose one:
36	13. If yes, list:	
37	a. RN	
38	b. Air Account Number:	
39	c. If this facility submitted a 2009 point source emission inventory to the agency under the provisions of 30 Texas Administrative Code Section 101.10, STOP completing this form and complete the "Emissions Totals Certification" form.	
40	14. Is the lease considered a major source for the federal NESHAP regulations for oil and gas, 40 Code of Federal Regulations 63 Subparts HH and HHH?	Choose one:

- Regulated Entity Reference Number (RN) & Air Account Number
 - Don't know if you have one?
 - Check central registry
www12.tceq.state.tx.us/crpub/2009
 - Customer Search or Regulated Entity Search
- 2009 Point Source Emission Inventory
 - Not the Phase I Special Inventory request
 - Complete Site Info to question 13c & jump to "Emissions Totals Certification" form



Site-Specific Data

42	Owner and Operator Information		
43	15. Owner name:		
44	16. Owner mailing address:		
45			
46	17. Contact/representative		
47	18. Contact/representative phone number:		
48	19. Contact/representative fax number:		
49	20. Contact/representative e-mail:		
50			
51	21. Operator name (if different from 15):		
52	22. Operator mailing address:		
53			
54	23. Operator contact/representative (if different from 21)		
55	24. Contact/representative phone number:		
56	25. Contact/representative fax number:		
57	26. Contact/representative e-mail:		

Make sure contact/representative can either answer questions or provide a contact who can answer questions concerning the inventory submittal.



Emissions Total Certification

Emissions Total Certification

Required for all sites

Select form type to complete emissions and related information:

Choose form type:	Completed ?
<input checked="" type="radio"/> Site-specific data	No
<input checked="" type="radio"/> Emissions totals certification	No
<input type="radio"/> Blowdown and/or process vents	No
<input type="radio"/> Boilers	No
<input type="radio"/> Compressor engines	No
<input type="radio"/> Flares	No
<input type="radio"/> Frac tanks	No
<input type="radio"/> Glycol dehydrators	No
<input type="radio"/> Heaters	No
<input type="radio"/> Loading	No
<input type="radio"/> Piping component fugitive areas	No
<input type="radio"/> Separators	No
<input type="radio"/> Condensate storage tanks	No
<input type="radio"/> Crude oil storage tanks	No
<input type="radio"/> Produced water storage tanks	No
<input type="radio"/> Turbines	No
<input type="radio"/> Other	No



Emissions Totals Certification

2009 Special Inventory Totals

Return to navigation tab **Emissions Totals Certification**

COMPLETE THIS FORM, PRINT IT, SIGN IT, AND REMIT WITH THE COMPLETED WORKBOOK.

The completed and certified inventory data must be submitted to the TCEQ by December 31, 2010. If the complete and certified inventory data is not postmarked by December 31, 2010, and received by the TCEQ, the TCEQ will exercise its enforcement powers as granted by the Legislature to ensure compliance with environmental regulatory requirements.

Company name: _____

Company mailing address: _____

Railroad Commission P-5 operator number: _____

Company contact/representative: _____

2009 ANNUAL EMISSIONS TOTALS* Complete the applicable section below.

REPORT TOTAL ANNUAL SITE, FACILITY, OR LEASE EMISSIONS	
CONTAMINANT	ANNUAL EMISSIONS (tons/year)
Nitrogen Oxides (NO _x)	
Volatile Organic Compounds (VOC)	
Aggregate Hazardous Air Pollutants (HAPs)	

* If a site was not fully operational during the entirety of 2009, or incomplete records do not allow for an accurate estimate of 2009 emissions, an alternative consecutive 12 months of emissions data may be substituted given that the period starts in 2009.

Or

2009 POINT SOURCE EMISSIONS INVENTORY

By checking this box I certify that a 2009 Point Source Emissions Inventory was submitted to the agency under the provisions of 30 Texas Administrative Code (TAC) Section 101.10.

Please Note: Completion of the following tabs is not required for leases that submitted a 2009 point source emissions inventory to the agency. Please complete and submit the Site, Facility, or Lease Information and Emissions Totals Certification forms only.

SIGNATURE OF LEGALLY RESPONSIBLE PARTY

I do hereby certify that information reported in this inventory is true, accurate, and fully represents the emissions that occurred during the 2009 calendar year or a consecutive 12 month period that begins in 2009 as specified below to the best of my knowledge.

Select one of the options below:

2009 calendar year or

12 month consecutive period:

beginning: **March 15, 2009**

and ending on:

March 14, 2010

Signature: _____

Printed Name: _____

Title: _____

Date: _____



Emissions Totals Certification

2009 Point Source Inventory Submitted

Return to navigation tab **Emissions Totals Certification**

COMPLETE THIS FORM, PRINT IT, SIGN IT, AND REMIT WITH THE COMPLETED WORKBOOK.

The completed and certified inventory data must be submitted to the TCEQ by December 31, 2010. If the complete and certified inventory data is not postmarked by December 31, 2010, and received by the TCEQ, the TCEQ will exercise its enforcement powers as granted by the Legislature to ensure compliance with environmental regulatory requirements.

Company name:

Company mailing address:

Railroad Commission P-5 operator number:

Company contact/representative:

2009 ANNUAL EMISSIONS TOTALS* Complete the applicable section below.

REPORT TOTAL ANNUAL SITE, FACILITY, OR LEASE EMISSIONS

CONTAMINANT	ANNUAL EMISSIONS (tons/year)
Nitrogen Oxides (NO _x)	
Volatile Organic Compounds (VOC)	
Aggregate Hazardous Air Pollutants (HAPs)	

* If a site was not fully operational during the entirety of 2009, or incomplete records do not allow for an accurate estimate of 2009 emissions, an alternative consecutive 12 months of emissions data may be substituted given that the period starts in 2009.

