



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

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SOURCE TESTING AND TEST REPORTING GUIDELINES

TESTING REQUIREMENTS

Source tests shall be conducted in accordance with the requirements established in the facility's Air Quality Operating Permit and with applicable state and federal regulations.

- Any deviations to the federal reference test methods shall be approved by the Director prior to conducting the tests. The absence of cyclonic flow must be verified before testing any system.
- Source tests shall be conducted at the maximum fuel consumption rate, production rate, or other operating parameters established in the Permit. **The hourly documentation for these parameters during the source test shall be included in the source test report.** If any test is conducted at less than permitted maximum capacity, or at a lower fuel rate, production rate or heat input rate, the test results will be evaluated against the permit operating conditions and the permit may need to be revised accordingly.
- **For all particulate matter test runs, the NDEP-BAPC has established minimum sampling volumes and sampling times (test run durations).** Test runs shall be conducted for a minimum of one hour, and shall either collect a minimum sample volume of 1.7 dry standard cubic meters (dscm, or 60 dscf) or be conducted for up to 2 hours to maximize the sample volume.
- For all gaseous species test runs, the NDEP-BAPC requires minimum test duration of 1 hour.
- The NDEP-BAPC requires the **analysis of a representative sample of the ore, fuel** or other material processed or combusted during the source testing of each system if the emissions may be affected by the composition of the material in the process. **The NDEP-BAPC requires that a minimum of one sample shall be taken during each day that a particular emissions unit is tested, but may require that a sample be taken during each test run.** The analysis report shall state the date the sample was analyzed and refer to the emission unit through which the ore/material was processed. The analysis report shall include content (sulfur, metals, moisture, etc...) of the ore, fuel, or other material and shall be submitted in the source test report.
- Any emission limit or operating parameter exceeded at the time of the source test **must be reported within 24 hours** to NDEP-BAPC as required in the Nevada Administrative Code (NAC) 445B.232 "Excess emissions; Scheduled maintenance, testing or repairs; notification of director; malfunction, upset, startup, shutdown or human error." Reported permit exceedances will be evaluated in accordance with the Air Quality regulations and may result in a Notice of Alleged Air Quality Violation and Order (NOAV). Failure to properly report an exceedance of a permitted emissions limit represents the basis for a NOAV.

- Any calibration gases used for source tests shall be **certified prior to the tests and have valid certification dates** during the tests. Only a certified independent laboratory shall certify the calibration gases.

The NDEP-BAPC may reject emissions tests for any of the following reasons:

- 1) Failure to comply with all provisions of NAC 445B.252 “Testing and sampling.”
- 2) Any deviation from U.S. EPA Reference Test Methods unless specifically approved by the NDEP-BAPC.
- 3) For any source subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, failure to meet any additional testing requirements stated in the applicable Subpart.
- 4) Failure to achieve isokinetic sampling rates (+/- 10% Method 5 for PM, +/- 20% Method 201A for PM10) for any of the three required test runs.
- 5) Failure to provide relevant process and production information for the period of each test run.
- 6) Failure to achieve the operating conditions (e.g., throughput rate, heat input rate, fuel flow rate, emission limits) specified in Section IV or V of the Air Quality Operating Permit during each test run.

SOURCE TEST REPORTING GUIDELINES

For comprehensive and consistent reporting, the NDEP-BAPC requires the submittal of a complete test report in accordance with NAC 445B.252 “Testing and sampling.” The NDEP-BAPC reserves the right to require the report resubmitted if these guidelines and the following format are not followed.

- ***Immediately report any excess emissions:*** Any emission limit or opacity limit exceeded during a source test must be reported within 24 hours to the NDEP-BAPC, as required by NAC 445B.232.
- ***Clearly identify any permit or testing deviations:*** Any excess emissions or other permit deviations that occur during the test program, and any deviations from the specified testing methods or procedures, **shall be clearly identified in the first three pages of the report.**
- ***Explain operating deviations:*** Any process upsets that occur, and any failures to achieve that the operating conditions or parameters specified in Section IV or V of the Air Quality Operating Permit, during each test run shall be identified and explained **within the first three pages of the report.**
- ***Identify Systems & Units:*** **Identify any emissions unit tested using the System Number and/or Unit Number as it is identified in the air quality operating permit.**
- ***Use permit units for operating parameters:*** The hourly documentation for the pollutant emissions rates and operating parameters (production rate, fuel consumption rate, heat input rate, etc.) shall be reported in the same measurement units as specified in the permit.
- ***Include test run data:*** The report shall include legible, complete, “raw” data sheets and explanations of any process upset(s) during the source test. If additional runs are conducted, supporting documentation shall be included in the report regarding the reason for those runs. The NDEP-BAPC will determine validity of each test run and which test runs will be validated for the purpose of determining compliance. The report shall include start and stop times of each test run with an explanation of any time breaks during or between test runs.

