



**Workshop DD**  
**Title V Permit**  
**Total Compliance Certification**



# Presenters



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# Topics



- Understanding the Permit
- Identifying Compliance Measures for Permit Conditions
- Auditing Compliance
- Certifying Compliance
- Case Histories



# Understanding the Permit Contents and Structure



- Plant-wide requirements
- Requirements specific to emission units
- General requirements
- Federal/state enforceability versus State enforceability only



# Understanding the Permit Parts/Sections



- Facility/plant identification section
- Emission limits and operating restrictions
- Testing requirements
- Recordkeeping and reporting
- Miscellaneous conditions
- General conditions



# Understanding the Permit

## Example State Permits



- Ohio
- Indiana
- Kentucky
- Georgia



# Compliance Measures

## How Do I Comply?



- Conditions specific to facility and emission units
- General requirements
- Ambiguous conditions
- Linked conditions
- Conditions with factual errors
- Conditions with typographical errors



# What is Being Certified



- Emission limits
- Usage/consumption limits
- Operating parameter requirements
- Material/fuel quality and composition limits
- Emission testing requirements
- Monitoring requirements
- Recordkeeping requirements
- Reporting requirements
- Non-specific and general requirements



# What is Being Certified

## Emission Limits



- Specific emissions limitation for individual emission units
- Short-term (e.g., hourly) and long-term limitations
- Basis for compliance
  - Emission test data
  - MSDS/material analyses
  - Engineering assumptions/calculations
  - Documentation and supporting data



# What is Being Certified Usage/Consumption Limits



- Fuel quantity limitations
- Material usage/throughput/production limitations
- Group or facility-wide limitations
- Calendar duration limits
- Rolling period limitations



# What is Being Certified

## Operating Parameters



- Control equipment parameters
  - Baghouse/cyclone pressure drop
  - Scrubber flow rate, pressure drop, fan amperage
  - ESP voltage
  - Control equipment downtime
  - Incinerator temperature
- Emission unit parameters
  - Operating mode
  - Operating period restrictions



# What is Being Certified

## Fuel/Material Quality and Composition



- Fuel quality requirements
  - Sulfur and ash content
  - Heating value
- VOC/HAP content of coatings
- Process material composition requirements
  - VOC content of process additives
  - Photochemically reactive (PCR) materials



# What is Being Certified

## Monitoring Requirements



- Continuous emission monitoring systems
- Monitor calibration
- Predictive emission monitoring systems using operating parameters
- Monitoring of fuel quality and material composition parameters
- Monitoring of control equipment parameters
- Monitoring of process operating parameters (operating hours, usages, visible emissions)



# What is Being Certified

## Recordkeeping Requirements



- Completeness of required records
  - Records include all parameters required by the permit
  - Records are available for the stated operating frequencies
- Availability of records
- Maintenance of records for 5 years
- Electronic and paper records



# What is Being Certified

## Reporting Requirements



- Excess emissions, exceedances, and/or excursions and permit deviations
- Control equipment malfunction reports
- Performance test and ITT reports
- Portable source relocation
- Required reports are filed by stated dates and to appropriate agencies



# What is Being Certified

## Reporting Requirements



- Reports are submitted in recommended format with specified information
- Supporting data included as required
- Refiling/correcting previously filed reports
- Including previous reporting errors as deviations



# What is Being Certified

## Non-Specific and General Requirements



- Not otherwise reported
- Emergency Reduction Plans (ERPs), Preventive Maintenance Plans (PMPs), RMPs, Ozone depleting substances
- Any applicable emission limitation (not expressly included in the permit)
  - “Insignificant activities” with existing PTI conditions
  - Process weight rate limitations
  - Combustion pollutant emission limits contained in the state regulations
- Any work practice standards



# Certification Issues



- Permit typographical errors
- Requested administrative modifications
- Errors in the application documents
- Conditions/limitations that are now found to be onerous or difficult
- Issues requiring legal interpretation
- Issues that are in conflict with other permits



# Certification Process



- Condition by condition review
- Analyze potential compliance issues
- Legal interpretation and concurrence
- Reportable deviations



