



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
AIR POLLUTION CONTROL PROGRAM  
**PERFORMANCE TEST PLAN**

Submit complete form and all attachments to:  
Missouri Department of Natural Resources  
Air Pollution Control Program, Enforcement Section  
P.O. Box 176, Jefferson City, MO 65102

DATE SUBMITTED

ATTENTION

PROPOSED TEST DATE

Test date must be agreed to by Air Pollution Control Program.

### 1. FACILITY INFORMATION

NAME

ADDRESS

CITY

STATE

ZIP CODE

CONTACT PERSON

TITLE

TELEPHONE NUMBER WITH AREA CODE

CELL PHONE NUMBER

### 2. AIR POLLUTION SOURCE TO BE TESTED

TYPE OF FACILITY/SOURCE

PERMIT NUMBER

FIPS/PLANT ID

PORT NUMBER

ADDRESS

DIRECTIONS TO SOURCE (OR ATTACH MAP)

INITIAL START-UP DATE

REASON FOR TEST

- Condition of Permit       Consent Agreement  
 Administrative Order       Other (specify)

### 3. TESTING FIRM INFORMATION

NAME OF FIRM

ADDRESS

CITY

STATE

ZIP CODE

CONTACT PERSON

CONTACT PERSON TITLE

TELEPHONE NUMBER WITH AREA CODE

CELL PHONE NUMBER WITH AREA CODE

NUMBER OF EMPLOYEES OF FIRM

NUMBER OF EMPLOYEES ENGAGED IN AIR POLLUTION SOURCE TESTING

Attach organizational chart with names and titles of personnel.

LOCATION AND DESCRIPTION OF LABORATORY FACILITIES

SUBCONTRACTOR(S) UTILIZED BY FIRM FOR SOURCE TESTING ACTIVITIES

NUMBER OF AIR POLLUTION SOURCES PREVIOUSLY TESTED BY FIRM

SOURCES TESTED BY FIRM IN PAST THREE YEARS (SOURCE, TEST, DATE)

**4. PERFORMANCE TEST INFORMATION**

|     | Pollutant | No. of Sampling Points | Total Time per Test Run | No. of Test Runs | Test Method to be Used |
|-----|-----------|------------------------|-------------------------|------------------|------------------------|
| 1.  |           |                        |                         |                  |                        |
| 2.  |           |                        |                         |                  |                        |
| 3.  |           |                        |                         |                  |                        |
| 4.  |           |                        |                         |                  |                        |
| 5.  |           |                        |                         |                  |                        |
| 6.  |           |                        |                         |                  |                        |
| 7.  |           |                        |                         |                  |                        |
| 8.  |           |                        |                         |                  |                        |
| 9.  |           |                        |                         |                  |                        |
| 10. |           |                        |                         |                  |                        |
| 11. |           |                        |                         |                  |                        |
| 12. |           |                        |                         |                  |                        |

**5. AUDIT INFORMATION**

| Method | Specific analyte | Expected sample concentration | Sample matrix and audit matrix (if different) | Audit sample concentration requested | Audit provider |
|--------|------------------|-------------------------------|---|--------------------------------------|----------------|
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |
|        |                  |                               |   |                                      |                |

**6. AUDIT PROVIDER INFORMATION**

PROVIDER NUMBER ONE

ADDRESS

|      |       |          |
|------|-------|----------|
| CITY | STATE | ZIP CODE |
|------|-------|----------|

|                        |       |
|------------------------|-------|
| NAME OF CONTACT PERSON | TITLE |
|------------------------|-------|

|                                 |                           |
|---------------------------------|---------------------------|
| TELEPHONE NUMBER WITH AREA CODE | FAX NUMBER WITH AREA CODE |
|---------------------------------|---------------------------|

PROVIDER NUMBER TWO

ADDRESS

|      |       |          |
|------|-------|----------|
| CITY | STATE | ZIP CODE |
|------|-------|----------|

|                        |       |
|------------------------|-------|
| NAME OF CONTACT PERSON | TITLE |
|------------------------|-------|

|                                 |                           |
|---------------------------------|---------------------------|
| TELEPHONE NUMBER WITH AREA CODE | FAX NUMBER WITH AREA CODE |
|---------------------------------|---------------------------|

**7. LABORATORY INFORMATION**

NAME

ADDRESS

|      |       |          |
|------|-------|----------|
| CITY | STATE | ZIP CODE |
|------|-------|----------|

|                |                         |
|----------------|-------------------------|
| CONTACT PERSON | TITLE OF CONTACT PERSON |
|----------------|-------------------------|

|  |  |
|--|--|
| TELEPHONE NUMBER WITH AREA CODE FOR CONTACT PERSON | FAX NUMBER WITH AREA CODE FOR CONTACT PERSON |
|--|--|

