

# ***PROTOCOL REQUIREMENTS***

*The following document has been provided as a guideline in preparation of test plans (protocols). EEMC will review the Company permit test requirements, combine the Company provided information with EEMC provided test procedures, etc. into a Test Protocol Document. When completed, two copies of this document will be sent to the Company for their review.*

## **Department of Environmental Quality Office of Air Quality Source Test Plan (Protocol) Requirements**

The information specified below must be submitted to the Compliance Unit of the Office of Air Quality at least 14 days prior to the scheduled test date. This information is required in order to insure that proper test methods and procedures are utilized. The Compliance Unit will review the test plan, and in the event of any deficiencies or comments concerning the plan, will contact the company to arrange a meeting to discuss the test procedures. Submission of this information will minimize the possibility of a test being rejected as a result of improper sampling or data collection procedures.

All testing shall be performed in strict accordance with the specified procedures.

A satisfactory test shall consist of three runs. Any variations in the sampling or analytical procedures must receive approval from this office prior to testing. Appropriate chain of custody procedures must be followed during the sampling and analysis.

The following information should be included in the source test plan (protocol).

### **Item 1) Source (Company) Information:**

- A. Name (including serial number of equipment), address, and location of the facility being tested.

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A copy of the Company permit (the relevant pages) should be provided to EEMC for review and inclusion in the Protocol.

- B. Responsible person(s) at the facility and telephone number.

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Items 2, 3, and 4 are provided by EEMC.

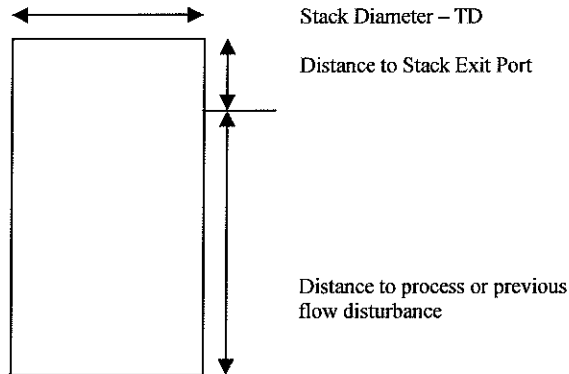
- Item 2) Testing Firm Information:**  
A. Name and address of the firm conducting the testing.  
B. Responsible person at the testing firm and telephone number.

- Item 3) Sampling Equipment:**  
Description of the emission sampling equipment including a schematic diagram of the sampling train.

- Item 4) Procedures:**  
A. Types of pollutants to be sampled.  
B. A description of the sampling analysis procedures.  
C. Documentation for any proposed variations from the specified procedures.

By Company –

- Item 5) Emission Point Information:**  
A. A sketch with dimensions indicating the flow of exhaust gases from the process through the control equipment and associated duct work to the stack.. *A plant layout schematic or equivalent drawing.*  
B. A diagram of the stack showing location and the distances to the Nearest upstream and downstream flow interferences. *Example follows:*



- By EEMC - C. A cross-sectional sketch of the stack at the sampling location, showing the locations of the sampling traverse points.

- By Company - D. Estimated flue gas conditions at the sampling location, including:  
Temperature: \_\_\_\_\_ °F  
Moisture Content: \_\_\_\_\_ %H<sub>2</sub>O v/v  
Velocity: \_\_\_\_\_ feet per second  
Allowable emission rates for pollutants to be tested:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- Item 6) Process Equipment:**
- A. A description of the process operation, including a process flow sheet.
  - B. Types and quantity of raw materials, catalysts, and products being used or produced in the process.
  - C. Maximum rated capacity of the process.
  - D. Actual maximum operating capacity of the process.
  - E. Operating capacity during the previous six months period.
  - F. Process data to be monitored and recorded to insure representative operation during the test and the sampling interval for recording. For example:
    - Asphalt Plants  
Process Rate, Recycle Rate, Drum Temperature
    - Power Plants  
Generation Rate, Coal Feed Rate, CEM Data, Coal Analysis
    - Other Sources  
Process Rate, Other parameters as applicable
  - G. Normal maintenance schedule for this process.
  - H. Normal maintenance schedule for this process.
  - I. Type of feed stock or fuel that causes the greatest individual emissions, and the percent of annual production for which these materials are used.

- Item 7) Control Equipment:**
- A. Description of emission control system, including the types of control equipment, manufacturer of control equipment, the rated capacity and efficiency of the control equipment.
  - B. Data to be monitored and recorded to insure representative operation of the control equipment during testing and the sampling period for recording. For example:
    - ESP  
Operating voltage and current (per field), spark rate, cleaning cycle, fan speed or current
    - Scrubber  
Pressure drop, water flow rate and supply pressure, fan speed or current
    - Baghouse  
Pressure drop (total and each compartment), number, type, and temperature range of bags, damper position, fan current or speed, cleaning cycle
  - C. Minimum acceptable values of all control device parameters, such as flow rates, pressure drops, temperature, and voltage of electrical input.
  - D. Description of any conditioning of gases prior to control device.
  - E. Normal maintenance schedule on control equipment for the previous year.