Or

2009 POINT SOURCE EMISSIONS INVENTORY



By checking this box I certify that a 2009 Point Source Emissions Inventory was submitted to the agency under the provisions of 30 Texas Administrative Code (TAC) Section 101.10.

Please Note: Completion of the following tabs is not required for leases that submitted a 2009 point source emissions inventory to the agency. Please complete and submit the Site, Facility, or Lease Information and Emissions Totals Certification forms only.

SIGNATURE OF LEGALLY RESPONSIBLE PARTY

I do hereby certify that information reported in this inventory is true, accurate, and fully represents the emissions that occurred during the 2009 calendar year or a consecutive 12 month period that begins in 2009 as specified below to the best of my knowledge.

Select one of the options below:



2009 calendar year or



12 month consecutive period:

beginning: _____

and ending on: _____

Signature:

Printed Name:

Title:

Date:



Equipment to Include

Remaining forms are required if sources exist that meet reporting requirements.

Select form type to complete emissions and related information:

Choose form type:	Completed ?
<input checked="" type="radio"/> Site-specific data	No
<input type="radio"/> Emissions totals certification	No
<input type="radio"/> Blowdown and/or process vents	No
<input type="radio"/> Boilers	No
<input type="radio"/> Compressor engines	No
<input type="radio"/> Flares	No
<input type="radio"/> Frac tanks	No
<input type="radio"/> Glycol dehydrators	No
<input type="radio"/> Heaters	No
<input type="radio"/> Loading	No
<input type="radio"/> Piping component fugitive areas	No
<input type="radio"/> Separators	No
<input type="radio"/> Condensate storage tanks	No
<input type="radio"/> Crude oil storage tanks	No
<input type="radio"/> Produced water storage tanks	No
<input type="radio"/> Turbines	No
<input type="radio"/> Other	No



Equipment to Include

Complete a form for each piece of equipment (listed above) that meets one of the following criteria for 2009:

- ◇ Emitted 1 ton or more of NO_x,
- ◇ Emitted 1 ton or more of volatile organic compounds (VOC), or
- ◇ Emitted 0.1 tons per year or more of a hazardous air pollutant (HAP)

If individual pieces of equipment do not meet the requirements listed above, they may be omitted from the inventory provided that the total emissions from all such unreported sources are:

- ◇ less than 5 tons of NO_x,
- ◇ less than 5 tons of VOC, and
- ◇ less than 1 ton of aggregate HAPs

If the total emissions from the omitted pieces of equipment do not satisfy these requirements, report each source starting with the piece of equipment with the highest emissions until the total emissions of the remaining omitted sources satisfy the above requirements.

Let's break this down...



Equipment to Include

First criteria: Complete a form for each piece of equipment that meets one of the following criteria for 2009:

- emitted 1 ton or more of NO_x ,
- emitted 1 ton or more of VOC, or
- emitted 0.1 tons per year or more of a HAP



Equipment to Include

Second Criteria: If individual pieces of equipment do not meet the previous requirements, they may be omitted from the inventory provided that the total emissions from all such unreported sources are:

- less than 5 tons of NO_x ,
- less than 5 tons of VOC, and
- less than 1 ton of aggregate HAPs



Equipment to Include

If the total emissions from the omitted pieces of equipment do not satisfy these requirements, report each source starting with the piece of equipment with the highest emissions until the total emissions of the remaining omitted sources satisfy the previous requirements.



Equipment to Include - Example 1 -

Equipment List	Total Emissions in tons per year (tpy)						
	NOx	VOC	Formaldehyde (HAP)	Acrolein (HAP)	Acetaldehyde (HAP)	Benzene (HAP)	Aggregate HAPs
Engine 1	5.1	0.15	0.06	0.01	0.006	-	0.076
Engine 2	5.1	0.15	0.06	0.01	0.006	-	0.076
Engine 3	0.5	0.02	0.006	0.001	0.0006	-	0.0076
Fugitive Area	-	.5	-	-	-	0.01	0.01
Gas Tank	-	0.05	-	-	-	0.001	0.001

Engine 1 and Engine 2 must be included.

First Criteria:

- ✓ Emitted \geq 1 tpy NO_x,
- Emitted \geq 1 tpy VOC, or
- Emitted \geq 0.1 of a HAP



Equipment to Include - Example 1 -

Equipment List	Total Emissions in tons per year (tpy)						
	NOx	VOC	Formaldehyde (HAP)	Acrolein (HAP)	Acetaldehyde (HAP)	Benzene (HAP)	Aggregate HAPs
Engine 1	5.1	0.15	0.06	0.01	0.006		0.076
Engine 2	5.1	0.15	0.06	0.01	0.006		0.076
Engine 3	0.5	0.02	0.006	0.001	0.0006		0.0076
Fugitive Area	-	.5	-	-	-	0.01	0.01
Gas Tank	-	0.05	-	-	-	0.001	0.001
Total of Remaining Sources	0.5	0.57	0.006	0.001	0.0006	0.011	0.0186

Engine 3, Fugitive Area, and Gas Tank **do not** need to be included.

