Title V GHG Permitting

April 2, 9 and 10, 2012

Jim Swaney, P.E.
Permit Services Manager
and
Martin Keast
Supervising Permit Services Engineer
SJVAPCD
Workshop Web Attendees

Can send questions or comments during workshop via e-mail to:

webcast@valleyair.org
Add “Title V” in subject line

• About 5 minute delay before e-mail shows up in our e-mail inbox
• Webcast e-mail available only during workshop webcast
Meeting Agenda

• Basics of Title V
  – Applicability
  – Exemptions
  – Initial Application, Modifications and Renewals
• Timelines
• Discuss Initial Application Forms
• Examples
What is Title V?

• Title V is a federally mandated operating permit program which requires major sources to maintain permits which can be enforced by the EPA or individual citizens.
• District Rule 2520 – Federally Mandated Operating Permits
• There is additional monitoring and reporting compared to the “District Only” permit which you are accustomed to.
What is Title V?

• Title V permits are issued for up to a five-year period.
• Currently ~300 sources in the valley are subject to Title V
• Recently, the US EPA established major source thresholds for Greenhouse Gas (GHG) emissions, potentially subjecting more sources to Title V
Applicability

• Sources with Potential to Emit greater than major source thresholds:
  – NOx: 10 tpy
  – VOC: 10 tpy
  – PM10: 70 tpy
  – SOx: 70 tpy
  – CO: 100 tpy
  – GHG: 100 tpy (mass) and 100,000 tpy (CO$_{2e}$)

• Fugitive emissions don’t count unless listed in source categories of 40 CFR 70.2
Timeline of regulations

4/07: US Supreme Court ruling
12/09: Endangerment finding
4/10: EPA decision on subject to regulation
5/10: Adopt Light Duty Vehicle Rule
6/10: Adopt Tailoring Rule
1/2/11: LDVR requirements go into effect
Tailoring Rule

• Step 1: 1/2/11 to 6/30/11
  – Anyway sources (already in Title V due to criteria pollutant emissions)
• Step 2: on and after 7/1/11
  – Can trigger Title V solely due to GHG
  – One year to apply for Title V permit
Applicability

• 6 “well mixed” GHG:
  – Carbon dioxide (CO₂)
  – Methane (CH₄)
  – Nitrous oxide (N₂O)
  – Hydrofluorocarbons (HFC)
  – Perfluorocarbons (PFC)
  – Sulfur hexafluoride (SF₆)
Applicability, cont.

• To be a regulated pollutant:
  – Facility potential to emit above 100,000 short tpy ($\text{CO}_2\text{e}$)

• If a regulated pollutant, major source if:
  – Facility potential to emit above 100 short tpy (mass)

• Fugitive emissions don’t count unless listed in source categories of 40 CFR 70.2
Options to avoid Title V

- Restrict your facility potential to emit to below the major source thresholds (GHG: either 100,000 tpy CO$_{2e}$ or 100 tpy mass thresholds)
- Go under Rule 2530 “Federally Enforceable Potential to Emit” and keep your actual emissions less than ½ the major source thresholds – you must request this in writing and keep records of actual emissions (GHG: only applies to 100 tpy mass threshold)
Title V Timelines

- 7/1/2011: Step 2 of EPA Tailoring Rule takes effect, giving sources 1 year to submit applications
- 6/28/2012: major sources of GHG must submit a complete Initial Title V application.
Types of Title V Applications

- Initial application – to initially apply for a Title V permit
- Modifications – 4 types, to make changes to the Title V permit (including incorporating Authorities to Construct)
- Renewal application – permit is renewed every 5 years, source must submit an application 6 to 18 months before current permit expires
Modifications at Title V sources

- Administrative Amendment
- Minor Modification
- Significant Modification
- Section 6.4.4 Modification
- Authority to Construct with Certificate of Conformity (ATC w/COC)
What is Title V Monitoring and Reporting?

• More frequent monitoring of operating parameters to demonstrate that adequate operating control equipment is functioning correctly.

