



**EPA Office of Compliance  
Enforcement Targeting and Data Division**

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Media Systems and Support Section, Data Systems and Information Management Branch, Enforcement Targeting and Data Division, Office of Compliance, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460

# Electronic Reporting Tool

Software to Standardize  
Source Test Planning, Reporting  
and Assessment

Ron Myers

OAQPS/SPPD/MPG

6/14/2006



# Presentation Topics

- Test Reporting History
- Test Report Workflow
- Test Report Uses
- Problem Areas
- A Solution of One
- Future



# Testing Philosophy

- **Credibility of Performance Requires**
  - Measurement of Emissions
  - Monitoring of Critical Parameters
  - Verification of Collection Methods
  - Validation of Reported Data
- **Otherwise We are Only Guessing**



# History

- 1970's
  - Paper, pencil, nomographs, slide rules
- 1980's
  - Paper, pencil, nomographs, calculators
- 1990's
  - Paper, pencil, computers



# Test Report Workflow

- Draft Plan - paper
- Wait for comment – paper approval
- Conduct test – paper report
- State Agency observes test – paper
- Assess validity of report
  - Transcription of data
- Acceptance of data – paper report
- Report results to EPA
  - Transcription of information



# Test Report Uses

- Compliance certification
- ~~Permit applications or revisions~~
- ~~Permit fee determination~~
- ~~Emissions Inventory~~
- ~~Performance Information~~
- ~~Modeling~~
- ~~Risk Assessment~~
- ~~Environmental Justice Issues~~
- ~~TRI – CERCLA – SARA~~
- ~~AIRS AFS reporting~~
- ~~Complaint Evaluations~~



# Areas of Opportunity

- Improve coordination
- Reduce duplicative work
- Standardize reports
- Improve information flow
- Reduce storage space
- Improve documentation
- Improve & standardize QA



# The Electronic Reporting Tool

- Replaces resource intensive manual manipulation of paper reports
- Provides for single location for planning, calibration, field sampling, field inspection, data quality assessment documentation
- Highlights need for most critical data requirements
- Facilitates coordination between source and State
- Standardizes several components of documentation
- Provides for electronic transmission of information





# Open Discussion

- QUESTIONS?







## ERT - Main Menu

<p><b>Setup / Test Plan</b></p> <p>Facility Info</p> <p>Process Info</p> <p>Locations / Methods</p> <p>Signatures</p> <p>Full Test Plan</p>	<p><b>Test Data</b></p> <p>Import Field Run Data</p> <p>Input Lab Data</p> <p>Process Data</p> <p>Run Details</p> <p>Tester Comments</p> <p>Attachments</p>	<p><b>Test Plan Review</b></p> <p>Test Plan Review</p> <p>Test Data Review</p> <p>Observer Comments</p> <p>Test Reviewer Comments</p> <p>Test Review</p> <p>DQQ's</p>	<p><b>Printed Reports</b></p> <p>Test Plan</p> <p>Test Plan Review</p> <p>Test Report</p> <p>Test Report</p> <p>Report Signatures</p>
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Select Project Data Set	Create New Project Data Set	Save Project Data Set As	Compact Project Data Set
Current Project Data Set:	D:\My Documents\ert\EWS Example Data.mdb		

**Project Submittal History:**

	Action	SubmitDate	SubmittedTo	SubmittedFrom	Comment
▶	Submit Test Plan	5/15/2005	NC Agency	MACTEC	1st Final
	Approve Test Plan	5/14/2005	MACTEC	NC Agency	Approved
*					

Record: ⏪ ⏴ 1 ⏵ ⏩ ⌘ of 2



Test Plan

Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

- Facility/Permit
- Regulations
- Process/APCD
- Locations/Methods
- Methods cont.
- Audit/Calibrations
- Schedule
- Signatures
- Attach.

Facility Name:

Environ Mental Concious Furniture Co.