First Criteria:

- Emitted ≥ 1 tpy NO_x,
- Emitted ≥ 1 tpy VOC, or
- Emitted ≥ 0.1 of a HAP

Second Criteria:

- ✓ Emitted < 5 tpy NO_x,
- ✓ Emitted < 5 tpy VOC, or
- ✓ Emitted < 1 of aggregate HAPs



Equipment to Include - Example 2 -

Equipment List	Total Emissions in tons per year (tpy)			
	NO _x	VOC	Benzene (HAP)	Aggregate HAPs
Tank 1	-	0.95	0.01	0.01
Tank 2	-	0.85	0.01	0.01
Tank 3	-	0.75	0.01	0.01
Tank 4	-	0.75	0.01	0.01
Tank 5	-	0.75	0.01	0.01
Tank 6	-	0.75	0.01	0.01
Fugitive Area 1	-	0.55	0.02	0.01

First Criteria:

- ✘ Emitted ≥ 1 tpy NO_x,
- ✘ Emitted ≥ 1 tpy VOC, or
- ✘ Emitted ≥ 0.1 of a HAP



Equipment to Include - Example 2 -

Equipment List	Total Emissions in tons per year (tpy)			
	NO _x	VOC	Benzene (HAP)	Aggregate HAPs
Tank 1	-	0.95	0.02	0.02
Tank 2	-	0.85	0.02	0.02
Tank 3	-	0.75	0.01	0.01
Tank 4	-	0.75	0.01	0.01
Tank 5	-	0.75	0.01	0.01
Tank 6	-	0.75	0.01	0.01
Fugitive Area 1	-	0.55	0.01	0.01
Total all Sources	-	5.35	0.09	0.09

First Criteria:

- Emitted ≥ 1 tpy NO_x,
- Emitted ≥ 1 tpy VOC, or
- Emitted ≥ 0.1 of a HAP

Second Criteria:

- ✓ Emitted < 5 tpy NO_x,
- ✗ Emitted < 5 tpy VOC, or
- Emitted < 1 of aggregate HAPs



Equipment to Include - Example 2 -

Equipment List	Total Emissions in tons per year (tpy)			
	NOx	VOC	Benzene (HAP)	Aggregate HAPs
Tank 1	-	0.95	0.02	0.02
Tank 2	-	0.85	0.02	0.02
Tank 3	-	0.75	0.01	0.01
Tank 4	-	0.75	0.01	0.01
Tank 5	-	0.75	0.01	0.01
Tank 6	-	0.75	0.01	0.01
Fugitive Area 1	-	0.55	0.01	0.01
Total all Sources	-	5.35	0.09	0.09

Report the tank with the highest emission rate and re-check criteria.

Second Criteria:

- Emitted < 5 tpy NO_x,
- Emitted < 5 tpy VOC, or
- Emitted < 1 of aggregate HAPs



Equipment to Include - Example 2 -

Equipment List	Total Emissions in tons per year (tpy)			
	NO _x	VOC	Benzene (HAP)	Aggregate HAPs
Tank 1	-	0.95	0.02	0.02
Tank 2	-	0.85	0.02	0.02
Tank 3	-	0.75	0.01	0.01
Tank 4	-	0.75	0.01	0.01
Tank 5	-	0.75	0.01	0.01
Tank 6	-	0.75	0.01	0.01
Fugitive Area	-	0.55	0.01	0.01
Total all Remaining Sources	-	4.4	0.07	0.07

Only Tank 1 must be included. Tanks 2-6 & Fugitive Area **do not**.

First Criteria:

- Emitted ≥ 1 tpy NO_x,
- Emitted ≥ 1 tpy VOC, or
- Emitted ≥ 0.1 of a HAP

Second Criteria:

- ✓ Emitted < 5 tpy NO_x,
- ✓ Emitted < 5 tpy VOC, or
- ✓ Emitted < 1 of aggregate HAPs



Common to all Equipment Types

“Identification Information” and “Receptor Information” is the same for all forms.

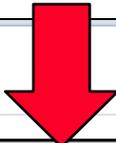
Select form type to complete emissions and related information:

Choose form type:	Completed ?
<input checked="" type="radio"/> Site-specific data	No
<input type="radio"/> Emissions totals certification	No
<input type="radio"/> Blowdown and/or process vents	No
<input type="radio"/> Boilers	No
<input type="radio"/> Compressor engines	No
<input type="radio"/> Flares	No
<input type="radio"/> Frac tanks	No
<input type="radio"/> Glycol dehydrators	No
<input type="radio"/> Heaters	No
<input type="radio"/> Loading	No
<input type="radio"/> Piping component fugitive areas	No
<input type="radio"/> Separators	No
<input type="radio"/> Condensate storage tanks	No
<input type="radio"/> Crude oil storage tanks	No
<input type="radio"/> Produced water storage tanks	No
<input type="radio"/> Turbines	No
<input type="radio"/> Other	No



Common to all Equipment Types

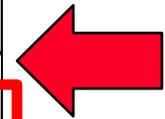
Complete a column for each piece of equipment.

Blowdown or Process Vent(s) Form					
Return to navigation tab					
Please complete a separate column for each blowdown or process vent.					
Vent Identification Information	Blowdown or Process Vent 1	Blowdown or Process Vent 2	Blowdown or Process Vent 3	Blowdown or Process Vent 4	Blowdown or Process Vent 5
Company's unique identification number for source					
Site, facility, or lease name	site name	site name	site name	site name	site name
Lease number(s)	lease number	lease number	lease number	lease number	lease number
County	Choose from the following list:	Choose from the following list:	Choose from the following list:	Choose from the following list:	Choose from the following list:
Receptor Information Complete this section only if the nearest off-site receptor is within 1/4 mile.					
Distance to nearest receptor in feet					
Describe receptor (Choose from list)					
Equipment emission point location: Latitude (decimal degrees)					
Equipment emission point location: Longitude (decimal degrees)					
Blowdown or Process Venting Emissions					
Total blowdown vented volume (scf/yr)					
Number of blowdown events in 2009 (number)					
Blowdown or Process Control Device					
Is a control device being used? (Select: Yes or No)					
Type of control device					
Control device volatile organic compound (VOC) efficiency (%)					
Annual emissions, tons per year*					
Total volatile organic compounds (VOC)					
* In addition, complete the "HAPs >= 0.1 tpy" tab for this piece of equipment for each HAP equal >= 0.1 tpy.					