• Every six months, a facility submits a Report of Required Monitoring (RRM) demonstrating compliance has been attained.

• Annually a facility submits a report of Annual Compliance Certification (ACC).
Initial Application Process

- Upon submittal of a Title V application, a determination of completeness will be made. This will be sent in the form of a letter with an estimate of maximum processing hours.
- The District must process the application within 18 months from completeness date.
- An Engineering Evaluation will be prepared with Draft Title V permits sent to the applicant, EPA and ARB. All hourly time spent processing will be invoiced on a calendar quarterly basis.
Application Process continued

• The applicant, ARB and the public will have 30-days to comment on the draft permits.
• The public may request to have a public hearing.
• The EPA shall have 45-days to comment on the draft permits.
• The District shall make appropriate changes based on comments received.
• The final permit will be sent to the applicant with copies to ARB, EPA, and anyone who commented.
Application Forms

• Title V application has 5 parts (TVFORM-main through TVFORM-005)
• Responsible Official must sign TVFORM-005
  – Responsible official is the owner, president, general manager, CEO, or a person having overall responsibility for regulatory compliance for the facility.
Application Forms

• Complete TVFORM-main
  – Check Initial Application on the top of the form.
  – Complete the rest of the form as indicated for the facility.
San Joaquin Valley Air Pollution Control District
www.valleyair.org

Permit Application For:

- [ ] INITIAL TITLE V PERMIT - First Federal Title V Operating Permit
- [ ] RENEWAL OF TITLE V PERMIT - Federal Title V Operating Permit Renewal
- [ ] NEW TITLE V PERMIT - New Stationary Source Commencing Operation After June 15, 1995

1. PERMIT TO BE ISSUED TO:

2. MAILING ADDRESS:
   STREET: ____________________________ CITY: ____________________________
   P.O. BOX: ____________________________ STATE: ____________________________
   ZIP CODE: ____________________________

3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:
   STREET: ____________________________ CITY: ____________________________
   S.I.C. CODE(S) OF FACILITY (If Known):
   SECTION ________________ RANGE ________________

4. GENERAL NATURE OF BUSINESS:

5. DESCRIPTION OF EQUIPMENT FOR WHICH APPLICATION IS MADE. Include Permit Numbers, a separate CAM plan if applicable and use additional sheets, if necessary:

Optional Section

6. CHECK WHETHER YOU ARE A PARTICIPANT IN EITHER OF THESE VOLUNTARY PROGRAMS:
   [ ] Yes [ ] No
   [ ] Send info
   [ ] Yes [ ] No
   [ ] Send info

7. TYPE OR PRINT NAME OF APPLICANT:

8. SIGNATURE OF APPLICANT:
   DATE: ____________
   PHONE #: ____________
   FAX #: ____________
   E-MAIL: ________________

FOR APCD USE ONLY:

   DATE STAMP: ________________
   FILING FEE: $ ________________
   RECEIVED: ________________
   DATE PAID: ________________
   PROJECT #: ________________
   FACILITY #: ________________
Application Forms

• Complete TVFORM-001 or TVFORM-002
  – Use TVFORM-001 to report actual annual emissions (emission Inventory), or
  – Use TVFORM-002 to report maximum permitted emission levels
  – FORM-001: either submit last approved emission statements for all permit units, or complete the form with actual emission per permit unit
  – FORM-002: state the maximum annual emissions allowed per the operating conditions of the existing permit unit. If HAP emissions are greater than 10 tpy for a single compound (or 25 tpy for combined HAP) they must also be calculated.
San Joaquin Valley  
Unified Air Pollution Control District  

Title V Application - ACTUAL EMISSIONS REPORT

Refer to the attached instructions for more information.

<table>
<thead>
<tr>
<th>COMPANY NAME:</th>
<th>FACILITY ID:</th>
</tr>
</thead>
</table>

**LIST OF EQUIPMENT AND CALCULATED ANNUAL EMISSIONS** - In numerical order, list all permitted equipment and describe the emissions (See Instructions). **If more space is required, use additional forms.** Attach sample calculations.