QUALITY CERTIFICATION

Certifying entity one:  
Procedures/methods certified:

Certifying entity two:  
Procedures/methods certified:

Certifying entity three:  
Procedures/methods certified:

## 7. SAMPLE LOCATION & TRAVERSE POINT INFORMATION

|  |   |              |                |                |          |  |  |           |  |  |
|--|---|--------------|----------------|----------------|----------|--|--|-----------|--|--|
| DUCT TO BE SAMPLED   | Sketch of Stack or Duct with Port Locations & Distances Shown<br><b>[NOTE Cyclonic flow must be measured by instrument and shown to be within allowable limits prior to initiation of sampling.]</b> If sampling location is downstream from an axial flow fan, installation of a flow straightening device will probably be necessary to meet cyclonic flow criterion. |              |                |                |          |  |  |           |  |  |
| DUCT DIMENSIONS<br>From inside far wall to outside of port<br><br>Nipple length<br><br>Depth (or diameter) of duct<br><br>Width (rectangular duct)   |   |              |                |                |          |  |  |           |  |  |
| RECTANGULAR STACK EQUIVALENT DIAMETER<br><br>$D_e = \frac{2 \times \text{Depth} \times \text{Width}}{\text{Depth} + \text{Width}} = \frac{2( \quad ) ( \quad )}{( \quad + \quad )} =$  |   |              |                |                |          |  |  |           |  |  |
| DISTANCE FROM NEAREST FLOW DISTURBANCE TO PORTS <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 15%;"></td> <td style="width: 35%; text-align: center;">Upstream (A)</td> <td style="width: 50%; text-align: center;">Downstream (B)</td> </tr> <tr> <td style="text-align: center;">Distance</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">Diameters</td> <td></td> <td></td> </tr> </table> |   |              | Upstream (A)   | Downstream (B) | Distance |  |  | Diameters |  |  |
|  |   | Upstream (A) | Downstream (B) |                |          |  |  |           |  |  |
| Distance   |   |              |                |                |          |  |  |           |  |  |
| Diameters  |   |              |                |                |          |  |  |           |  |  |
| Stack Area =   |   |              |                |                |          |  |  |           |  |  |
| CALCULATED BY  |   |              |                |                |          |  |  |           |  |  |

## TRAVERSE POINTS REFERENCE TABLES

| LOCATION OF TRAVERSE POINTS IN RECTANGULAR STACKS |    |      |      |    |      |      |      |      |    |      |      | LOCATION OF TRAVERSE POINTS IN CIRCULAR STACKS |      |      |      |      |      |      |      |      |      |      |      |
|---|----|------|------|----|------|------|------|------|----|------|------|--|------|------|------|------|------|------|------|------|------|------|------|
|   | 2  | 3    | 4    | 5  | 6    | 7    | 8    | 9    | 10 | 11   | 12   |  | 4    | 6    | 8    | 10   | 12   | 14   | 16   | 18   | 20   | 22   | 24   |
| 1   | 25 | 16.7 | 12.5 | 10 | 8.3  | 7.1  | 6.3  | 5.6  | 5  | 4.5  | 4.2  | 1  | 6.7  | 4.4  | 3.2  | 2.6  | 2.1  | 1.8  | 1.6  | 1.4  | 1.3  | 1.1  | 1.1  |
| 2   | 75 | 50   | 37.5 | 30 | 25   | 21.4 | 18.8 | 16.7 | 15 | 13.8 | 12.5 | 2  | 25   | 14.6 | 10.5 | 8.2  | 6.7  | 5.7  | 4.9  | 4.4  | 3.9  | 3.5  | 3.2  |
| 3   |    | 83.3 | 62.5 | 50 | 41.7 | 35.7 | 31.3 | 27.8 | 25 | 22.7 | 20.8 | 3  | 75   | 29.6 | 19.4 | 14.6 | 11.8 | 9.9  | 8.5  | 7.5  | 6.7  | 6    | 5.5  |
| 4   |    |      | 87.5 | 70 | 58.3 | 50   | 43.8 | 38.9 | 35 | 31.8 | 29.2 | 4  | 93.3 | 70.4 | 32.3 | 22.6 | 17.7 | 14.6 | 12.5 | 10.9 | 9.7  | 8.7  | 7.9  |
| 5   |    |      |      | 90 | 75   | 64.3 | 56.3 | 50   | 45 | 40.9 | 37.5 | 5  |      | 85.4 | 67.7 | 34.2 | 25   | 20.1 | 16.9 | 14.6 | 12.9 | 11.6 | 10.5 |
| 6   |    |      |      |    | 91.7 | 78.6 | 68.8 | 61.1 | 55 | 50   | 45.8 | 6  |      | 95.6 | 80.6 | 65.8 | 35.6 | 26.9 | 22   | 18.8 | 16.5 | 14.6 | 13.2 |
| 7   |    |      |      |    |      | 92.9 | 81.3 | 72.2 | 65 | 59.1 | 54.2 | 7  |      |      | 89.5 | 77.4 | 64.4 | 36.8 | 28.3 | 23.6 | 20.4 | 18   | 16.1 |
| 8   |    |      |      |    |      |      | 93.8 | 83.2 | 75 | 68.2 | 62.5 | 8  |      |      | 96.8 | 85.4 | 75   | 63.4 | 37.5 | 29.6 | 25   | 21.8 | 19.4 |
| 9   |    |      |      |    |      |      |      | 94.4 | 85 | 77.3 | 70.8 | 9  |      |      |      | 91.8 | 82.3 | 73.1 | 62.5 | 38.2 | 30.6 | 26.2 | 23   |
| 10  |    |      |      |    |      |      |      |      | 95 | 86.4 | 79.2 | 10   |      |      |      | 97.4 | 88.2 | 79.9 | 71.7 | 61.8 | 38.8 | 31.5 | 27.2 |
| 11  |    |      |      |    |      |      |      |      |    | 95.5 | 87.5 | 11   |      |      |      |      | 93.3 | 85.4 | 78   | 70.4 | 61.2 | 39.3 | 32.3 |
| 12  |    |      |      |    |      |      |      |      |    |      | 95.8 | 12   |      |      |      |      | 97.9 | 90.1 | 83.1 | 76.4 | 69.4 | 60.7 | 39.8 |