Common to all Equipment Types Identification Information

Blowdown or Process Vent(s) Form	
Return to navigation tab	
Please complete a separate column for each blowdown or process vent.	
Vent Identification Information	Blowdown or Process Vent 1
<u>Company's unique identification number for source</u>	site name
<u>Site, facility, or lease name</u>	lease number
<u>Lease number(s)</u>	Choose from the following list
<u>County</u>	



- Company's unique identification number for source
 - List a 10-character or less unique identification label for the source; alphanumeric characters are preferred.
 - Your choice: Vent 1, CAT 3515
- Site, facility, or lease name, lease numbers, and county all prefilled from "Site Info" tab for you.



Common to all Equipment Types

Receptor Information

Blowdown or Process Vent(s) Form	
Return to navigation tab	
Please complete a separate column for each blowdown or process vent.	
Vent Identification Information	Blowdown or Process Vent 1
<u>Company's unique identification number for source</u>	
<u>Site, facility, or lease name</u>	site name
<u>Lease number(s)</u>	lease number
<u>County</u>	Choose from the following list
Receptor Information Complete this section only if the nearest off-site receptor is within 1/4 mile.	
<u>Distance to nearest receptor in feet</u>	
<u>Describe receptor (Choose from list)</u>	
<u>Equipment emission point location: Latitude (decimal degrees)</u>	
<u>Equipment emission point location: Longitude (decimal degrees)</u>	

Receptor information only required if receptor is within 1/4 mile.



Common to all Equipment Types Receptor Information

Determining your site location and equipment location using Texas Commission on Environmental Quality (TCEQ) online viewer:
www.tceq.state.tx.us/goto/sqmaview

TCEQ Spatial Queries and Mapping Application Viewer

View aerial imagery for any area in Texas, and obtain latitude-longitude coordinates for point locations or polygons. Incorporates the Google Maps Viewer.

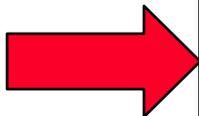
The TCEQ Spatial Queries and Mapping Applications Viewer allows users to do the following:

- View aerial imagery for any area in Texas.
- Obtain latitude - longitude coordinates for point locations or polygons.
- Locate points in Texas that correspond to known street addresses.

The Viewer is an ArcIMS application, which provides users with basic GIS capability via a web browser.

It incorporates the [Google Maps Viewer](#) [Exit...](#), but includes functionality and tools specifically designed to meet TCEQ customer needs. Because this viewer is posted on the TCEQ external web page and is available for public use, its use of the Google Maps Viewer complies with the [Terms of Service for Google Maps](#). [Exit...](#)

- [How to Use the TCEQ Spatial Queries and Mapping Application Viewer](#) [DOC Format, 363 KB] - **Read this first.** This downloadable MS Word document explains how to use the tools available in the viewer.
- [Go to the Map Viewer](#) - Best viewed using Internet Explorer 7 and above.
- [Contact Us](#) - You may e-mail the Information Resources Division -- GIS Team at gismail@tceq.state.tx.us





Common to all Equipment Types Receptor Information

Select Zoom to Address →

Map it →

Address Standardization and Geocoding

Street:
 Street Number, Name, and Type

City:
 City Information

State:
 State Information

Zip Code:
 Zip Code Information

Cleaned Address	City	State	Address Validation Score	Geocode Score	Latitude	Longitude
3401 W Lancaster Ave	Fort Worth	TX	95	100	32.74743340232	-97.36728986908

[Map It](#)



Common to all Equipment Types Receptor Information

The screenshot displays the TCEQ Spatial Queries Mapping Application interface. On the left, there is a sidebar with the TCEQ logo and the text "Spatial Queries Mapping Application". Below this, there are input fields for coordinates: "32.74743340232 (i.e. 29.7000)" and "-97.36728986908 (i.e. -100.1000)". There are also buttons for "ZOOM to Lat/Long", "REPORT Lat/Longs", "STOP Reporting Coords", "ZOOM to Address (launches dialog box)", "GEOCODE Address", "FIND Directions", "START Line", "STOP Line", "MAKE it a Polygon", "CLEAR Acetate", "View Layer", "Select From List", "ZOOM to Texas", "ZOOM to County", "Select One", "ZOOM to City", "Select From List", "EDIT Nodes", "FOCUS Map", and "GENERATE Coordinates Table".

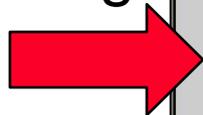
The main area shows a map of Fort Worth, Texas, with a red pin marker placed on the intersection of North Hi Mt and Camp Bowie W Blvd. A white callout box with a red arrow pointing to the pin contains the text "Site now indicated by marker". In the top right corner, there are three buttons: "Map", "Satellite", and "Hybrid". A red arrow points to the "Satellite" button, and a white callout box with a red arrow pointing to it contains the text "Toggle to Satellite or Hybrid View".

The map shows various streets, including River Oaks Blvd, White Settlement Rd, W Lancaster Ave, and W Vickery Blvd. It also shows landmarks like the Kimbell Art Museum and the Modern Art Museum of Fort Worth. A small inset map in the bottom right corner shows the location of the main map area within the state of Texas.