# Reporting Deviations



- Forms and documents needed for reporting deviations
- Need to correct reports that have been already filed
- Basis for deviations and supporting data
- Corrective actions
- Internal controls



# Understanding the Permit Review Tools



- Search database
- Highlighting key requirements
- Dividing responsibilities



operation during the test is at or near the maximum actual firing rate.  
[391-3-1-.02(3)(b)]

4.2.3  
Testing

Within twelve ~~(12) months~~ <sup>October 2003</sup> of the date of issuance of this permit, the Permittee shall conduct performance tests for **Particulate Matter** and **Nitrogen Oxides (Nox)** emissions from Boiler **B002**. Following the first performance test for PM and NO<sub>x</sub> emissions, performance tests shall be conducted at least **once every two** years. The tests shall be performed under the following conditions:  
[391-3-1-.02(6)(b)1]

See modification 2/6/04 and EPD letter xxxx

See modification (1/24/03) & EPD letter 4/7/03

Testing

a. The steam generator is firing a combination of **wood bark, peanut hulls, Pecan hulls, and fines**, with the percentage of peanut hulls to be at least the highest level expected until the next test. Should the Permittee expect to fire **plastic waste** prior to the next test, the plastic waste would be fired at the highest rate expected until the next test.

Testing

b. The steam generator test shall be performed at the **maximum operating rate** expected until the next test. The Permittee shall maintain steam production records to verify the operating rate of the boiler during each test.

Testing

c. The wet electrostatic precipitator serving the steam generator shall be operated during the test at the **lowest total kilovolts** and at the **lowest water flow** rates to the pre-quench chamber.

Testing

d. One test run during each performance test shall be conducted while **grate raking** and **soot blowing**. The Permittee shall report the frequency and duration of soot blowing and grate raking during normal operation with each test report.

e. One test run during each performance test shall be conducted during the wash cycle.

Recordkeeping

4.2.4 For Boiler **B003** the Permittee shall, upon request, determine compliance with the **Nitrogen Oxides (Nox)** emission limitation in Condition **3.3.3 (b)** through the use of a 30-day performance test using the Continuous Monitoring System (CMS) required by Condition **5.2.1 (b) (a)**. For the purpose of monitoring during periods when performance tests are not

|   |   |
|---|---|
| <p>3.3.10 The <u>Permittee</u> shall not fire fuel oil in Boilers B001 and B002 and Paper Machine Burners 1APD, 2APD, 3APD, 3AYD, 4APD and 4AYD which contains more than 0.34 percent, by weight, sulfur.</p>   | <p><b>Review fuel oil supplier test data for each shipment and P&amp;GPP monthly quality assurance testing data.</b> Maximum sulfur content was <b>0.20 %.</b><br/> <b>Confirm:</b> No exceedances noted during the reporting period.</p> <p>Reviewed supplier certifications for fuel oil. No deviations observed. January 14, 2003 fuel shipment sulfur content analysis results were included with the December 2002 shipment records (both from the same tank). Also reviewed monthly fuel oil analysis data conducted by the plant. The sulfur content results for the in house analysis were also below the allowable permit limit of 0.34%. (Noted significant variations in the supplier certification data and the analysis results conducted by the plant.)</p> |
| <p>[40 CFR 52.21, 391-3-1-.02(2)(g)(subsumed)]</p>  |   |
| <p>3.3.11 The <u>Permittee</u> shall not discharge or cause the discharge into the atmosphere from Boiler B002 any gases which:</p>   |   |
| <p>[40 CFR 52.21 Avoidance]</p>   |   |
| <p>a. Contain particulate matter in excess of 0.108 pounds per million Btu heat input.</p>  | <p><b>Review B002 PM test performed in November 2003.</b></p> <p>Reviewed October/November stack test results. The measured emission rates were well below the allowable rate of 0.108 lb/MMBtu.</p>  |
| <p>b. Contain nitrogen oxides in excess of 0.30 pounds per million Btu heat input.</p>  | <p><b>Review B002 NOx monitoring in January, April, July, and October of 2003.</b></p> <p>Reviewed quarterly CTM-30 monitoring results for 2003. No deviations observed.</p>  |
| <p>3.3.12 The <u>Permittee</u> shall not discharge or cause the discharge into the atmosphere from any Paper Machine stack (Emission Unit ID Nos. 1APM, 2APM, 3APM, 4APM, 5APM and 6APM) any gases that exhibit visible emissions, equal to or greater than 20 percent opacity (6 minute average), except for one 6 minute period per hour of not more than 27 percent opacity.</p> | <p>No specific opacity testing required. <b>Requested deletion of visible emission requirements for 1APM in a letter dated 1/24/03. Review papermachine scrubber pressure loss, liquid flow rates, and any malfunctions. Note: 4AVS flow rate @ 163 gpm in January of 2003, slightly above limit (162 gpm, 90% of 180 gpm).</b></p> <p>Reviewed scrubber operating parameter records for 2APM-6APM that indicated no deviations. Also reviewed daily visible emission logs for 1APM. No visible emissions for 1APM were observed.</p>   |