E. AIR POLLUTION CONTROL EQUIPMENT

Types and manufacturers of all control equipment

Design or guarantee efficiency

Design gas volume at full load (actual cubic feet per minute, or acfm)

Design pressure drop

Maintenance schedule and method of record keeping

**9. EMISSION SOURCE PROCESS/OPERATION – GENERIC**

Provide a full description of the process/operation being tested for air emissions.

A. CHARACTERIZATION OF PLANT/EQUIPMENT/PROCESS

B. MANUFACTURER, MODEL AND SERIAL NUMBERS OF ALL MAJOR COMPONENTS

C. RATED PROCESS/PRODUCTION CAPACITY

D. NORMAL PROCESS/PRODUCTION CAPACITY

E. NATURE AND RELATIVE PERCENT OF RAW MATERIAL INPUT TO PROCESS

F. PRODUCT(S) – WITH REALTIVE PERCENT IF MORE THAN ONE

G. TYPE(S) OF FUEL

CONSUMPTION RATE

H. NORMAL OPERATING SCHEDULE

I. Attach a process flow diagram.

**9-1 ASPHALTIC CONCRETE PLANTS - SPECIFIC**

Provide a description of the source operation.

A. TYPE OF PLANT (CONTINUOUS, BATCH, PORTABLE, PERMANENT, DRYER-DRUM)

B. MANUFACTURER, MODEL &amp; SERIAL NUMBERS OF DRYER AND OTHER MAJOR COMPONENTS

C. RATED CAPACITY OF UNIT (TONS/HOUR)

D. NORMAL PRODUCTION RATE (TONS/HOUR)

E. PRODUCTION RATE ANTICIPATED FOR COMPLIANCE TEST (TONS/HOUR) (NOT TO BE EXCEEDED, UNDER AUTHORITY GRANTED BY PERMIT)

\*THIS RATE IS NOT BE EXCEEDED DURING SUBSEQUENT PRODUCTION, UNDER THE AUTHORITY GRANTED BY THE APCP PERMIT

F. TYPE(S) OF FUEL (SHOW PERCENTAGES WHEN MORE THAN ONE TYPE OF FUEL IS BURNED)

NORMAL FUEL CONSUMPTION RATE

G. NORMAL OPERATING SCHEDULE

H. TYPE OF EMISSION CONTROL DEVICE

I. MODEL AND SERIAL NUMBER

J. Spare bags/nozzles on hand?

 YES  NO

K. OPERABLE GAUGES/DEVICES INDICATING PRESSURE DROP ACROSS DEVICE?

 YES  NO

L. WATER PRESSURE GAUGE ON SCRUBBER?

 YES  NO



**9-2. INCINERATORS AND CREMATORS - SPECIFIC**

Provide a full description of the source operation, including as a minimum the following.