Address:

666 66th St N Ave

City:

Boisenberry

State/Zip:

NC 27854-4866

Contact:

Enviro M. Concious

Phone:

(919) 666-2626

Fax:

(919) 666-6262

email:

enviro.concious@enviroconcious.com

Industry /SCC/NAIS:

30701415

FRS:

27562

Latitude:

Longitude:

Testing Company:

Monitoring Policy Group

Address:

OAQPS/SPPD (D205-05)

City:

Research Triangle Park

State/Zip:

NC 27711

Contact:

Barrett Parker

Phone:

(919) 541-5635

Fax:

(919) 541-1065

email:

parker.barrett@epa.gov

Air Permit Number: NC666-1234

AFS Number:

Permitted State Source ID/Name: DR2 Dryer 2

Permitted Maximum Process Rate: 175 Tons per Hour

Maximum Normal Operation Process Rate: 150 Tons per Hour

Target Process Rate for Testing: 125 Tons per Hour

Next Page



Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

Facility/Permit Regulations Process/APCD Locations/Methods Methods cont. Audit/Calibrations Schedule Signatures Attach.

**1. What is the specific purpose for the proposed testing?**

"Determine compliance with NSPS and State SIP emissions limitations  
Establish CAM monitoring parameters as stated in Title V permit"

**2. List all state and federal regulations that apply to the proposed testing:**

"40CFR60 Subpart XXX - Filterable PM limitation of 0.019 lb/ton of dried wood  
25NC666.234-2 - Filterable PM limit of 0.5 lb/ton feed  
25NC7725-3 - Condensable Organic PM limit of 0.5 lb/ton feed"

**3. Will the test results be used for other regulatory purposes (e.g., emission inventories, permit applications, etc.) beyond that stated above? If yes, explain.**

Results will be used for establishing total PM (filterable and condensable) emissions as required by State for Consolidated Emissions Reporting

Next Page

Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

Facility/Permit | Regulations | **Process/APCD** | Locations/Methods | Methods cont. | Audit/Calibrations | Schedule | Signatures | Attach.

**4a. Enter the process data to be documented during testing. (note: required before test data entry)**

Process Parameter	Units	Target Value	comments
Natural Gas Fuel Flow	Ft <sup>3</sup> /min	25	
Dryer Outlet Temperature	deg F	325	
Dryer Wood Feed	Tons/hr	125	

Record: 1 of 5

**4b. Enter the process lab data to be documented during testing. (note: required before test data entry)**

Analysis Required	Units	Comments
Wood Moisture Content of feed material	percent	
Wood Moisture Content of product	percent	
Wood density of feed material	lb/ton	
Wood density of product	lb/ton	

Record: 1 of 4

**5a. Please give a brief description of the source (including control equipment) and attach source or process flow diagram:**

"PROCESS DESCRIPTION  
 Figure 2-1 illustrates the basic processing steps for OSB production. The steps are:  
 Logs are slashed, debarked, cut into shorter lengths, and sliced into thin wafers.

**5b. Control Devices: (note: required before test data entry)**

Control Device Parameters	Units	Target Value	comments
PM - Electrified Filter Bed - Filter bed voltage, current, and temperature		0	
PM - Electrified Filter Bed - Gas flow rate		0	
PM - Electrified Filter Bed - Inlet gas temperature		0	

Record: 1 of 5

Column widths may be changed by user.

Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

Facility/Permit Regulations Process/APCD Locations/Methods Methods cont. Audit/Calibrations Schedule Signatures Attach.

6. Please enter sampling location information. (all dimensions in inches)

(note: required before test data entry)

	Location	Num. Points	# of Ports	Rnd. Duct Diam.	Duct Len.	Duct Width	Equiv. Diam	Up Stream Dist	Dwn
▶	Inlet	16	2	19.5	0	0	0	280	
	stack	16	2	72	0	0	0	280	
*		0	0	0	0	0	0	0	

Record: [Navigation icons] 1 of 2

(Note: UpStreamDist = Distance from upstream disturbance  
DwnStreamDist = Distance from downstream disturbance )

7. Please provide the following information for each test parameter.

(note: required before test data entry)

	Location	Target Parameter	Test Method	Num Test Runs	Test Run Duration	Comments
▶	Inlet	Filterable Particulate	m5	3	64	
	stack	Filterable Particulate	m5	3	64	one train for all
	stack	Inorganic Condensable Particulate	m202	3	64	
	stack	Organic Condensable Particulate	M315	3	64	
	stack	Total Particulate		3	64	
*				0	0	

Record: [Navigation icons] 1 of 5

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Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

Facility/Permit Regulations Process/APCD Locations/Methods **Methods cont.** Audit/Calibrations Schedule Signatures Attach.

8. Describe below or attach complete documentation of all modifications and/or deviations to the applicable test methods. If alternative methods requested, attach documentation of request AND approval, including dates.