In certain cases (See Instructions) previously approved emissions statements or inventory reports may be attached and submitted in lieu of this form. If this option is chosen, do not list permitted equipment described in those emissions inventory statements or reports on this form.

<table>
<thead>
<tr>
<th>Column 1 Permit Number</th>
<th>Column 2 Specific Source of Emissions (if applicable)</th>
<th>Column 3 Actual Annual Pollutant Emissions in tons per year (one pollutant per column)</th>
<th>List the pollutant(s) for which the facility is a major source:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOₓ</td>
<td>VOC</td>
<td>PM₁₀</td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

Emissions for year ending: __________________________
San Joaquin Valley
Unified Air Pollution Control District

Title V Application - ACTUAL GHG EMISSIONS REPORT

Refer to the attached instructions for more information.

<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>FACILITY ID</th>
</tr>
</thead>
</table>

**LIST OF EQUIPMENT AND ACTUAL ANNUAL EMISSIONS** - In numerical order, list all permitted equipment and describe the emissions (See Instructions). If more space is required, use additional forms. Attach sample calculations.

In certain cases (See Instructions), actual emissions may be reported in lieu of potential emissions. If this option is chosen report actual emissions on TVFORM-001 and do not list emissions here.

<table>
<thead>
<tr>
<th>Column 1 Permit Number</th>
<th>Column 2 Specific Source of Emissions (if applicable)</th>
<th>Column 3 Potential Annual Pollutant Emissions in short tons per year (one pollutant per column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>List the pollutant(s) for which the facility is a major source:</td>
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<tr>
<td></td>
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<td>CO₂</td>
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</tbody>
</table>

TVFORM-001
Revised March 21, 2012
Application Forms

• Complete TVFORM-003
  – Identify insignificant activities that occur at the facility.
  – Place a checkmark for any of the activities listed that occur at the facility.
San Joaquin Valley  
Unified Air Pollution Control District  
Title V Application - INSIGNIFICANT ACTIVITIES

Check the box next to the exemption category from Rule 2020 which describes any insignificant activity or equipment at your facility not requiring a permit.