A. MANUFACTURER AND TYPE OF INCINERATOR

B. TYPE OF FEED (BATCH, INTERMITTENT, CONTINUOUS) AND FREQUENCY

C. DESIGN FEED RATE (LBS/HR, LBS/BATCH)

D. EXPECTED NORMAL FEED RATE

E. TYPE OF SCALES

F. 24 HOUR OPERATIONAL FLOW SCHEME (e.g., ASH REMOVAL, PREHEAT, BURN CYCLE, POST HEAT)

G. TYPE OF FUEL

H. VOLUME OF SECONDARY CHAMBER IN CUBIC FEET

Sketch chamber with inside dimensions:

I. TYPE OF SECONDARY CHAMBER TEMPERATURE CONTINUOUS CHART RECORDER

J. TYPE(S) OF WASTE AND RELATIVE PERCENTAGES

K. IS FACILITY A HOSPITAL?

YES       NO

LICENSED NUMBER OF BEDS

AVERAGE BED OCCUPANCY



K. Attach process flow diagram, including all affected facilities and control devices.

#### PROCEDURAL NOTES

1. Testing is to be done on nonmetallic mineral processing of a fresh blast (e.g. rain-soaked material can result in negative-biased test results and subsequent violation notices when emissions increase later from dry material).
2. Nonmetallic mineral shall be processed at its maximum production rate, +/- 10 percent, otherwise production is limited to the rate at which compliance with regulations was demonstrated. A record of throughput production tonnage shall be kept during testing so that the ton/hour production rate may be determined.
3. Fugitive emission opacity read by EPA Method 9 **must** be observed for a duration of **30 minutes**
4. Each piece of equipment, or affected facility, shall be identifiable by a unique Serial and/or Plant Identification Number at the time of the *NSPS OOO* compliance test. The displayed numeral(s) shall remain a permanent means of identifying facilities throughout their history of ownership.
5. Two copies of the final report of the test results shall be provided to the coordinating regulatory agency within 30 days of the completion of the compliance test.

**9-4. IRON ORE PELLETIZING FURNACE - SPECIFIC**

Describe the source operation including, as a minimum, the following

A. TYPE OF FURNACE

B. FUNCTION OF UNIT

C. LIST EACH TYPE OF PRODUCT PRODUCED

D. NATURE AND RELATIVE PERCENTAGE OF RAW MATERIAL FOR EACH TYPE OF PRODUCT

E. RELATIVE PERCENTAGE OF EACH PRODUCT PRODUCED ANNUALLY

F. PRODUCT DURING EMISSION TEST

G. FURNACE DESIGN MATERIAL INPUT RATE

H. FURNACE NORMAL MATERIAL INPUT RATE

I. DESIGN PRODUCTION RATE

J. NORMAL PRODUCTION RATE

K. TYPE(S) OF FUELS BURNED (PERCENTAGES OF EACH WHEN MORE THAN ONE TYPE IS BURNED)

L. NORMAL FUEL CONSUMPTION RATE(S)

M. HEAT CONTENT OF FUEL

N. ESTIMATED H<sub>2</sub>S CONCENTRATION OF FUEL

O. FUEL FIRING RATE

P. DESCRIPTION OF AIR POLLUTION CONTROL EQUIPMENT

Q. NORMAL OPERATING SCHEDULE

R. Attach process flow diagram showing flow of feed, fuel, product, stack gases and fly ash.

**9-5. GAS TURBINES - SPECIFIC**

A description of the source operation including as a minimum the following

A. MANUFACTURER AND MODEL OF TURBINE

B. TYPE OF HEAT RECOVERY SYSTEM ON THE GAS TURBINE EXHAUST (SIMPLE CYCLE, REGENERATIVE CYCLE OR COMBINED CYCLE)

C. HEAT INPUT RATE AT PEAK LOAD, GIGAJOULES/HOUR AT ISO CONDITIONS

D. USAGE OF TURBINE (GAS AND OIL TRANSPORTATION OR PRODUCTION, EMERGENCY STANDBY, STEAM OR ELECTRICAL GENERATION)

E. THERMAL EFFICIENCY AT PEAK LOAD BASED ON LOWER HEATING VALUE OF THE FUEL (HEAT INPUT PER UNIT OF POWER OUTPUT)

F. TYPE OF FUEL(S) USED AND ULTIMATE ANALYSIS OF THE FUEL BURNED OF HYDROGEN, CARBON, SULFUR, NITROGEN, OXYGEN, WATER AND GROSS CALORIFIC VALUE) OR FACTORS TO BE USED IN TEST

