



Representative Sampling Guidance

2023 AAPCA Best Practice in Air Pollution Control

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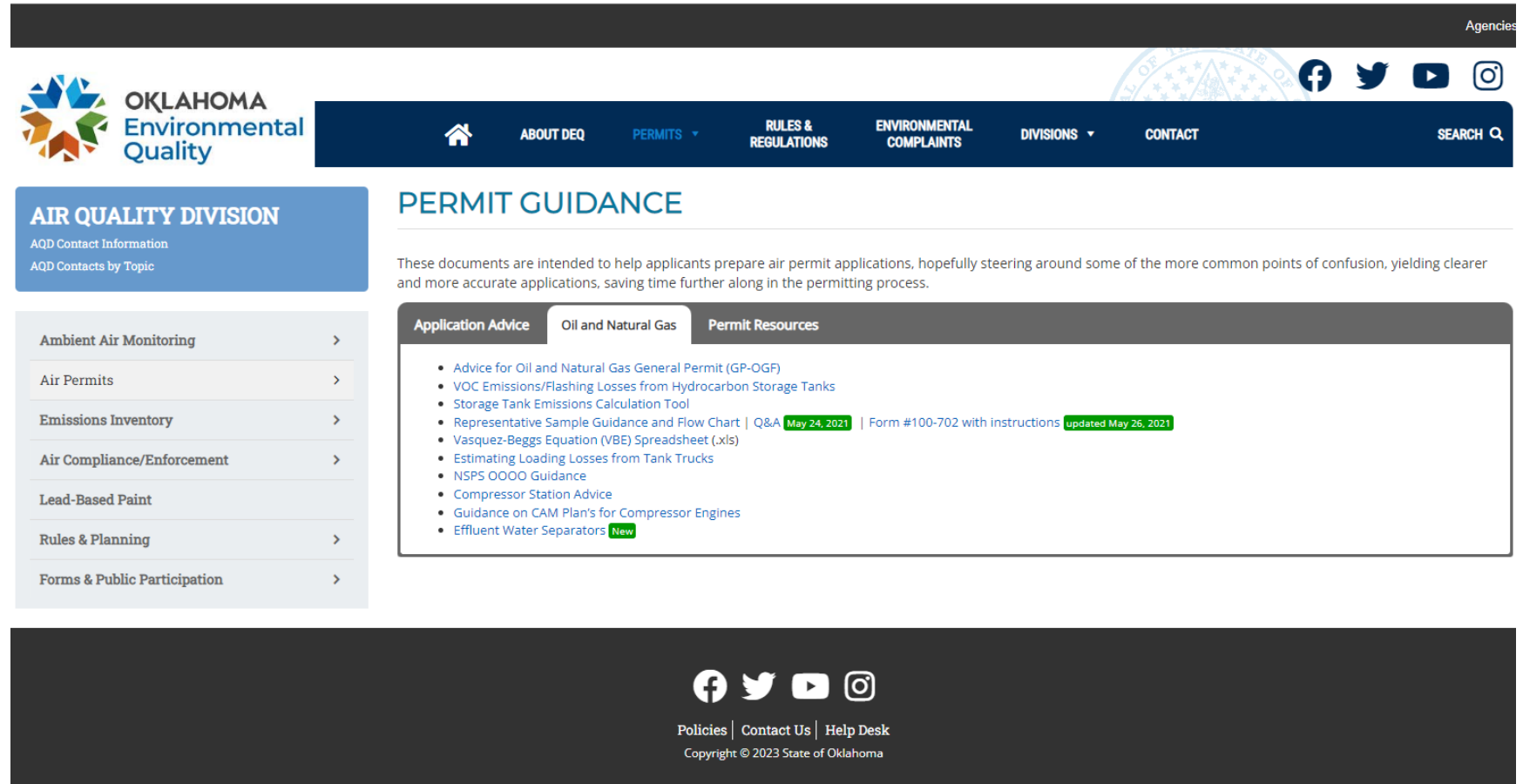
Guidance Developed

Representative Sampling Guidance:

- Published as final on September 15, 2020.
 - Effective March 15, 2021.
 - Through several rounds of industry comment.
- Updated May 24, 2021.
 - Added Q&A Document and Additional Instructions to Forms
- More updates coming soon.