Instead of using the procedures prescribed in NC rule 25NC7725-3, we propose using a combination of Method 202 and Method 315 procedures. These include purging with Nitrogen and the use of Methelene Chloride as the extracant. In addition, we propose to use acetone as a finish solvent following the Methelene

9. Does the proposed sampling location meet the minimum EPA Method 1 criteria for acceptable measurement sites? Please list below or attach the supporting documentation.

Yes  No

10. Has absence of cyclonic flow been verified per EPA Method 1 (Section 2.4)? If no, absence of cyclonic flow must be verified prior to testing. If yes, please attach supporting documentation.

Yes  No

Cyclonic flow will be determined as part of the initial velocity traverse

11. Select the method that will determine the oxygen concentration :

M3A-instrumental

Test Plan Review

Test Plan Title: Emissions Testing of Wood Chip Dryer 2

Test Plan Date: 5/25/2005

State Review Accepted (Y/N)

- Facility/Permit
- Regulations
- Process/APCD
- Locations/Methods
- Methods cont.
- Audit/Calibrations
- Schedule
- Signatures
- Attach.

Facility Name:

Environ Mental Concious Furniture Co.

Address: 666 66th St N Ave

City: Boisenberry

State/Zip: NC 27854-4866

Contact: Enviro M. Concious

Phone: (919) 666-2626

Fax: (919) 666-6262

email: enviro.concious@enviroconcious.com

Industry /SCC/NAIS: 30701415

FINS: 27562

Latitude:

Longitude:

Testing Company:

Monitoring Policy Group

Address: OAQPS/SPPD (D205-05)

City: Research Triangle Park

State/Zip: NC 27711

Contact: Barrett Parker

Phone: (919) 541-5635

Fax: (919) 541-1065

email: parker.barrett@epa.gov

Facility Info:

Yes  No

Add/View Comment

Test Co. Info:

Yes  No

Add/View Comment

Source info:

Yes  No

Add/View Comment

Air Permit Number: NC666-1234

Permitted Source ID and Name: DR2 Dryer 2

Permitted Maximum Process Rate: 175 Tons per Hour

Maximum Normal Operation Process Rate: 150 Tons per Hour

Target Process Rate for Testing: 125 Tons per Hour

Next Page

## Run Data Details

Facility: Environ Mental Concious Furniture Co.

Permitted Source ID/Description: DR2 Dryer 2

Location: stack

Add New Run Data

Delete Run Data

Header Data | Point Data | Lab Data | Sampling/Stack Data Results | Emissions

**RunNumber:**

1

**RunDate:**

12/23/2004

**JobNumber:**

s608.001

**Method:**

m5/202

	BeginTime	EndTime	Clock	GasMeter	Velocity	StackTemp	DryGasInlet	DryGasOu
▶	0	4	12:02:00 PM	703.127	0.32	167	79	
	4	8	12:06:00 PM	705.411	0.32	168	80	
	8	12	12:10:00 PM	707.696	0.33	169	80	
	12	16	12:14:00 PM	709.980	0.33	169	81	
	16	20	12:18:00 PM	712.265	0.27	169	83	
	20	24	12:22:00 PM	714.549	0.27	169	84	
	24	28	12:26:00 PM	716.834	0.22	167	86	
	28	32	12:30:00 PM	719.118	0.22	166	87	
	32	36	12:41:00 PM	721.403	0.3	164	88	
	36	40	12:45:00 PM	723.687	0.3	168	89	
	40	44	12:49:00 PM	725.972	0.31	169	90	
	44	48	12:53:00 PM	728.256	0.31	169	91	
	48	52	12:57:00 PM	730.540	0.28	169	92	
	52	56	1:01:00 PM	732.825	0.28	169	93	

# Run Data Details

Facility:

Permitted Source ID/Description:

Location:

**RunNumber:** 
**RunDate:** 
**JobNumber:** 
**Method:**

**Sampling Train Parameters:**

NetRunTime:	<input type="text" value="34"/>
NetTravPts:	<input type="text" value="16"/>
Dn:	<input type="text" value="0.297"/>
Cp:	<input type="text" value="0.84"/>
Y:	<input type="text" value="0.991"/>
Pb:	<input type="text" value="30.04"/>
DeltaH:	<input type="text" value="1.07"/>
Vm:	<input type="text" value="36.980"/>
tm:	<input type="text" value="84.66"/>
Vmstd:	<input type="text" value="35.762"/>
Vlc:	<input type="text" value="461.9"/>
Vwstd:	<input type="text" value="21.74"/>
% I:	<input type="text" value="107.0"/>