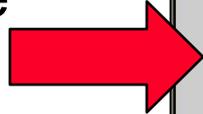


Common to all Equipment Types Receptor Information

Report
Lat/Longs



Generate
Coordinate
Table



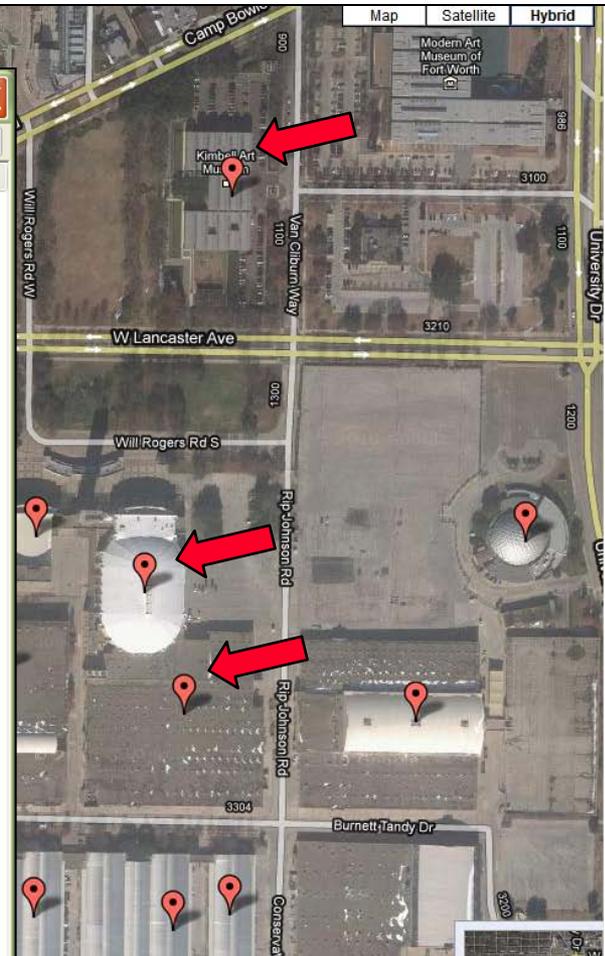
TCEQ Spatial Queries Mapping Application

32.74852694564598
(i.e.29.7000)
-97.36504554748535
(i.e. -100.1000)
ZOOM to Lat/Long
REPORT Lat/Longs
STOP Reporting Coords
ZOOM to Address (launches dialog box)
GEOCODE Address
FIND Directions
START Line
STOP Line
MAKE it a Polygon
CLEAR Acetate
View Layer
Select From List
ZOOM to Texas
ZOOM to County
Select One
ZOOM to City:
Select From List
EDIT Nodes
FOCUS Map
GENERATE Coordinates Table

This viewer is designed to help answer spatial queries including creation of spatial coordinates for point, line or polygon data. If you have a known latitude/longitude, you can input it directly into the first two boxes, otherwise you can use one of the ZOOM to functions to get to an area of interest. You can also use the slider bar on the map itself to zoom in on the map. There is also a FOCUS map tool that zooms into an area by clicking on a spot on the map.

Node 0

Name	Latitude	Longitude
Point 0	32.745585229913004	-97.36580729484558
Point 1	32.74307657350314	-97.36556053161621
Point 2	32.74319388634843	-97.36506700515747
Point 3	32.74317583822845	-97.36677289009094
Point 4	32.74316681416709	-97.36722350120544
Point 5	32.74316681416709	-97.36774921417236
Point 6	32.74498965600849	-97.36704111099243
Point 7	32.746000324522335	-97.36675143241882
Point 8	32.7446828436554	-97.36546397209167
Point 9	32.74596422941569	-97.36249208450317
Point 10	32.744628700189295	-97.36344695091247
Point 11	32.74852694564598	-97.36504554748535





Common to all Equipment Types

Receptor Information

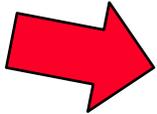
Blowdown or Process Vent(s) Form	
Return to navigation tab	
Please complete a separate column for each blowdown or process vent.	
Vent Identification Information	Blowdown or Process Vent 1
<u>Company's unique identification number for source</u>	
<u>Site, facility, or lease name</u>	site name
<u>Lease number(s)</u>	lease number
<u>County</u>	Choose from the following list
Receptor Information Complete this section <u>only if</u> the nearest off-site receptor is within 1/4 mile.	
<u>Distance to nearest receptor in feet</u>	
<u>Describe receptor (Choose from list)</u>	
<u>Equipment emission point location: Latitude (decimal degrees)</u>	
<u>Equipment emission point location: Longitude (decimal degrees)</u>	

- Receptors can be identified using software.
- With the TCEQ viewer the latitude and longitude information can be completed.
- This methodology can also be used for the site centroid, if not already known.



Common to all Equipment Types

HAPs ≥ 0.1 tpy

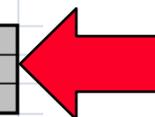


Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
* In addition, complete the "HAPs ≥ 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.	

In addition, complete the "HAPs ≥ 0.1 tpy" tab for every piece of equipment where HAPs exist ≥ 0.1 tpy.

Choose emission source type from the dropdown menu and complete the row for each piece of equipment that meets the requirements.

Hazardous Air Pollutants (HAPs) ≥ 0.1 tpy as requested			
Use this form to report HAPs individually that are ≥ 0.1 tpy for each source required.			
<u>Site, facility, or lease name</u>		site name	
<u>Lease number(s)</u>		lease number	
<u>County</u>		Choose from the following list:	
Emission source type	Identification number	Hazardous Air Pollutant (HAP)	Annual Emissions (tons per year)
0			
1	Blowdown or Process Vent		
2	Compressor Engine		
3	Flare		
4	Frac Tank		
5	Glycol Dehydrator		
6	Loading		
7	Fugitive Area		
8	Separator		

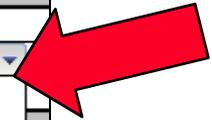


Prefilled for you



Equipment Specific Information Blowdowns or Process Vents

Blowdown or Process Venting Emissions	
Total blowdown vented volume (scf/yr)	
Number of blowdown events in 2009 (number)	
Blowdown or Process Control Device	
Is a control device being used? (Select: Yes or No)	
Type of control device	
Control device volatile organic compound (VOC) efficiency (%)	Routed to flare Routed to other combustive device Other
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
* In addition, complete the "HAPs >= 0.1 tpy" tab for this piece of equipment for each HAP equal \geq 0.1 tpy.	



