



Air Quality Bureau Source Test Protocol Worksheet

General Information

Facility Contact Information

Company Name: _____
Facility Name: _____
MAQP # (if applicable): _____
Operating Permit (OP) # (if applicable): _____
Facility Address: _____
City: _____ State: ____ Zip: _____
Mailing Address: _____
City: _____ State: ____ Zip: _____

Facility Responsible Official Contact

Name: _____
Title: _____
Email: _____
Phone: _____ (cell) _____ (office)

Facility Environmental Contact

Name: _____
Title: _____
Email: _____
Phone: _____ (cell) _____ (office)

Stack Testing Contractor

Testing Company Name: _____
Mailing Address: _____
City: _____ State: ____ Zip: _____
Contact Name: _____
Contact Title: _____
Contact Email: _____
Phone: _____ (cell) _____ (office)

Additional Contracted Services (Lab/Analytical, External QA/QC, etc.)

Company Name: _____
Contractor's Purpose: _____
Mailing Address: _____
City: _____ State: ____ Zip: _____
Contact Name: _____
Contact Title: _____
Contact Email: _____
Contact Phone: _____ (cell) _____ (office)
 Other contractors' information in attached file.

Facility Description

Provide a brief description of the facility operations:

Emitting Units to be Tested

Number of emitting units to be tested: _____

Information for Emitting Unit ID: _____
 (complete pages 2 - 4 for each emitting unit to be tested)

Emitting unit name and description:

Describe pollution control equipment and ID (as appropriate):

Continuous operation? Batch operation?

If batch: Batch duration: _____ Batches per day: _____

Additional emitting unit information (optional):

Source Test Planning

Proposed test date(s): _____

Maximum rated capacity*: _____

Average process rate*: _____

Proposed test rate*: _____

Based on:

- 90 -110% of maximum load
- Normal operating load
- >50% of maximum load for Relative Accuracy Test Audit (RATA) (as applicable)
- Other, please explain: _____

The following are **required** for a complete protocol:

- ▶ Block flow diagram/description of process facility
- ▶ Diagram of stack showing sampling ports, platform and adjacent duct work.

Additional source test planning information in attached file (optional).

Control equipment shall be operated under normal conditions during test? Yes No
 If 'No', please explain:

Planned fuel types and gross heating value (as applicable) during testing*:

Anticipated fuel feed rates during testing*:

*Include units of measure.

Source Test Program Details for Emitting Unit: _____

(complete pages 2 - 4 for each emitting unit to be tested)

Pollutant	Emission Limit(s)		Test Frequency	Compliance Determination Permit Reference Condition No(s).	Applicable State/Federal Rule or Consent Decree No(s).
	Limit*	Permit Reference Condition No(s).			
<i>Example: Particulate Matter (PM)</i>	<i>0.01 grains/dry std cubic feet (dscf)</i>	<i>II.A.1</i>	<i>Every 4 years</i>	<i>II.B.1, II.B.2, II.B.4, II.B.6</i>	<i>MAQP #0166-04, NSPS Subpart I</i>

Explain how this testing fulfills the requirements of the applicable condition(s) and requirement above (e.g., meets required scheduled testing, establishes operating limits, RATA, etc.):

Identify Standard Test Methods Used

- Method 1 – Selection of Sampling Points and Traverse Points for Stationary Sources
- Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate
- Method 3 – Gas Analysis for the Determination of Dry Molecular Weight
- Method 3A – Determination of Oxygen and Carbon Dioxide Concentrations in Emissions from Stationary Sources
- Method 4 – Determination of Moisture Content in Stack Gases

Additional Test Methods to be Performed (as appropriate)

Parameter or Pollutant Measured	Test Method	No. of Runs Required	No. of Runs Anticipated	Anticipated Sample Time and Volume for Each Run*
<i>Example: PM</i>	<i>Method 5</i>	<i>3</i>	<i>3</i>	<i>60 minutes, 31.8 dscf</i>

List all test methods above required to participate in the stationary source audit program:

Discuss any federal test method deviations and analytical deviations (as applicable):

- Additional test method information attached (optional).