| Source ID | Control Equipment    | Parameter to be Monitored | Data Required                   | Limit/Data Compared to:   | Monitoring Measuring Frequency                   | Frequency of Data Collection (Record)            | Data Manipulation/Calculation  | Required Reports  | Reporting Frequency                        |
|-----------|----------------------|---------------------------|---------------------------------|---|--|--|--|-------------------|--|
| P12       | Venturi Scrubber C12 | Fuel usage                | Amount fired                    |   |  | Monthly  |  |                   |  |
| P12       | Venturi Scrubber C12 | Pressure drop             | Pressure drop (inches of water) | <a href="#">No less than 7.0 in. water</a>  | Once every 8 hours or once per day of operation. | Once every 8 hours or once per day of operation. |  | Monitoring Report | Semiannual report by Janua 30 and July 30. |
|           |                      | Liquid flow rate          | Flow rate (gpm)                 | <a href="#">No less than 150 gpm (Construction Permit 03-POY-180 requires no less than 204 gpm)</a> | Once every 8 hours or once per day of operation. | Once every 8 hours or once per day of operation. |  | Monitoring Report | Semiannual report by Janua 30 and July 30. |
| P12       | Venturi Scrubber C12 | Fuel sulfur content       | Sulfur content (wt %)           | <a href="#">0.35 % by wt (Construction Permit 03-POY-180 has sulfur content limit of 0.03%)</a>     | Each shipment                                    | Each shipment                                    | Supplier certification   |                   |  |
| P12       | Venturi Scrubber C12 | Fuel usage                | Type fired                      | NG, #2 fuel oil   |  | Monthly  | Onsite technical drawings and fuel usage records.  |                   |  |
| P12       | Venturi Scrubber C12 | Fuel usage                | Type fired                      | NG, #2 fuel oil (Only NG in duct burner)  |  | Monthly  | Onsite technical drawings and fuel usage records.  |                   |  |
| P12       | Venturi Scrubber C12 | Fuel usage                | Amount fired                    |   |  | Monthly  |  |                   |  |
| P12       | Venturi Scrubber C12 | Pressure drop             | Pressure drop (inches of water) | <a href="#">No less than 6.5 in. water</a>  | Once every 8 hours or once per day of operation. | Once every 8 hours or once per day of operation. |  | Monitoring Report | Semiannual report by Janua 30 and July 30. |
|           |                      | Liquid flow rate          | Flow rate (gpm)                 | <a href="#">No less than 204 gpm</a>  | Once every 8 hours or once per day of operation. | Once every 8 hours or once per day of operation. |  | Monitoring Report | Semiannual report by Janua 30 and July 30. |
| P12       | Venturi Scrubber C12 | Fuel sulfur content       | Sulfur content (wt %)           | <a href="#">0.03 % by wt</a>  | Each shipment                                    | Each shipment                                    | Supplier certification indicating name of supplier, sulfur content, methods used to test sulfur content, and compliance statement regarding sulfur content |                   |  |



R. Stratospheric Ozone Protection

1. Federal Requirements. (Call 1-800-296-1996 for information)

a. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:

*Verify that no ODS are used/contained in the facility products.*

- 1) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to section 82.106.
- 2) The placement of the required warning statement must comply with the requirements pursuant to section 82.108.
- 3) The form of the label bearing the required warning statement must comply with the requirements pursuant to section 82.110.
- 4) No person may modify, remove or interfere with the required warning statement except as described in section 82.112.

b. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in 40 CFR Part 82, Subpart B:

*Review whether facility personnel maintain, service, repair, or dispose of refrigeration equipment. Review if facility has any refrigeration equipment containing 50 or more pounds of Class I or Class II substances. If so, facility must review and confirm compliance with 40 CFR 82 Subpart F requirements.*

- 1) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to section 82.156.
- 2) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to section 82.158.
- 3) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to section 82.161.
- 4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to section 82.166. (The term, "MVAC-like appliance", is defined in section 82.152)
- 5) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to section 82.156.
- 6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to section 82.166.

c. If the permittee manufactures, transforms, imports or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

*Confirm facility does not manufacture, transform, import, or export any Class I or Class II substances.*

d. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

*Confirm facility personnel do not service MVACs or MVAC-like appliances. (MVAC-like appliances include air-conditioning equipment in construction vehicles such as bulldozers, front-end loaders, etc.) If they do, facility must review and confirm compliance with 40 CFR 82 Subpart B requirements.*



# Compliance Status Examples



- The Permittee shall not discharge or cause the discharge into the atmosphere, from Boilers B001, B002 and B003, any gases which exhibit visible emissions, the opacity of which is equal to or greater than 20 percent, except for one 6 minute period per hour of not more than 27 percent opacity.
- ***Review ESP voltage and prequench chamber flow rates and any malfunctions for boilers. Confirm:*** No specific opacity testing required. No excursions from ESP voltage and prequench chamber flow rates were noted and there were no malfunctions of the B002 ESP during the reporting period. There were no malfunctions of the boilers during the reporting period.  
Reviewed operating parameter records for B002. No deviations observed. There were no reported malfunctions of B001 and B003.



# Compliance Status Examples



- The Permittee shall not cause, let, suffer, permit or allow the emission of fly ash and/or other particulate matter from Boilers B001 and B003 in amounts equal to or exceeding the following:

- 

$$P = 0.5 \left( \frac{10}{R} \right)^{0.5}$$

The allowable emission rates per the equation equal 0.116 and 0.128 lb/MMBtu for B001 and B003, respectively. The AP-42 factor for gas firing is 7.6 lb/million cf (filterable + condensable) which is equal to 0.0076 lb/MMBtu. The AP-42 emission factor for No. 2 oil is 2 lb/1000 gallons, which equals to 0.0143 lb/MMBtu heat input. The AP-42 factors are lower than the equation allowable emission rates. Therefore, B001 and B003 are in compliance with this condition.



# Compliance Status Examples



- The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
- This requirement applies to all other monitoring devices besides the B003 CMS. P&GPP is currently compiling copies of manufacturer specifications for calibration of the monitoring devices for Papermachine scrubber differential pressure and flow rate, B002 ESP voltage and prequench chamber flow rate, Oxone and Consumer Wraps baghouses differential pressure, and fuel usage. Records of monitoring device calibration will be maintained.
- Dennis Barthelemy has obtained X001 and Thermacare monitoring device calibration data as required by this condition. He has also obtained necessary records for papermachines.
- Mark Hines has compiled required records for B002 and B003.



# Compliance Status Examples



- The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage of material containing volatile organic compounds at all times.
- ***Review any spills occurred and spill prevention training.***  
***Confirm:*** There were no significant spills of VOC materials or VOC-containing wastes during the reporting period. Spill prevention training of employees was conducted. The Stormwater Prevention Plan has “Best Management Practice” that indicates how to handle chemicals/materials.
- It was indicated that there were no environmental incidences in 2003 involving spills or other activities impacting air emissions.



# Compliance Status Examples



- In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emissions control equipment for a period of four hours or more which results in excessive emissions.
- ***Confirm: There were no malfunctions of process production equipment or air pollution control equipment during the reporting period.***
- Discussions with the plant personnel indicated no incidences during 2003 that resulted in excess emissions.