Use dropdown menus where available.



Equipment Specific Information

Boilers and Heaters

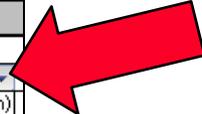
Unit Information	
Serial number	
Make	
Model	
Operational Data	
<u>2009 annual operating hours</u>	
<u>2009 fuel consumption rate (in million scf per year [MMscf/yr] or gallons per year)</u>	
<u>2009 fuel consumption rate units (Choose from MMscf/yr or gallons per year)</u>	
<u>Fuel type (Select from Dropdown List)</u>	
<u>Maximum design capacity (in million Btu per hour [MMBtu/hr])</u>	
Emissions Control Device Information	
<u>Control installed (Select: Yes or No)</u>	
<u>If yes, control description</u>	
<u>If yes, NO_x control efficiency (%)</u>	
Annual Emissions, tons per year	
<u>Nitrogen oxides (NO_x)</u>	
<u>Total volatile organic compounds (VOC)</u>	

Same information requested for boilers and heaters.



Equipment Specific Information Compressor Engines

Unit Information	
Serial number	
Make	
Model	
Operational Data	
2009 annual operating hours	
2009 fuel consumption rate (in million scf per year [MMscf/yr] or gallons per year)	
2009 fuel consumption rate units (Choose from MMscf/yr or gallons per year)	
Fuel type (Select from dropdown list)	
Burn type (Select: Rich or Lean)	
Cycle (Select: 2 Cycle or 4 Cycle)	
Engine rating (hp)	
Maximum design capacity (in million Btu per hour [MMBtu/hr])	
Emissions Control Device Information	
Control installed (Select: Yes or No)	
If yes, select a control description	
If other, please describe here	
If yes, NO _x control efficiency (%)	
If yes, VOC control efficiency (%)	
Automatic air/fuel ratio controller?	
Annual Emissions, tons per year*	
Nitrogen oxides (NO _x)	
Total volatile organic compounds (VOC)	
Formaldehyde (if ≥ 0.1 tpy)	
* In addition, complete the "HAPs >= 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.	



If you chose "Other" for the control, describe the control device in the row below.



Equipment Specific Information

Compressor Engines

- Rich Burn vs. Lean Burn engines
 - Rich: Engines capable of being operated with an exhaust stream oxygen concentration of $\leq 0.5\%$ by volume.
 - Lean: Engines not capable of being operated with an exhaust stream oxygen concentration of $\leq 0.5\%$ by volume.
 - * 30 Texas Administrative Code Section 117.10
- Formaldehyde, a HAP, is specifically requested.



Equipment Specific Information Flare

Flare Data	
2009 annual operating hours (0-8760)	
Assist type (Choose from Air, Steam or Unassisted)	
Amount of pilot gas used in 2009 (in millions of standard cubic feet/year [MMscf/yr])	
Amount of waste gas combusted in 2009 (in millions of standard cubic feet/year [MMscf/yr])	
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
Nitrogen oxides (NO _x)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	
* In addition, complete the "HAPs >= 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.	

Benzene, toluene, ethylbenzene and xylene(s) (BTEX) and n-hexane are specifically requested.



Equipment Specific Information

Frac Tanks

Operational Data	
2009 maximum daily production rate (bbl/day)	
2009 annual throughput (bbl/yr)	
Control Device Information	
Is a control device being used? (Choose Yes or No)	
Type of control device (e.g., flare, VRU, etc.)	
If other, please describe here	
If yes, control device VOC efficiency (%)	
Liquid Composition (Mole%)	
Total volatile organic compounds (VOC)	
Benzene	
Ethylbenzene	
n-Hexane	
Toluene	
Xylene(s)	
Aggregate total of all other HAPs	
Annual emissions, tons per year* [Include flash, breathing, and working loss emissions.]	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	
* In addition, complete the "HAPs ≥ 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.	



Equipment Specific Information

Glycol Dehydrator

Operational Data	
2009 annual operating hours (0-8760)	
Amount of gas treated in 2009 (in millions of standard cubic feet per year [MMscf/yr])	
2009 average daily production rate (in millions of standard cubic feet per day [MMscf/day])	
Regenerator Control Information:	
How is the regenerator controlled? (Choose from No Control, Flare, Non-Flare Combustive Device, Condenser, Condenser and Flare, or Condenser and Non-Flare Combustive Device)	
If condenser is present, what is the efficiency (%)?	
If combustive device is present, what is the destruction efficiency (%)?	
MACT HH applicability	
Subject to MACT HH?	
If yes, Indicate: Major or Area Source?	
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	
* In addition, complete the "HAPs ≥ 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.	



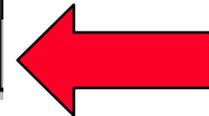
Equipment Specific Information Loading

Operational Data	
<u>2009 annual throughput (bbl/yr)</u>	
<u>Type of liquid loaded/unloaded.</u>	
Control Device Information	
<u>Is loading area controlled?</u>	
<u>If yes, select control device</u>	
<u>If other, please describe</u>	
<u>If yes, VOC control efficiency (%)</u>	
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	
<u>* In addition, complete the "HAPs ≥ 0.1 tpy" tab for this piece of equipment for each HAP equal ≥ 0.1 tpy.</u>	



Equipment Specific Information Piping Component Fugitives

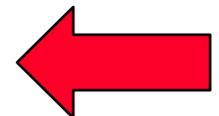
Component Count Evaluation	
Total number of pumps and compressor seals for entire site	
Total number of uncontrolled relief valves for entire site	
Total number of components for entire site	
Completion of the section below is required if indicated for each fugitive area.	Complete the section below



Component Count Evaluation

- Complete this section for the entire site regardless of the number of fugitive areas at the site.
- If “completion is optional” is indicated, you have the option to stop completing this form.
 - Please verify that you are comfortable with the estimated emission rate indicated.

Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	0.63
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	



- If “Complete the section below” is indicated, you must complete the following sections.



Equipment Specific Information

Piping Component Fugitives

Gas Component Counts	
Gas actuated pneumatic valves (number)	
Air actuated pneumatic valves (number)	
Non-actuated valves (number)	
Pump seals (number)	
Connectors (number)	
Flanges (number)	
Open-ended lines (number)	
Other (number)	
Light Oil Component Counts	
Gas actuated pneumatic valves (number)	
Air actuated pneumatic valves (number)	
Valves (number)	
Pump seals (number)	
Connectors (number)	
Flanges (number)	
Open-ended lines (number)	
Other (number)	
Heavy Oil Component Counts	
Gas actuated pneumatic valves (number)	
Air actuated pneumatic valves (number)	
Non-actuated valves (number)	
Pump seals (number)	
Connectors (number)	
Flanges (number)	
Open-ended lines (number)	
Other (number)	
Water/Oil Component Counts	
Gas actuated pneumatic valves (number)	
Air actuated pneumatic valves (number)	
Non-actuated valves (number)	
Pump seals (number)	
Connectors (number)	
Flanges (number)	
Open-ended lines (number)	
Other (number)	

Complete the component count information, if required. If specific site information is not available, use best estimate, such as construction drawings or other sources.



Equipment Specific Information

Piping Component Fugitives

Gas Composition (Mole%)	
Total volatile organic compounds (VOC)	
Benzene	
Ethylbenzene	
n-Hexane	
Toluene	
Xylene(s)	
Aggregate total of all other HAPs	
Liquid Composition (Mole%)	
Total volatile organic compounds (VOC)	
Benzene	
Ethylbenzene	
n-Hexane	
Toluene	
Xylene(s)	
Aggregate total of all other HAPs	
Monitoring Program	
<u>Is fugitive area subject to monitoring program?</u>	
<u>If yes, please select program:</u>	
<u>If other, please describe:</u>	
<u>Is monitoring program voluntary or required by permit or rule?</u>	
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	



Equipment Specific Information

Separators

Operational Data	
2009 annual operating hours (0 - 8760 hrs)	
2009 throughput (million standard cubic feet per year [MMscf/yr] or barrels/year [bbls/yr])	
2009 throughput units (Select either MMscf/yr or bbls/yr)	
Separator Detail	
Separator pressure (psig)	
Separator temperature (degrees Fahrenheit)	
Separator gas gravity at initial condition	
Annual emissions, tons per year*	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	

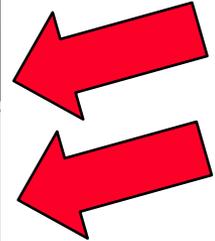
Vented separators

- Designed to open to the atmosphere
- Only capture the produced liquids from a well



Equipment Specific Information Condensate Tank

Tank Information Evaluation Use this section to determine if specific tank information is required for this site for condensate tank(s).	
2009 annual site throughput of condensate	
Is HARC 51C an accepted method to calculate tank emissions?	Yes
<i>If yes, would you like to use the HARC 51C to calculate your tank emissions? If you choose yes here, no further information is required for this tank and your VOC emissions will be calculated for you below. You may only choose this option if site wide condensate production is less than 1,501 barrels per year.</i>	No



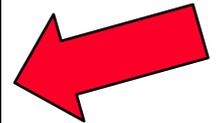
Tank Information Evaluation

- Complete this section for the entire condensate throughput for site.
- If “Yes” is indicated in the HARC 51C method evaluation, you have the option to use the factor.
 - Choose “Yes” if you would like to use the factor and the emissions will be calculated for you.
 - Choose “No” if you would like to calculate your own emissions.



Equipment Specific Information Condensate Tank

Tank Information Evaluation Use this section to determine if specific tank information is required for this site for condensate tank(s).	
<u>2009 annual site throughput of condensate</u>	1502
<u>Is HARC 51C an accepted method to calculate tank emissions?</u>	No
<u>If yes, would you like to use the HARC 51C to calculate your tank emissions? If you choose yes here, no further information is required for this tank and your VOC emissions will be calculated for you below. You may only choose this option if site wide condensate production is less than 1,501 barrels per year.</u>	N/A



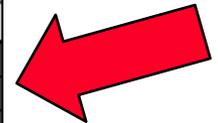
Tank Information Evaluation

- If “No” is indicated in the HARC 51C method evaluation, you must complete the following sections.



Equipment Specific Information Condensate Tank

Tank Configuration Information	
<u>Please choose one: information is for single tank or multiple tanks</u>	
<u>If multiple, number of tanks</u>	
<u>If multiple tanks are present at the lease, please choose a configuration: parallel or series</u>	
Operational Data	
<u>2009 maximum daily production rate (bbl/day)</u>	
<u>2009 annual throughput (bbl/yr)</u>	
Material Data Review instructions to make sure a valid methodology is used for the liquid type and throughput.	
<u>Working and breathing emissions calculation method</u>	
<u>If other, please describe here</u>	
<u>Flash emissions calculation method</u>	
<u>If other, please describe here</u>	
Control Device Information	
<u>Is a control device being used? (Choose Yes or No)</u>	
<u>Type of control device (Select from list)</u>	
<u>If other, please describe here</u>	
<u>If yes, control device VOC efficiency (%)</u>	
Annual emissions, tons per year* [Include flash, breathing, and working loss emissions.]	
<u>Total volatile organic compounds (VOC)</u>	
<u>Benzene (if ≥ 0.1 tpy)</u>	
<u>Ethylbenzene (if ≥ 0.1 tpy)</u>	
<u>n-Hexane (if ≥ 0.1 tpy)</u>	
<u>Toluene (if ≥ 0.1 tpy)</u>	



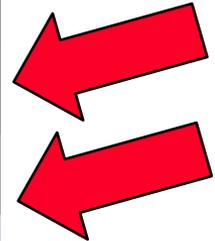
If multiple tanks, you have the option to complete one column for all tanks.