*Include units of measure.

Stack Details for Emitting Unit: _____, (complete pages 2 - 4 for each emitting unit to be tested)

Circular Stack Details (as applicable)
(see Figures 1, 2, & 3)

Stack Diameter (D): _____ inches

Port Distance from:

Upstream Disturbance (A): _____ inches

Downstream Disturbance (B): _____ inches

Measured on site: Yes No

Area of Stack: _____ square inches

Upstream Diameters (A/D): _____

Downstream Diameters (B/D): _____

No. of Particulate Traverse Points Required: _____

No. of Non-particulate Traverse Points Required: _____

No. of Sampling Ports: _____

Rectangular Stack Details (as applicable)
(see Figures 1, 2, & 4, Table 1)

Length of Stack (L): _____ inches

Width of Stack (W): _____ inches

Port Distance from:

Upstream Disturbance (A): _____ inches

Downstream Disturbance (B): _____ inches

Measured on site: Yes No

Equivalent Diameter (D): _____ inches

Area of Stack: _____ square inches

Upstream Diameters (A/D): _____

Downstream Diameters (B/D): _____

No. of Particulate Traverse Points Required: _____

No. of Non-particulate Traverse Points Required: _____

No. of Sampling Ports: _____ Matrix: _____

Figure 1: Minimum No. of Traverse Points for Particulate Traverses

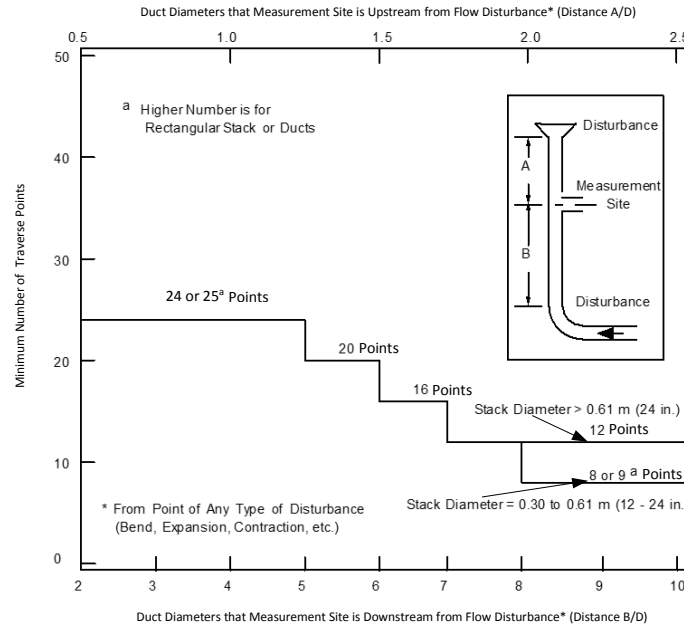


Figure 2: Minimum No. of Traverse Points for Velocity (Non-Particulate) Traverses