Guidance Developed



The screenshot shows the Oklahoma Environmental Quality website. The header includes the agency logo, navigation menu (Home, About DEQ, Permits, Rules & Regulations, Environmental Complaints, Divisions, Contact), and social media icons. The main content area is titled "PERMIT GUIDANCE" and contains a list of resources under the "Permit Resources" tab. A blue sidebar on the left lists various air quality topics. A dark footer at the bottom contains social media icons, contact links, and copyright information.

OKLAHOMA Environmental Quality

AIR QUALITY DIVISION
AQD Contact Information
AQD Contacts by Topic

- Ambient Air Monitoring >
- Air Permits >
- Emissions Inventory >
- Air Compliance/Enforcement >
- Lead-Based Paint
- Rules & Planning >
- Forms & Public Participation >

PERMIT GUIDANCE

These documents are intended to help applicants prepare air permit applications, hopefully steering around some of the more common points of confusion, yielding clearer and more accurate applications, saving time further along in the permitting process.

- Application Advice
- Oil and Natural Gas
- Permit Resources

- Advice for Oil and Natural Gas General Permit (GP-OGF)
- VOC Emissions/Flashing Losses from Hydrocarbon Storage Tanks
- Storage Tank Emissions Calculation Tool
- Representative Sample Guidance and Flow Chart | Q&A **May 24, 2021** | Form #100-702 with instructions **updated May 26, 2021**
- Vasquez-Beggs Equation (VBE) Spreadsheet (.xls)
- Estimating Loading Losses from Tank Trucks
- NSPS OOOO Guidance
- Compressor Station Advice
- Guidance on CAM Plan's for Compressor Engines
- Effluent Water Separators **New**

AAPCA
THE ASSOCIATION OF AIR POLLUTION CONTROL AGENCIES
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Why focus on Oil and Gas Facilities?

Facilities (as of February 3, 2020):

16,193 operating facilities.

11,569 operating oil and gas facilities (71.4%).

Permit Applications Received (2019):

2,453 total.

1,961 oil and gas facilities (79.9%).

- These numbers are based on:
 - Well sites / centralized tank batteries.
 - Compressor stations (gathering & transmission).
 - Natural gas plants.



Representative Sampling Concerns

Applicants submitting:

- Use of samples from across the state.
- Only simplified justification for use of samples (e.g., same county/formation).
- Use of sample averaging.
- Reliance on significantly older samples.
- Reliance on “cookie cutter” data.

Lower standards such as 6 TPY VOC Tank Limit



Representative Sampling Challenges

Oklahoma formations are not uniform:

- Significant changes in emissions can occur even from neighboring zones.
- Horizontal drilling.

Lack of data to analyze.

Industry request for:

- “reasonable” default values.
- Case-by-case determinations.
- Limit the imposed burden of the guidance.



Updates:

Representative Sampling Now Applies to

Facility Types

- Well sites
- Gathering compressor stations
- Transmission compressor stations
- Gas plants

Permit Types

- Major Source
- Individual Minor Source
- GP-OGF
- ~~PBR O&NG~~ – On Request
- ~~Construction~~

Emissions Sources

- ~~Glycol Dehydration Units~~ - Site Specific
- ~~Amine Sweetening Units~~ - Site Specific
- Hydrocarbon Storage Tanks
- ~~Fugitive VOC Equipment Leaks~~



Updates:

Removal of form submittal for

- Construction Applications
- PBR-O&NG Facilities
- Fugitive Emissions.

Sections labels and reorganization of guidance document and flow charts

3 calendar year limit to 60-month limit



Sampling Requirements – All Sites

All Sites

Samples shall not to be older than 60 months.

Site-specific sampling for:

- Glycol dehydration units.
- Amine Units.
- H₂S content.



Sampling Requirements –

Well Sites & Gathering Stations (Hydrocarbon Storage Tanks)

Representative sample must be:

- Within 10 miles of permitting facility;
- API Gravity $\pm 5^\circ$;
- Sampling point must be similar;
- Sample temperature within 20°C ; and
- Sample pressure:
 - If < 30 psig, must be **$> \frac{1}{2}$ of the facility**.
 - If ≥ 30 psig, must be **within 20 psig**.

Do not need to meet the items if:

- Throughput < 10 bbl/day; or
- Throughput $< 1,200$ bbl/day and storage tanks controlled.

Site-specific sampling required if any of the following are met:

- None of the previously listed conditions are met.
- Uncontrolled tanks with > 4 TPY VOC.
- Exceeds 80% of an emissions threshold.



Questions?



Thank You!