<table>
<thead>
<tr>
<th>Exemption Category</th>
<th>Rule 2020 Citation</th>
<th>Exemptions Category</th>
<th>Rule 2020 Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure or incinerator assoc. with a structure designed as a dwelling for 6 or less</td>
<td>6.1</td>
<td>Containers used to store refined lubricating oils</td>
<td>6.6.8</td>
</tr>
<tr>
<td>Locomotives, airplanes, and watercraft used to transport passengers or freight</td>
<td>6.4</td>
<td>Unused pressure vessels used exclusively to store liquefied gases or assoc with emission equipment</td>
<td>6.6.9 or 6.13</td>
</tr>
<tr>
<td>Natural gas or LPG-fueled boilers or other indirect heat transfer units of 5 MMBtu/hr or less</td>
<td>6.1.1</td>
<td>Portable tanks used exclusively to store produced fluids for 5 six months</td>
<td>6.6.10</td>
</tr>
<tr>
<td>Piston-type i.e. engines with maximum continuous rating of 300 horsepower (hp) or less</td>
<td>6.1.2</td>
<td>Mobile transport tanks on delivery vehicles of VOCs</td>
<td>6.6.11</td>
</tr>
<tr>
<td>Gas turbine engines with maximum heat input rating of 3 MMBtu/hr or less</td>
<td>6.1.3</td>
<td>Loading racks used for the transfer of less than 4,000 gal/day of ungraded organic material with initial boiling point &gt; 350°F or of final oil with specific gravity ≥ 0.8596</td>
<td>6.7.1.1</td>
</tr>
<tr>
<td>Space heating equipment other than boilers</td>
<td>6.1.4</td>
<td>Loading racks used for the transfer of asphalt, creosote or hydrocarbons oil stored in asphalt tanks, or creosote oil with specific gravity ≥ 0.8592</td>
<td>6.7.1.2</td>
</tr>
<tr>
<td>Cooling towers with a circulation rate less than 10,000 gal/min, and that are not used for cooling of process waste, or water from location, jets or condenser**</td>
<td>6.2</td>
<td>Equipment used exclusively for the transfer of refined lubricating oil</td>
<td>6.7.3</td>
</tr>
<tr>
<td>Use of less than 2 gal/day of graphic arts materials</td>
<td>6.3</td>
<td>Equipment used to apply architectural coatings</td>
<td>6.3.1</td>
</tr>
<tr>
<td>Equipment at retail establishments used to prepare food for human consumption</td>
<td>6.4.1</td>
<td>Unheated, non-convoluted cleaning equipment with a 25 ft open rear; using solvents with initial boiling point &gt; 205°F and ≤ 23 g/l/sq ft exposure levels</td>
<td>6.9</td>
</tr>
<tr>
<td>Ovens at bakeries with total daily production less than 5,000 pounds and ascept by sec. 6.1.1</td>
<td>6.4.2</td>
<td>Braising, searing, or welding equipment</td>
<td>6.10</td>
</tr>
<tr>
<td>Equipment used exclusively to netting or compression molding or brittle or plastics, where no plastisize or blowing agent is used</td>
<td>6.5</td>
<td>Equipment used to compress natural gas</td>
<td>6.11</td>
</tr>
<tr>
<td>Containers used to store clean, treated water</td>
<td>6.6.1</td>
<td>Fugitive emissions sources assoc with emission equipment</td>
<td>6.12</td>
</tr>
<tr>
<td>Containers ≤ 100 bbl used to store oil with specific gravity ≥ 0.874</td>
<td>6.6.2</td>
<td>Pipes and Ponds as defined in Rule 2020</td>
<td>6.13</td>
</tr>
<tr>
<td>Containers ≤ 100 bbl installed prior to 6/1/82 used to store oil with specific gravity ≥ 0.874</td>
<td>6.6.3</td>
<td>On-site manufacture, manufacturing, and the application of material as a road base material</td>
<td>6.17</td>
</tr>
<tr>
<td>Containers with a capacity ≤ 20 gals used to store organic material with a flash storage temperature less than 230°F</td>
<td>6.6.4</td>
<td>Emissions less than 1/6 day from units not included above</td>
<td>6.19</td>
</tr>
<tr>
<td>Containers used to store ungraded organic material, with an initial boiling point ≥ 230°F</td>
<td>6.6.5</td>
<td>Venting P/C natural gas from the sole purpose of pipeline and compressor repair and maintenance</td>
<td>7.2</td>
</tr>
<tr>
<td>Containers used to store fuel oils or non-air-Moved asphalt with specific gravity ≤ 0.9043</td>
<td>6.6.6</td>
<td>Non-structural repairs and maintenance to permitted equipment</td>
<td>7.3</td>
</tr>
<tr>
<td>Containers used to store petroleum distillates used as motor fuel with specific gravity ≤ 0.825</td>
<td>6.6.7</td>
<td>Emission of emissions ≤ 1.00 lb/day and 1.00 lb/year</td>
<td>7.4</td>
</tr>
</tbody>
</table>

No insignificant activities. (Check this box if no equipment in the above categories exist at your facility.)

TVFORM-093  
(Rev. September 2011)
Application Forms

• Complete TVFORM-004
  – List each permit unit in column 1.
  – Identify rules each permit unit is subject to in column 2.
  – Identify compliance status in column 3.
  – Describe how compliance is achieved in column 4.
  – If there is a future compliance date from an applicable rule state that in column 5.
San Joaquin Valley
Unified Air Pollution Control District

Title V Application - COMPLIANCE PLAN

In numerical order list all permitted equipment that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