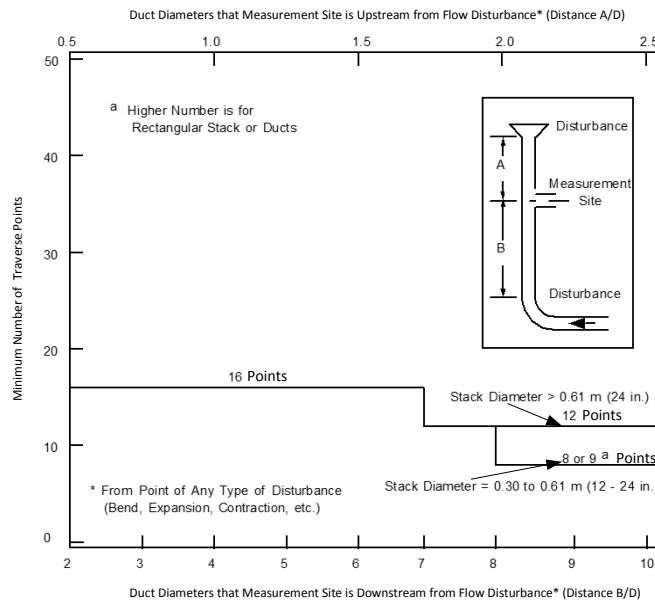


Figure 3: Circular Stack Cross-section

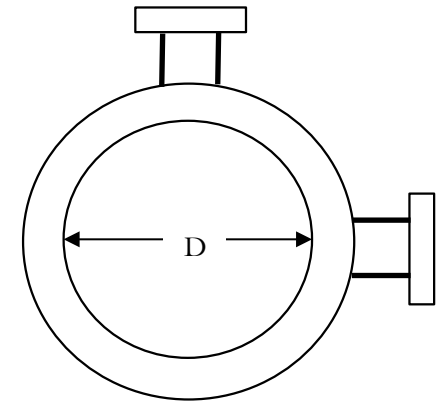


Figure 4: Rectangular Stack Cross-section

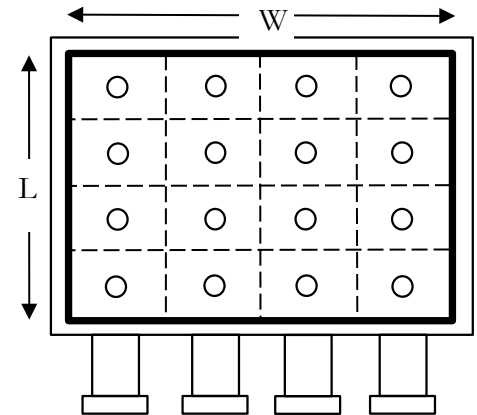


Table 1: Cross-section Layout for Rectangular Stacks

Number of Traverse Points	Matrix
9	3x3
12	4x3
16	4x4
20	5x4
25	5x5
30	6x5
36	6x6
42	7x6
49	7x7

Additional Information

Describe any safety equipment DEQ needs to bring to observe testing (as applicable):

Describe safety concerns or hazardous conditions at the facility and/or sampling location (as applicable):

Additional information applicable to the proposed emission testing or other comments (as applicable):

Please identify all additional files or attachments that complete this source test protocol*:

File Name	File Content
<i>Example: Attachment A – Test Information for EU ID 42.pdf</i>	<i>Set of pages 2-4 for emission unit 42</i>
	Block flow diagram/description of process facility (required)
	Diagram of stack w/ sampling ports, platform, & adjacent duct work (required)

**Any information required to be submitted, that has been declared confidential under the appropriate procedures, may be referenced or submitted separately.*

Contractor/Consultant Endorsements

I certify that emissions testing will be conducted as described in this protocol. Every effort will be made to obtain reliable, repeatable, and representative data using approved test methods.

Company Name: _____

Company Representative: _____

Title: _____

Signature: _____ Date: _____

(sign or insert your e-signature)

Facility Responsible Official Endorsements

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements contained in this submittal are true, accurate, and complete. This form is submitted as a DEQ-approved appropriate alternate equivalent to the Protocol requirements found in the *Montana Source Test Protocol and Procedures Manual* per Administrative Rules of Montana 17.8.106(2).

Responsible Official Name: _____

Title: _____

Signature: _____ Date: _____

(sign or insert your e-signature)

How to Submit this Protocol

- ▶ Electronically submit to your facility's Air Quality Bureau contact or DEQ-ARMB-Admin@mt.gov, or
- ▶ Mail to: Department of Environmental Quality
Air Quality Bureau,
1520 E. 6th Ave.
P.O. Box 200901,
Helena, MT 59620-0901
- ▶ Questions: (406) 444-3490

Schedule Reminder

- ▶ Submit a protocol at least 25 working days prior to the proposed test date.
- ▶ Confirm the test date at least 3 days prior to beginning test.
- ▶ Submit source test report within 60 days of test date, unless another schedule is required by rule.