**Stack Gas Parameters:**

% H2O:	<input type="text" value="37.81"/>	Vs:	<input type="text" value="34.44"/>
% H2Osat:	<input type="text" value="38.04"/>	Dstk:	<input type="text" value="72"/>
Mfd:	<input type="text" value="0.6219"/>	Dwdth:	<input type="text" value="0"/>
% CO2:	<input type="text" value="7"/>	Dlngth:	<input type="text" value="0"/>
% O2:	<input type="text" value="13.2"/>	As:	<input type="text" value="28.274"/>
% CO + N2:	<input type="text" value="79.8"/>	Qsd:	<input type="text" value="30,697.9"/>
Fo:	<input type="text" value="1.10"/>	Qaw:	<input type="text" value="58,425.4"/>
Md:	<input type="text" value="29.65"/>		
Ms:	<input type="text" value="25.25"/>		
Pg:	<input type="text" value="-0.18"/>		
Ps:	<input type="text" value="30.03"/>		
ts:	<input type="text" value="167.25"/>		
DeltaPavg:	<input type="text" value="0.278"/>		

Record:       of 3



# Run Data Details

Facility:

Permitted Source ID/Description:

Location:

Header Data | Point Data | Lab Data | Sampling/Stack Data Results | Emissions

RunNumber:	RunDate:	JobNumber:	Method:
<input type="text" value="1"/>	<input type="text" value="12/23/2004"/>	<input type="text" value="s608.001"/>	<input type="text" value="m5/202"/>

  

Compound:	<input type="text" value="Filterable Particulate"/>
Mass_mg:	<input type="text" value="25.20"/>
mg/dscm:	<input type="text" value="24.88"/>
gr/dscf:	<input type="text" value="0.01087"/>
gr/dscf@12%CO2:	<input type="text" value="0.01863"/>
gr/dscf@7%O2:	<input type="text" value="0.01962"/>
lb/hr:	<input type="text" value="2.8614"/>
lb/mmBTU:	<input type="text" value="0.0390"/>
lb/dscf:	<input type="text" value="1.55E-06"/>

Record:       of 4

Record:       of 3



# State Review of Test Report

Facility:

Permitted Source ID/Description:

Location:

Process DQQs   Run DQQs   Average Emissions

RunNumber:	RunDate:	JobNumber:	Method:
<input type="text" value="In-m5-1"/>	<input type="text" value="9/8/2005"/>	<input type="text" value="s608.001"/>	<input type="text" value="m5"/>

  

ID	Question	U % Adj	Value (Y/N)
8	Is the pitot calibration data missing or outside of the specifications ?	+ 75	y
9	Is the pitot tube coefficient different from 0.84, 0.99, or calib data?	+ 2	y
10	Are the thermocouple devices calibration data missing or outside of specs?	+ 75	y
11	Is the flow rate more than 30% different from previous test?	+ 5	y
12	Is the mass determined gravimetrically < 10 mg?	+ 3	y
13	Is the leak check info missing or > 0.02 cfm?	+ 2	y
14	Is the DGM calibration data missing or outside of specs?	+ 75	y
15	Is the isokinetic sampling rate < 90 or > 110 %?	+/- 2	y
16	Is the nozzle calibration data missing or outside of specs?	+ 75	y
17	Is the raw field data missing?	+ 100	y
18	Is the laboratory report insufficiently detailed or missing?	+ 100	y
19	Are the sample custody records missing?	+ 50	y

State Review Run Status:

Record:       of 3

Record:       of 2



# State Review of Test Report

Facility: Environ Mental Concious Furniture Co.

Permitted Source ID/Description: DR2 Dryer 2

Location Inlet

Process DQCs Run DQCs **Average Emissions**

Applicable State and Federal Regulations for this Test Report:

"40CFR60 Subpart XXX - Filterable PM limitation of 0.019 lb/ton of dried wood  
25NC666.234-2 - Filterable PM limit of 0.5 lb/ton feed  
25NC7725-3 - Condensable Organic PM limit of 0.5 lb/ton feed"

Compound: Filterable Particulate

Average for Accepted Runs:

Does the data demonstrate compliance?



Record: 1 of 1