<table>
<thead>
<tr>
<th>COLUMN 1</th>
<th>COLUMN 2</th>
<th>COLUMN 3</th>
<th>COLUMN 4</th>
<th>COLUMN 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit Number</td>
<td>Cite Applicable Requirement(s)</td>
<td>Compliance Status:</td>
<td>How Will You Comply With The Applicable Requirement?</td>
<td>Future Effective Date</td>
</tr>
</tbody>
</table>
| See Instructions | Specify the applicable Rule, Regulation, & Section number. | YES | Describe operational requirements and limitations, and/or monitoring, recordkeeping, & reporting protocol to assure compliance with the applicable requirements. See instructions for further details. | (List future effective dates of the applicable requirement, if any.) 
<p>| | | NO | If SUBSUMED, leave this column blank. | |
| | | EXEMPT | | | |
| | | SUBSUMED | | | |</p>
<table>
<thead>
<tr>
<th>COLUMN 1</th>
<th>COLUMN 2</th>
<th>COLUMN 3</th>
<th>COLUMN 4</th>
<th>COLUMN 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit Number</td>
<td>Cite Applicable Requirement(s)</td>
<td>Compliance Status:</td>
<td>How Will You Comply With The Applicable Requirement?</td>
<td>Future Effective Date</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District Rules 2520, 9.5.2.2 and 4305</td>
<td>YES</td>
<td>Existing permit condition 37: documentation and review of start-up operation records</td>
<td>NA</td>
</tr>
<tr>
<td>S-113-73</td>
<td>District Rules 2520, 9.5.2.2 and 4305</td>
<td>YES</td>
<td>Existing permit condition 37: documentation and review of start-up operation records</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-73</td>
<td>District Rule 2520, 9.5.7</td>
<td>YES</td>
<td>Existing permit condition 57: documentation and review of source testing records</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-78</td>
<td>District Rule 2520, 12.2</td>
<td>YES</td>
<td>Existing permit condition 39: reference condition - no action required</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-78</td>
<td>District Rule 2520, 12.2</td>
<td>YES</td>
<td>Existing permit condition 39: reference condition - no action required</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District Rules 2520, 9.5.2 and 4300</td>
<td>YES</td>
<td>Existing permit condition 1: documentation and review of monitoring sources</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District Rule 2520, 9.5.2, 9.1.2, and 4308</td>
<td>YES</td>
<td>Existing permit condition 2: documentation and review of monitoring sources</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District Rules 2520, 9.5.2 and 4306</td>
<td>YES</td>
<td>Existing permit condition 3: documentation and review of monitoring sources</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District NSR Rule, 4306 and 435</td>
<td>YES</td>
<td>Existing permit condition 4: documentation and review of source test results</td>
<td>NA</td>
</tr>
<tr>
<td>S-113-77</td>
<td>District NSR Rule and 4406</td>
<td>YES</td>
<td>Existing permit condition 5: documentation and review of source test results</td>
<td>NA</td>
</tr>
<tr>
<td>S-113-77</td>
<td>District NSR Rule and 4406</td>
<td>YES</td>
<td>Existing permit condition 6: documentation and review of source test results</td>
<td>NA</td>
</tr>
<tr>
<td>S-112-77</td>
<td>District NSR Rule and 4406</td>
<td>YES</td>
<td>Existing permit condition 7: documentation and review of equipment operation records</td>
<td>NA</td>
</tr>
</tbody>
</table>
Application Forms

• Complete TVFORM-005
  – Initial the circles of each truthful statement
  – Have the Compliance Certification form signed by the Responsible Official as described in the instructions.
  – For Initial TV Applications, leave the Compliance Certification dates blank
San Joaquin Valley
Air Pollution Control District

TITLE V COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[ ] INITIAL TITLE V PERMIT
[ ] PERMIT RENEWAL
[ ] NEW TITLE V PERMIT

COMPANY NAME: FACILITY ID: _____

1. Type of Organization: [ ] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility

2. Owner’s Name:

3. Agent to the Owner:

4. Compliance Certifications will be submitted on:

   year 1: __/__/____ year 2: __/__/____ year 3: __/__/____ year 4: __/__/____ year 5: __/__/____

   Other dates if required by regulations or compliance schedule:

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial each circle for confirmation):

[ ] Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s) which the source is in compliance as identified in the Compliance Plan.

[ ] Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term as identified in the Compliance Plan, on a timely basis.

[ ] Based on information and belief formed after reasonable inquiry, the source identified in this application is not in compliance at the time of permit issuance with the applicable federal requirement(s), as identified in the Compliance Plan, and I have attached a compliance schedule.

[ ] Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

[ ] Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the foregoing is correct and true:

__________________________________________________________
Signature of Responsible Official

__________________________________________________________
Date

__________________________________________________________
Name of Responsible Official (please print)

__________________________________________________________
Title of Responsible Official (please print)

Mail/ing Address: Central Regional Office * 3900 Chestnut Avenue * Fresno, California 93724-0144 * (559) 230-9000 * FAX (559) 230-6061
Application Forms

• Available at:
  http://www.valleyair.org/busind/pto/ptoforms/titlevidx.htm
General Permit Templates

• General Permit Templates are permits that have been developed by the District with input from EPA that includes all applicable conditions.

• The District has developed a facility-wide “Umbrella” template to include all administrative requirements.

• A facility will need only to submit a Template Qualification Form (last) page of #SJV-UM-0-3.

• There is a standard set of conditions.

• Public cannot comment on the conditions, only the source’s qualification to use the template.
Title V General Permit Template Qualification Form
for
Facility-wide Umbrella General Permit Template

District facility ID #____________________________________

To use this template, remove this sheet and attach to application. The conditions outlined in
this template will be placed on your Title V permit.

Any facility may use this facility-wide template as part of its Title V application.

Based on information and belief formed after reasonable inquiry: 1) the information on
this form is true and correct and 2) the facility certifies compliance with this template's
permit conditions

Signature of Responsible Official ___________________________ Date ______________________

Name of Responsible Official (Please Print) ____________________________

TQF-1
General Permit Templates

• All other general permit templates have been out-dated because the prohibitory rule requirements have changed frequently. However they may be used as a “guide” to address applicable requirements.
Streamlining Procedure

1. Provide a side-by-side comparison of the applicable requirements to be streamlined by listing key provisions from each requirement.

2. Based on the side-by-side comparison in step 1, select the most stringent emission limit or requirement.

3. Propose one set of permit conditions, called the streamlined requirements, which is to be placed on the Title V permit, assuring compliance with the most stringent emission limit; and contains appropriate monitoring recordkeeping, and reporting requirements.
## Streamlining Example

<table>
<thead>
<tr>
<th>Type of Requirement</th>
<th>Title of Requirement 1</th>
<th>Title of Requirement 2</th>
<th>Alternative Proposed Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Limit</td>
<td></td>
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<tr>
<td>Work Practice Standard</td>
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<td>Monitoring</td>
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<tr>
<td>Recordkeeping</td>
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<td>Reporting</td>
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<tr>
<td>Test Methods</td>
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</table>
### Streamlining Example

<table>
<thead>
<tr>
<th>Type of Requirement</th>
<th>District Rule 2201</th>
<th>40CFR60 Subpart KKKK &amp; Rule 4702</th>
<th>Alternative Proposed Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Limit</td>
<td>2.5 ppmv NOX @ 15% O2</td>
<td>25 ppmv NOX @ 15% O2</td>
<td>2.5 ppmv NOX @ 15% O2</td>
</tr>
<tr>
<td>Work Practice Standard</td>
<td>Fired only on PUC regulated natural gas</td>
<td>Fired on PUC quality natural gas</td>
<td>Fired on PUC regulated natural gas</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Continuous Emission Monitoring System (CEMS)</td>
<td>Water-to-fuel ratio and mass flowrate, or CEMS</td>
<td>Continuous Emission Monitoring System (CEMS)</td>
</tr>
<tr>
<td>Recordkeeping</td>
<td>Keep records for 5 years</td>
<td>None</td>
<td>Keep records for 5 years</td>
</tr>
<tr>
<td>Reporting</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Test Methods</td>
<td>EPA Method 7E, 20, ARB Method 100</td>
<td>EPA Method 7E or 20</td>
<td>EPA Method 7E, 20, or ARB Method 100</td>
</tr>
</tbody>
</table>
Proposed Conditions