G. EMISSION CONTROL TECHNOLOGY

H. NORMAL OPERATING SCHEDULE

I. Attach diagram of facility showing flow of exhaust gases.

**9-6. CARBON ADSORBENT REGENERATORS - SPECIFIC**

Describe the source operation including as a minimum the following

A. MANUFACTURER(S) OF MAJOR COMPONENTS

B. DESIGN INPUT CAPACITY (TONS/DAY)

C. TYPE(S) OF FUEL USED

D. DESCRIPTION OF HEATING SYSTEM, INCLUDING NUMBER OF LOCATIONS OF BURNERS DURING STARTUP AND NORMAL OPERATION

E. NORMAL CARBON INPUT RATE AND MAXIMUM FUTURE RATE ANTICIPATED (TONS/HOUR)

F. NORMAL OPERATING SCHEDULE

G. NORMAL MAINTENANCE SCHEDULE FOR PLANTS, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

H. Attach process flow diagram, showing flow of carbon, exhaust gases, fly ash and air pollution control device liquid where applicable

**9-7. CHROMIUM ELECTROPLATING - SPECIFIC**

Provide a full description of the process being tested for air emissions including

TYPE OF PLATING OPERATION

Hard Chromium  Decorative Chromium

A. CHARACTERIZE THE PLANT/EQUIPMENT/PROCESS

B. TANKS

| ID Number | Function<br>(plate, anodize,<br>etch, rinse, etc.) | Ducted to<br>Control Device?<br><br><input type="checkbox"/> Yes <input type="checkbox"/> No | Diameter of duct to control device |        | Estimated flow to control device |          |
|-----------|--|--|------------------------------------|--------|----------------------------------|----------|
|           |  |  | English                            | Metric | DSCF/min                         | DSCM/min |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |
|           |  | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                    |        |                                  |          |

C. Rectifiers

| ID Number   | Manufacturer | Model Number | Serial Number | Rated Amperage |
|---|--------------|--------------|---------------|----------------|
|   |              |              |               |                |
|   |              |              |               |                |
|   |              |              |               |                |
|   |              |              |               |                |
|   |              |              |               |                |
| TOTAL   |              |              |               |                |
| Calculate maximum cumulative potential rectifier capacity |              |              |               |                |
| Total amps x 8400 x 0.7 =                                 |              |              |               |                |

D. Control device(s)

| ID Number | Manufacturer | Model Number | Serial Number | Maximum design flow rate |          |
|-----------|--------------|--------------|---------------|--------------------------|----------|
|           |              |              |               | DSCF/min                 | DSCM/min |
|           |              |              |               |                          |          |
|           |              |              |               |                          |          |
|           |              |              |               |                          |          |
|           |              |              |               |                          |          |

E. Process/control device monitors

| Device (e.g., amp meter, thermocouple, magnhelic) | Location (e.g., tank number, duct number) |
|---|---|
|   |   |
|   |   |
|   |   |
|   |   |

F. RATED PROCESS/PRODUCTION CAPACITY

G. NORMAL PROCESS/PRODUCTION CAPACITY

H. PRODUCT(S) PRODUCED AND PROPORTION OF EACH

I. NORMAL OPERATING SCHEDULE (HOURS/DAY, DAYS/WEEK, WEEKS/YEAR)



**9-8. FOSSIL FUEL-FIRED STEAM GENERATORS - SPECIFIC**

Describe the source operation including as a minimum the following.

A. FUEL TYPE(S) COAL, OIL, OR GAS TYPE OF FUEL(S) USED AND ULTIMATE ANALYSIS OF THE FUEL BURNED ( PERCENT OF HYDROGEN, CARBON, SULFUR, NITROGEN, OXYGEN, WATER AND GROSS CALORIFIC VALUE) OR F FACTORS TO BE USED IN TEST

LIST PERCENTAGES OF EACH FUEL FIRED IN COMBINATION. FOR COAL AND OIL, INDICATE CLASSIFICATION, AND FOR GAS, INDICATE TYPE

B. MANUFACTURER(S) OF BOILER AND OTHER MAJOR COMPONENTS

**C. FIRING TYPE**

For coal  Underfeed  
 Overfeed (moving grate, spreader or vibrating grate)  
 Suspension (pulverized or cyclone)

For oil, gas or pulverized coal suspension firing  Vertical  
 Tangential  
 Horizontal

NUMBER AND LOCATION(S) OF BURNERS

D. TYPE OF BOILER

Shell  Firetube  Watertube

E. DESCRIPTION OF ASH HANDLING AND DISPOSAL SYSTEM

F. FUEL COMPOSITION (BY ANALYSIS)

G. DESIGN FUEL FIRING RATE AND HEAT INPUT

H. DESIGN STEAM PRODUCTION RATE, PRESSURE AND TEMPERATURE

I. USE OF STEAM PRODUCED

J. DESIGN ELECTRICITY GENERATION RATE, IF APPLICABLE

K. FLY ASH RE-CIRCULATION SYSTEM DESCRIPTION, IF APPLICABLE

L. FREQUENCY AND DURATION OF SOOT BLOWING

M. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

N. NORMAL OPERATING SCHEDULE

O. Attach diagram of facility.

**9-9. SEWAGE SLUDGE INCINERATORS - SPECIFIC**

Describe the source operation including as a minimum the following.

