

Stack Testing

Air updates
2012
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Nebraska DEQ

Outline



- Guidance Documents
- ERT
- I Need to Test (step by step guidance)
- Audit Program
- Common Problems
- Detection Limits

Guidance Documents

- National Stack Testing Document (April 27, 2009)

www.epa.gov/compliance/resources/policies/.../caa/stacktesting.pdf



What is found in the National Stack Testing Guidance Document

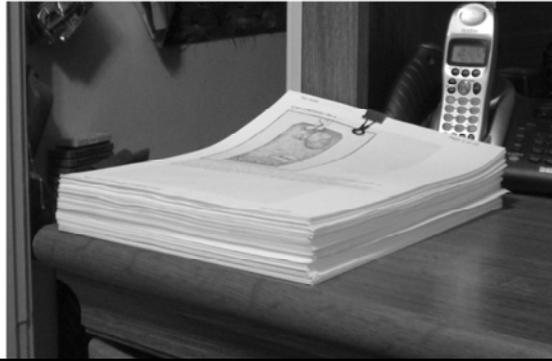
- The time frame for conducting stack test
- Stack test notifications
- Observation of stack test
- Representative testing conditions
- Stoppages
- Postponements
- Test reports



Guidance Documents

- State of Nebraska Stack Testing Guidance

www.deq.state.ne.us/



What is found in the Nebraska Stack Testing Guidance Document

- Test planning
- Performance testing
- Test report
- Confidentiality claim
- Attachments
 - protocol & test report requirements



What is the ERT

- It is the electronic reporting tool (electronic submittal of test data to EPA)
- Required in these NSPS & NESHAP source categories:
 - Boilers, Portland Cement, Incinerator, Oil & Gas, Coal Preparation.
- In the future it will be in the General Provisions
- Source or tester can input into ERT
- Cost



ERT



www.epa.gov/ttn/chief/ert/index.html

Highlights the need to document the key information and procedures required by the existing EPA Federal Test Methods;

Facilitates coordination among the source, the test contractor, and the regulatory agency in planning and preparing for the emissions test;

Provides for consistent criteria to quantitatively characterize the quality of the data collected during the emissions test;

Standardizes the reports; and

Provides for future capabilities to electronically exchange information in the reports with facility, State or Federal data systems.

In addition to improving the content and quality of source emissions test reports, the ERT should:

- Reduce the workload associated with manual transcription of information and data contained in the report;
- Reduce the resources required to store and access the reports; and
- Reduce redundant efforts in using the data for multiple purposes



I need to test

Step by Step
Guidance

Who do I call?

- Brad Pracheil DEQ
– (402) 471-4141
- Consultant
- Test Company



Where can I find a test company's contact information

- Call DEQ
- SES website www.sesnews.org
- Call EPA



Who do I hire

- Find a company that is qualified to do the work. (QSTI required for Part 75)
- Talk with other companies in your industry type.
- Corporate experience.
- Testing is expensive choose wisely



When do I need to test

- Read your permit or rule that you may be subject to first. (Use most stringent)
- 60/180 days or 3rd quarter or permit term



What is needed in a Protocol

- See the Nebraska Stack Testing Guidance
 - Facility information
 - Test company information
 - Test information (reasons for test, pollutants, methods)
 - Emission point information (diameter stack)
 - Control equipment information (baghouse, scrubber)
 - Process equipment information (max rate, material being used, process data to be monitored)
 - Test date & a rough start time (am/pm)

Test Day

- Need to be operating the facility at representative conditions
- Need to be operating the units to be tested and units prior
- Make sure to hold your process steady (do not alter operational parameters)
- Need to start test on time or close as possible