# Compliance Status Examples



- The Permittee shall submit written reports of any failure to meet an applicable emission limitation or standard contained in this permit and/or any failure to comply with or complete a work practice standard or requirement contained in this permit which are not otherwise reported in accordance with conditions 6.1.4 or 6.1.2.
- **Confirm:** There were no other deviations from emission limitations, emission standards, or work practice methods during the reporting period. See Semi-annual Reporting Form.
- The first semi-annual 2003 report was submitted on 7/21/03 and indicated no deviations.
- Suggested that all reports and notifications be sent Certified Mail-Return Receipt Requested to verify 30-day requirements.



# Compliance Status Examples



- The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the Permit, and the emissions resulting from those changes.
- Records of the installation or removal of any equipment considered as an “insignificant activity” must be maintained. *Review all installation or removal of “insignificant activities” during the reporting period.*
- P&GPP will submit a modification request listing the outside warehouse space heaters as an insignificant activity.



# Compliance Status Examples



- Any application form, report, or compliance certification submitted pursuant to this Permit shall contain a certification by a responsible official of its truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- **Deviation:** The responsible official was unavailable and did not sign the off-permit modification request letter dated June 19, 2003 for the Wood Hogger.
- At the time, the risks of the issue were weighed and submitting the modification letter on time was more important than having the responsible official's signature. From now on, P&GPP will clarify the procedures for signatures and determine what does or does not need a responsible official's signature. If the responsible official is unavailable in the future, the document will be sent to Cincinnati P&G Corporate for a signature.



# Compliance Status Examples



- The Permittee shall include the records required to be maintained by condition 5.3.2 with the submission of the quarterly report as required by condition 6.1.4 of this permit.
- ***The quarterly reports under Condition 6.1.4 of the Title V permit were submitted on January 29, April 23, July 21, and October 24 of 2003.***  
It was verified that the required records are being maintained.



# Compliance Status Examples



- No person may cause, allow, or permit particulate matter to be emitted into the ambient air which substantially contributes to exceeding of an air standard, or creates air pollution.
- Confirm compliance with PM emissions and operational limitations in Part I A.1.a, B.1.a, C.5.a, D.1.a, F.1.a, H.1.a, L.1.a, M.5, and M6. Monitor management of any construction, on-site maintenance, or other similar activities for reasonably available work practices.



# Compliance Status Examples



- No person may cause, allow or permit emissions of carbon monoxide to the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.
- Confirm boilers, paper machine dryers, and diesel powered air compressors have been maintained in proper operating condition.



# Compliance Status Examples



- No person may cause, allow, or permit nitrogen oxides or nitrogen compounds to be emitted to the ambient air which substantially contribute to the exceeding of an air standard or cause air pollution.
- Confirm boilers, paper machine dryers, and diesel powered air compressors have been maintained in proper operating condition. Confirm compliance with NO<sub>x</sub> emission limitations in Part I B.3.a and C.1.a.



# Compliance Status Examples



- When the department requires instrumentation to monitor the operation of air pollution control equipment, or to monitor source performance, the instrument shall measure operational variables with the specified accuracy.
- The accuracy requirements have been incorporated in the Part I specific conditions. Verify that the pressure drop monitors are calibrated annually to an accuracy of + or - 1 inch of water. Verify that 11F-14F papermachines, converting operations, and trim vey system scrubber liquid flow rate monitors are calibrated annually to an accuracy within 5 %. Verify that the water level monitors for converting operations Venturi Scrubbers C43 and C44 are calibrated annually for accuracy within 5 %.



# Compliance Status Examples



- The permittee shall furnish to the Department, within a reasonable time specified by the Department, any information that the Department may request in writing to determine whether cause exists to revise, revoke or suspend this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Department copies of records required to be kept pursuant to this permit.
- Review letters, emails, and other correspondence from the Department requesting information and related response documents.



# Compliance Status Examples



- The permittee shall submit compliance certifications to the Department, and part 70 sources shall also submit this compliance certification to the United States Environmental Protection Agency. (s. NR 439.03(1)(c) and (9),
- Review that the compliance certification was completed and mailed as Certified Mail - Return Receipt Requested. Verify that copies are mailed to U. S. EPA.





# P&G Albany Case History