A. TYPE OF INCINERATOR

- Multiple hearth furnace     Rotary kiln furnace     Fluidized-bed unit  
 Traveling-gate furnace     Atomized spray unit     Wet-oxidation unit

B. MANUFACTURER(S) OF MAJOR COMPONENTS

C. DESIGN INPUT CAPACITY, TONS/DAY (SPECIFY SLUDGE MOISTURE CONTENT)

D. NUMBER OF HEARTH(S) (IF MULTIPLE-HEARTH DESIGN)

E. DESCRIPTION OF DE-WATERING SYSTEM

F. AVERAGE SLUDGE MOISTURE CONTENT OUT OF DE-WATERER PERCENT

G. TYPE(S) OF AUXILIARY FUEL USED (WHERE APPLICABLE)

H. DESCRIBE AUXILIARY HEAT SYSTEM, INCLUDING NUMBER AND LOCATIONS OF BURNERS, NORMAL FUEL RATES AND OPERATING PROCEDURES FOR BURNERS DURING STARTUP AND NORMAL OPERATION

I. DESCRIBE OF INCINERATOR ASH HANDLING AND DISPOSAL SYSTEM

J. DESCRIBE SLUDGE FLOW MEASURING DEVICE (FOR CHARGING RATE DETERMINATION)

K. NORMAL SLUDGE INPUT RATE AND MAXIMUM FUTURE RATE ANTICIPATED FOR UNIT [TONS/HOUR (SPECIFY SLUDGE MOISTURE CONTENT)]

L. NORMAL OPERATING SCHEDULE

M. NORMAL MAINTENANCE SCHEDULE FOR PLANT, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

N. Attach process flow diagram, showing flow of sludge, incinerator ash, stack gases, fly ash, and air pollution control device liquid, where applicable

**9-10. PORTLAND CEMENT PLANTS - SPECIFIC**

Describe the source operation including as a minimum the following

A. TYPE OF PROCESS (WET OR DRY)

B. KILN DESIGN INPUT CAPACITY [TONS/HOUR (DRY BASIS)]

C. NORMAL KILN INPUT RATE [TONS/HOUR (DRY BASIS)]

D. DESIGN PRODUCTION RATE OF UNIT (TONS/HOUR)

E. NORMAL PRODUCTION RATE OF UNIT (TONS/HOUR)

F. MANUFACTURER(S) AND MODEL OF KILN AND OTHER MAJOR COMPONENTS

G. DESCRIPTION OF PREHEATER SYSTEM

H. DESCRIPTION OF AIR POLLUTION CONTROL EQUIPMENT DUST RECYCLING SYSTEM, IF APPLICABLE

I. TYPES OF CEMENT PRODUCED AND PERCENTAGES OF TOTAL PRODUCTION OF EACH TYPE

J. TYPE(S) OF FUELS BURNED (INDICATE PERCENTAGES OF EACH WHEN MORE THAN ONE TYPE IS BURNED)

K. NORMAL FUEL CONSUMPTION RATE(S)

L. LOCATION OF QUARRY

M. SOURCE(S) OF RAW MATERIALS

N. DESCRIBE EACH AIR POLLUTION EMISSION POINT, INCLUDING THE KILN, CLINKER COOLER, RAW MILL SYSTEM, FINISH MILL SYSTEM, RAW MILL DRYER, RAW MATERIAL STORAGE, CLINKER STORAGE, FINISHED PRODUCT STORAGE, CONVEYOR TRANSFER POINTS, BAGGING AND BULK LOADING AND UNLOADING SYSTEM

O. NORMAL OPERATING SCHEDULE

P. NORMAL MAINTENANCE SCHEDULE FOR PLANT, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

Q. PROCESS FLOW DIAGRAM, SHOWING FLOW OF FEED, FUEL, PRODUCT, STACK GASES AND FLY ASH (PLEASE ATTACH)

**9-11. ABRASIVE BLAST CLEANING FACILITIES - SPECIFIC**

Describe the source operation including as a minimum the following.