Equipment Specific Information

Crude Oil Tank

Tank Information Evaluation Use this section to determine if specific tank information is required for this site for crude oil tank(s).	
<u>2009 annual throughput of crude oil</u>	31250
<u>Is HARC 51C an accepted method to calculate tank emissions?</u>	Yes
<u>If yes, would you like to use the HARC 51C to calculate your tank emissions? If you choose yes here, no further information is required for this tank and your VOC emissions will be calculated for you below. You may only choose this option if site wide crude oil production is less than 31,250 barrels per year.</u>	No



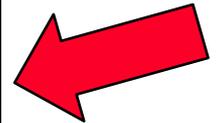
Tank Information Evaluation

- Complete this section for the entire crude oil throughput for site.
- If “Yes” is indicated in the HARC 51C method evaluation, you have the option to use the factor.
 - Choose “Yes” if you would like to use the factor and the emissions will be calculated for you.
 - Choose “No” if you would like to calculate your own emissions.



Equipment Specific Information Crude Oil Tank

Tank Information Evaluation Use this section to determine if specific tank information is required for this site for crude oil tank(s).	
<u>2009 annual throughput of crude oil</u>	31251
<u>Is HARC 51C an accepted method to calculate tank emissions?</u>	No
<i>If yes, would you like to use the HARC 51C to calculate your tank emissions? If you choose yes here, no further information is required for this tank and your VOC emissions will be calculated for you below. You may only choose this option if site wide crude oil production is less than 31,250 barrels per year.</i>	N/A



Tank Information Evaluation

- If "No" is indicated in the HARC 51C method evaluation, you must complete the following sections.



Equipment Specific Information

Crude Oil Tank

Tank Configuration Information	
<u>Please choose one: information is for single tank or multiple tanks</u>	
<u>If multiple, number of tanks</u>	
<u>If multiple tanks are present at the lease, please choose a configuration: parallel or series</u>	
Operational Data	
<u>2009 maximum daily production rate (bbl/day)</u>	
<u>2009 annual throughput (bbl/yr)</u>	
Material Data Review instructions to make sure a valid methodology is used for the liquid type and throughput.	
<u>Working and breathing emissions calculation method</u>	
<u>If other, please describe here</u>	
<u>Flash emissions calculation method</u>	
<u>If other, please describe here</u>	
Control Device Information	
<u>Is a control device being used? (Choose Yes or No)</u>	
<u>Type of control device (Select from list)</u>	
<u>If Other, please describe here</u>	
<u>If yes, Control device VOC efficiency (%)</u>	
Annual emissions, tons per year* [Include flash, breathing, and working loss emissions.]	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	



Equipment Specific Information Produced Water Tank

Tank Configuration Information	
Please choose one: information is for single tank or multiple tanks	
If multiple, number of tanks	
If multiple tanks are present at the lease, please choose a configuration: parallel or series	
Operational Data	
2009 maximum daily production rate (bbl/day)	
2009 annual throughput (bbl/yr)	
Material Data Review instructions to make sure a valid methodology is used for the liquid type and throughput.	
Working and breathing emissions calculation method	
If other, please describe here	
Flash emissions calculation method	
If other, please describe here	
Control Device Information	
Is a control device being used? (Choose Yes or No)	
Type of control device (Select from list)	
If other, please describe here	
If yes, control device VOC efficiency (%)	
Annual emissions, tons per year* [Include flash, breathing, and working loss emissions.]	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	

No emission factor to evaluate for produced water tanks.



Equipment Specific Information

Turbines

Unit Information	
Serial number	
Make	
Model	
Operational Data	
2009 operating hours	
2009 fuel consumption rate (in million scf per year [MMscf/yr] or gallons per year)	
2009 fuel consumption rate units (Choose from MMscf/yr or gallons per year)	
Fuel type (Select from dropdown list)	
Turbine rating (hp)	
Maximum design capacity (in million Btu per hour [MMBtu/hr])	
Emissions Control Device Information	
Control installed (Select: Yes or No)	
If yes, control description	
If yes, NO _x control efficiency (%)	
Automatic air/fuel ratio controller?	
Annual Emissions, tons per year	
Nitrogen oxides (NO _x)	
Total volatile organic compounds (VOC)	



Equipment Specific Information Others

Operational Data	
2009 annual operating hours (0 - 8760 hrs)	
Source Detail	
Source type (Choose from list):	
If other, describe source	
Annual emissions, tons per year*	
Nitrogen oxides (NO _x)	
Total volatile organic compounds (VOC)	
Benzene (if ≥ 0.1 tpy)	
Ethylbenzene (if ≥ 0.1 tpy)	
n-Hexane (if ≥ 0.1 tpy)	
Toluene (if ≥ 0.1 tpy)	
Xylene(s) (if ≥ 0.1 tpy)	

Only use this form if the other equipment type forms are not applicable.



I'm Done, Now What?

- Once the workbook is completed:
 - Save completed workbook to a CD.
 - Print and sign “Emissions Totals Certification” form (included in workbook).
 - Send all information to:

Barnett Shale Special Inventory, MC 167
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087
- Must be postmarked on or before December 31, 2010.
- Be prepared to submit supporting documentation within 10 days of the request.



Questions?

- Julia Knezek (512) 239-1424
- Miles Whitten (512) 239-5479
- Barnett Shale Email: bshaleei@tceq.state.tx.us
- Emissions Inventory Helpline (512) 239-1773