- **Appendices:** The NDEP-BAPC encourages the use of appropriately referenced appendices to contain sampling information, analytical data, “raw” test data, or other supporting information.
- **Laboratory certification:** Provide a copy of the analytical lab(s) EPA certification.
- **Include documentation of EPA Reference Method I:** The test report shall include Reference Method 1 calculations and identification of any stack anomalies. The report shall include a Reference Method 1 determination of cyclonic flow. Traverse point descriptions should include stack information and a diagram of the thickness of the stack wall and the length of the test port if these items dictate traverse point locations.
- **Submit report in 60 days:** The source test report shall be submitted within 60 days of the completion of the source test. Failure to submit the report within 60 days is a violation of NAC 445B.252 “Testing and sampling,” and is subject to potential enforcement action.

The NDEP-BAPC requires the following submissions:

- (a) **one printed copy of the completed source test report,**
- (b) **a summary sheet for each tested source, including all source test results, and**
- (c) **a compact disk(s) containing the complete text of the report (analysis, raw data, diagrams, etc.) in electronic PDF format and an electronic EXCEL spreadsheet(s) containing the data collected during each particulate matter source test run.** A copy of the required EXCEL spreadsheets is attached; please call the NDEP-BAPC Compliance & Enforcement Branch me to obtain an electronic version.

SOURCE TEST REPORT FORMAT

A. Cover Page

1. Facility Name and Location
2. Source Permit Number
3. Emission Systems Source Tested
4. Testing Company or agency, name and address
5. Certification by Source Testing Company that the sampling and analytical procedures and the data presented in the report are authentic and accurate.

B. Deviation Report (within the first three pages of the report)

1. Identify any emissions exceedances, exceedances of permitted operating parameters or other permit deviations during the source test.
2. Identify and explain any process upsets or other anomalies that occur during the test program.
3. Identify and discuss any deviations from the EPA Reference Methods.
4. Identify any deviations from standard analytical procedures.
5. Describe any errors in quality assurance procedures.

C. Table of Contents

D. Introduction

1. Test purpose
2. Test location
3. Test dates
4. System processes
5. Pollutants tested
6. Observers' names, titles, and their industry or agency.
7. Other relevant background information

E. One Page Summary of Test Parameters & Results for Each Unit Tested

1. Emission results reported in same System and Units numbers specified in the permit for each source tested emission unit.
 - a. Permitted emission limits (indicate any exceedances).
2. Visible Emission (Opacity) Observation Summary (if required.)

F. Test Data & Sampling Method (for each source tested)

1. Original raw field data (A printout shall be made if field data is originally recorded on a computer. Each sheet of the printout shall be signed and dated by the test team leader).
 - a. Original opacity observation field reports
 - b. Visible Emission Observer's Certification.
2. Electronic copy of Excel spreadsheet (PM SOURCE TEST DATA TEMPLATE) containing the data collected during each particulate matter source test run.
3. Description of System, process, any control devices, and control equipment flow diagram.
4. Raw data showing verification of the absence of cyclonic flow.
5. Process startups, shutdowns, and other operational changes during tests, such as the time of start and stop, shall be explained and noted.
6. Applicable federal test reference sample calculations.

G. Operating/Process Data

1. Process data, throughput and production data pertaining to operational permit limits for each system tested.
2. System, process and control device-operating parameters during the test as compared to normal operation. Control device parameters should include pressure drop, flow rates, make-up water rates, recycle water solids content for scrubbers; voltages, currents, spark rates and rapping cycle times for electrostatic precipitators; pressure drops and cleaning cycles for baghouses.
3. Characterization of the gas stream to the control device.
4. Type of raw material used, fuel products. Operational data signed and dated by the plant official.
5. Certification by a facility representative that the production rate and/or heat input rate during the source test, are reported accurately.

Appendices

Facility Process Information for each emission system or unit

1. Process throughput data, heat input data, and/or other operating parameters
2. Sampling and analytical results for material processed and/or fuel combusted

Description of EPA Reference Methods.

1. Test reference method procedures.

Sampling and Analysis Procedures

1. Sampling port location and dimensional cross-section diagram.
2. Sampling point description, including labeling system.
3. Sampling train description. Including nozzle size and leak test methods with results.

Lab Samples and Procedures

1. Description of collected samples and Chain of Custody for any collected samples from point of collection to post analysis.
2. Laboratory report, with chain of custody.
3. Laboratory Certification

Calibration and quality assurance procedures and results

1. Calibration gases expiration date.

Source Test log.

Project participants and titles.

Related correspondence.