A. DESCRIPTION OF ABRASIVE BLAST CLEANING FACILITY [INCLUDE OBJECT(S) CLEANED AND PURPOSE OF CLEANING]

B. MANUFACTURER(S) AND MODEL(S) OF MAJOR COMPONENTS

C. RATED CAPACITY OF FACILITY (UNITS CLEANED PER DAY)

D. NORMAL OUTPUT (UNITS CLEANED PER DAY)

E. TYPE(S) OF ABRASIVE MATERIAL(S) USED

F. METHOD OF PROPELLING THE ABRASIVE

Hydraulic blasting    Centrifugal force

Compressed air blasting device - indicate whether suction blast or direct pressure:

G. NUMBER OF BLASTING DEVICES EMPLOYED FOR FACILITY

H. DESCRIPTION OF EQUIPMENT USED TO CONFINE BLAST (BLASTING ROOM, BLASTING CABINET, HOUSING OF BLAST MACHINE OR PERFORATED DRUM OR BARREL IN CABINET)

I. METHOD(S) OF HANDLING OBJECTS CLEANED

J. DESCRIPTION OF HOODING AND VENTILATION SYSTEMS

K. NORMAL OPERATING SCHEDULE

L. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

M. Attach flow diagram showing flow of objects cleaned, abrasive materials, waste materials, recycled material(s) and exhaust gases.

**9-12. SULFURIC ACID PLANTS (CONTACT PROCESS) - SPECIFIC**

Describe the source operation including as a minimum the following.

A. TYPE OF CONTACT PLANT

- Hot Gas (burning elemental sulfur)  
 Wet Gas (burning alkylation acid, hydrogen sulfide, organic sulfides and mercaptans or acid sludge)

B. MANUFACTURE(S) OF MAJOR COMPONENTS OF PLANT

C. DESIGN CAPACITY (TONS/DAY)

D. TYPE OF FEEDSTOCK

E. DESCRIPTION OF ABSORPTION PROCESS

F. NUMBER OF CONVERSION STAGES

G. DESCRIPTION OF PRODUCT(S)

H. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

I. NORMAL OPERATING SCHEDULE

J. Attach diagram or sketch of facility showing conversion of feedstock to the product(s) and the flow of exhaust gases.

**9-13. CLAUS SULFUR RECOVERY PLANTS - SPECIFIC**

Describe the source operation including as a minimum the following.

A. MANUFACTURER(S) OF MAJOR COMPONENTS OF PLANT

B. DESIGN CAPACITY OF PLANT (LONG TONS/DAY)

C. NORMAL OPERATING LEVEL OF PLANT (LONG TONS/DAY)

D. NUMBER OF CATALYTIC CONVERSION STAGES

E. SOURCE(S) OF H<sub>2</sub>S GAS FED TO SULFUR RECOVERY PLANT

F. NORMAL INLET FEED STREAM COMPOSITION

G. SULFUR RECOVERY EFFICIENCY IN CLAUS PLANT (PERCENT)

H. OPERATING TEMPERATURE(S) IN REACTOR(S)

I. NORMAL H<sub>2</sub>S/SO<sub>2</sub> CONCENTRATION RATIO IN CONVERTER(S)

J. TYPE(S) OF CATALYST IN CONVERTER(S)

K. DETAILED DESCRIPTION OF TAIL GAS PROCESSING METHOD(S) FOR EMISSION CONTROL

L. MAXIMUM VENDOR-GUARANTEED EMISSIONS OF TOTAL SULFUR, EXPRESSED IN SO<sub>2</sub> EQUIVALENT (PPMV)

M. OVERALL SULFUR RECOVERY EFFICIENCY, INCLUDING CLAUS SULFUR PLANT (PERCENT)

N. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

O. NORMAL OPERATING SCHEDULE

P. Attach diagram or sketch of facility showing flow of feed gas, sulfur product, and gas stream.

**9-14) FLUID CATALYTIC CRACKING UNIT CATALYST REGENERATORS - SPECIFIC**

Describe the source operation including as a minimum the following.

A. MANUFACTURER(S) OF MAJOR COMPONENTS OF PLANT

B. TYPE(S) OF CATALYST REGENERATED

C. DESCRIPTION OF AIR HEATING AND TRANSFER SYSTEM

D. CATALYST DESIGN CIRCULATION RATE (TONS/HOUR)

E. REGENERATOR DESIGN AIR FLOW RATE (SCFM)

F. DESIGN COKE BURN-OFF (LB/HR)

G. REGENERATOR DESIGN TEMPERATURE (OF) AND PRESSURE (PSIG)

H. DESCRIPTION OF CONTROL ROOM INSTRUMENTATION FOR DETERMINATION OF AIR RATE TO REGENERATOR

I. DESCRIPTION OF INCINERATOR OR WASTE HEAT BOILER

J. TYPE(S) OF AUXILIARY OR SUPPLEMENTAL FUEL BURNED IN INCINERATOR OR WASTE HEAT BOILER. IF FIRED IN COMBINATION, LIST PERCENTAGES OF EACH FUEL

K. FUEL COMPOSITION(S) (BY ANALYSIS)

L. DESIGN FUEL FIRING RATE(S) AND HEAT INPUT(S)

M. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

N. NORMAL OPERATING SCHEDULE

O. Attach flow diagram of facility, showing flow of catalyst, air, fuel, exhaust gases and fly ash.

**9-15. FUEL GAS COMBUSTION DEVICES (PETROLEUM REFINERIES) - SPECIFIC**

A description of the source operation including as a minimum the following.