- Emission rates from the CTG, except during startup or shutdown periods, shall not exceed any of the following limits: NOx (as NO2) - 8.03 lb/hr and 2.5 ppmvd @ 15% O2. [Rule 2201 and 4703]

- The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations. [Rule 2201, 4703, and 40CFR60.4400(1)(i)]

- The owner/operator shall perform a relative accuracy test audit (RATA) for the NOx, CO, and O2 CEMs as specified by 40 CFR Part 60, Appendix F, 5.11, at least once every four calendar quarters. [District Rule 1080]

- Results of the CEM system shall be averaged over a one-hour period for NOx emissions and a three-hour period for CO emissions using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13. [District Rule 4703, 5.1, 6.4 and 40CFR60.13]

- Turbine shall only be fired with PUC regulated natural gas. [District Rule 4102]
Example – GHG applicability

Source with natural gas-fired boilers and a facility-wide fuel limit of 2,450,000 MMBtu/yr (to stay below the NOx major source threshold)

Emission factors and global warming potential are:

<table>
<thead>
<tr>
<th>GHG</th>
<th>EF (lb/MMBtu)</th>
<th>GWP</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td>116.5</td>
<td>1</td>
</tr>
<tr>
<td>CH₄</td>
<td>0.002</td>
<td>21</td>
</tr>
<tr>
<td>N₂O</td>
<td>0.0002</td>
<td>310</td>
</tr>
</tbody>
</table>

1. Calculate CO₂ₑ to see if > 100,000 tpy
2. Calculate GHG (mass) to see if > 100 tpy
Example, cont.

Step 1 – Calculate CO\textsubscript{2e}:

\[ \text{CO}_2 = 2,450,000 \times 116.5 \times 1/1 \times 1/2000 \]
\[ = 142,712.5 \text{ tons CO}_2\text{e} \]

\[ \text{CH}_4 = 2,450,000 \times 0.002 \times 21/1 \times 1/2000 \]
\[ = 51 \text{ tons CO}_2\text{e} \]

\[ \text{N}_2\text{O} = 2,450,000 \times 0.0002 \times 310/1 \times 1/2000 \]
\[ = 76 \text{ tons CO}_2\text{e} \]

\[ \text{CO}_2\text{e} = 142,712.5 + 51.5 + 76 = 142,840 \text{ tons} \]

> 100,000 tons/year, GHG is regulated for this facility
Example, cont.

Step 2 – Calculate GHG mass:

\[
\begin{align*}
\text{CO}_2 &= 2,450,000 \times 116.5 \times \frac{1}{2000} \\
&= 142,712.5 \text{ tons CO}_2 \\
\text{CH}_4 &= 2,450,000 \times 0.002 \times \frac{1}{2000} \\
&= 2.5 \text{ tons CH}_4 \\
\text{N}_2\text{O} &= 2,450,000 \times 0.0002 \times \frac{1}{2000} \\
&= 0.3 \text{ tons N}_2\text{O}
\end{align*}
\]

\[
\text{GHG} = 142,712.5 + 2.5 + 0.3 = 142,715.3 \text{ tons}
\]

> 100 tons/year, Major Source for GHG
Title V Timelines

• 7/1/2011: Step 2 of EPA Tailoring Rule takes effect, giving sources 1 year to submit applications

• 6/28/2012: major sources of GHG must submit a complete Initial Title V application.
Additional Information

Application forms, fact sheet and umbrella template are posted at the following page:

http://www.valleyair.org/busind/pto/ptoforms/titlevidx.htm
Additional Information

Please call any of our regional Small Business Assistance (SBA) hotlines:

North: (209) 557-6446
Central: (559) 230-5888
South: (661) 392-5665

Jim Swaney: jim.swaney@valleyair.org
Martin Keast: martin.keast@valleyair.org
(559) 230-5900