A. TYPE OF COMBUSTION DEVICE

Boiler process heater, flare, or other (specify):

B. FURTHER DESCRIPTION OF UNIT (TYPE OF BOILER, HEATER, FLARE, ETC.)

C. FUNCTION OF UNIT

D. DESIGN CAPACITY (106 BTU/HR)

E. DESIGN FUEL GAS FIRING RATE (SCF/HR)

F. SOURCE(S) OF FUEL GAS

G. AVERAGE HEAT CONTENT OF FUEL GAS (BTU/CF)

H. ESTIMATED H<sub>2</sub>S CONCENTRATION OF FUEL GAS (GR/DSCF)

I. DESCRIPTION OF FUEL GAS TREATMENT, IF APPLICABLE

J. NORMAL MAINTENANCE SCHEDULE FOR FACILITY, ALONG WITH A DESCRIPTION OF THE OPERATING DIFFICULTIES ENCOUNTERED THUS FAR

K. NORMAL OPERATING SCHEDULE

L. Attach diagram or sketch of facility showing flow of fuel gas and exhaust gases.





**9-17. CONTINUOUS MONITORING SYSTEM - SPECIFIC**

Describe continuous monitoring system(s) including the following.

A. MANUFACTURER OF EACH MONITOR

B. MODEL NUMBER AND SERIAL NUMBER OF EACH MONITOR

C. DESCRIPTION OF INTERFACE SYSTEM (FOR EXTRACTIVE MONITORS)

D. DESCRIPTION OF DATA ACQUISITION AND HANDLING SYSTEM

E. NUMBER OF COPIES OF OPERATOR'S MANUAL SUPPLIED WITH EACH MONITOR

F. NAME OF TESTING FIRM THAT WILL PERFORM THE REFERENCE METHOD TESTS FOR SULFUR DIOXIDE AND/OR NITROGEN OXIDES DURING THE CONTINUOUS MONITORING SYSTEM PERFORMANCE EVALUATIONS

G. NAME OF ORGANIZATION THAT WILL PERFORM THE CONTINUOUS MONITORING SYSTEM PERFORMANCE EVALUATIONS (SOURCE OPERATOR, MONITORING SYSTEM MANUFACTURER OR REPRESENTATIVE OR TESTING FIRM)

H. ANTICIPATED STARTING DATE OF THE CONDITIONING PERIOD FOR THE MONITORING SYSTEMS

I. DRAWING OF THE MONITORING SYSTEM LOCATION(S) SHOWING STACK OR DUCT DIMENSIONS, AIR POLLUTION CONTROL EQUIPMENT, FANS, AND LOCATION(S) OF DISTURBANCES WHICH AFFECT MONITOR LOCATION(S) DETERMINATION (MAY BE SHOWN ON DRAWING REQUIRED ON PRELIMINARY TEST METHOD PAGE OR ATTACH TO THIS DOCUMENT).

## SOURCE TESTING REPORT FORMAT

### COVER

- Plant name and location
- Source sampled
- Testing company or agency, name, and address

### CERTIFICATION

- Certification by team leader
- Certification by reviewer (e.g. Professional Engineer)

### INTRODUCTION

- Test purpose
- Test location, type of process
- Test dates
- Pollutants tested
- Observers' names (industry and agency)
- Any other important background information

### SUMMARY OF RESULTS

- Emission results
- Process data, as related to determination of compliance
- Control device parameter data summary
- Allowable emissions
- Description of collected samples
- Visible emissions summary
- Discussion of errors, both real and apparent

### SOURCE OPERATION

- Description of process and control device
- Process and control equipment flow diagram
- Process data and results, with example calculations for one test run
- Representatives of raw materials and products
- Any specially required operation demonstrated

### SAMPLING and ANALYSIS PROCEDURES

- Sampling port location and dimensioned cross section
- Sampling port description, including labeling system
- Sampling train description
- Brief description of sampling procedures, with discussion of deviations from standard methods
- Brief description of analytical procedures, with discussion of deviations from standard methods

### APPENDIX

- Complete results with example calculations for one test run
- Raw field data (original, not computer printouts)
- Control device parameter data
- Process production data
- Laboratory report, with chain of custody
- Test log
- Calibration procedures and results
- Project participants and titles
- Related correspondence