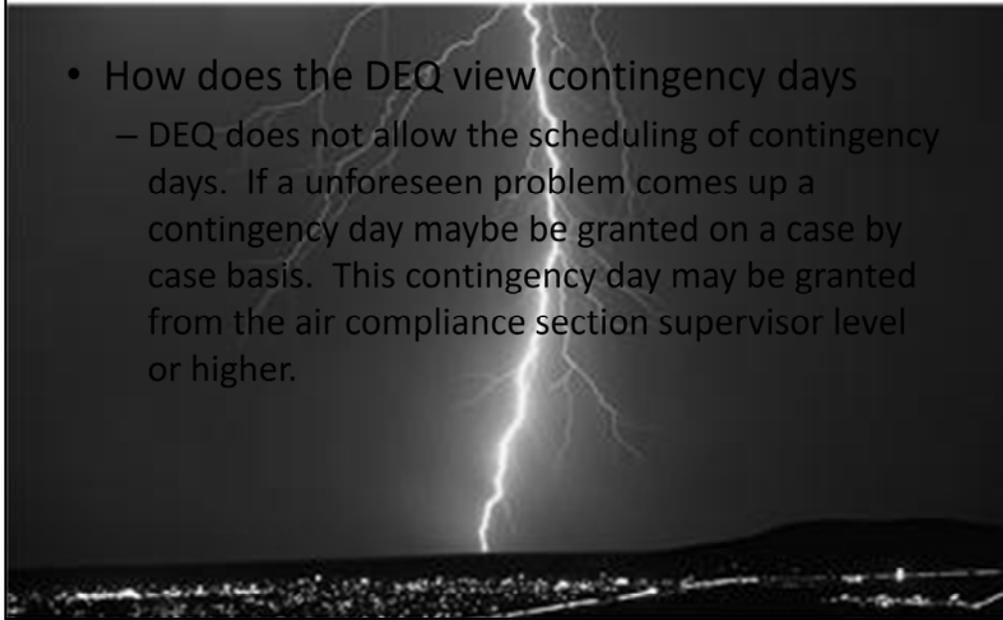
Test Day

what to track

- Need to keep track of operating parameters and settings like (but not limited to):
 - Water flow
 - Pressure drop
 - Feed flow rate
 - Gas flow rate
 - Important temperatures
 - Units produced
 - pH

Trouble Hits

- How does the DEQ view contingency days
 - DEQ does not allow the scheduling of contingency days. If a unforeseen problem comes up a contingency day maybe be granted on a case by case basis. This contingency day may be granted from the air compliance section supervisor level or higher.



Test Report

- A hard copy of the test report needs to be submitted within **45 days of completion of test** per Nebraska Air Quality Regulations Title 129 chapter 34.
- See Nebraska Stack Testing Guidance!



What Needs to be in the Test Report

1. Cover information (facility name, location)
2. Certification (signed by tester and reviewer)
3. Test information (permit condition ,NESHAP NSPS)
4. Summary of results (in units of the standard)
5. Process and control equipment information
6. Sampling and analytical procedures
7. Appendices (field data sheets, calibration sheets)

Confidential Report Submittal

- Need to follow the guidance on the DEQ website.
- Also need to submit a public copy for the file with the confidential parts blacked out.



<http://www.deq.state.ne.us/>

No News is Good News

- DEQ does not send out any formal letters (unless there is a violation)
- You can assume all is well if you don't hear from the Department
- We will let you know if we have any concerns

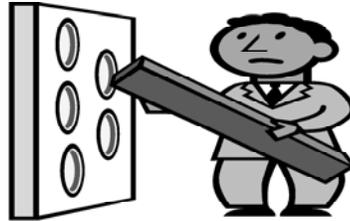
Audit Program

- Audit samples will be required for all stack tests (soon)
- These samples will be used to audit the laboratory
- Cost in testing could increase



Common Problems

- Missing 30 day notice or 45 day submittal
- Missing 60/180 day
- Testing performed not at representative conditions
- Testing issues
 - Leak checks / broken glassware
 - Failing to check for cyclonic flow
 - Equipment issues / temperature
 - Failing to follow the method or subpart completely
- Failing to submit operational data



More Common Problems

- New/updated methods (202)
- Failing to follow NESHAP/NSPS requirements
 - Test method (specified in reg)
 - ERT
 - Submittal (protocol and report time)
 - Testing procedures (DD, sample time)



New Detection Limit Procedure when to use DL and when to use Zero

- Detection limit must be used:
 - If any reading is above the detection limit and the rest are below
 - If 51% of run is above half the detection limit
- Zero can be used if:
 - All readings are below DL and 51% of run is less than half DL



Detection Limit is a general term. We are after the quantitative limit or reporting limit. A value that is gone through statistical analysis and is a confident number plus or minus x or you have 98 or 95 percent confidence in the number. They maybe values below this DL and that is what we are going to talk about on this slide and the next.

Compound A (DL 5 ppm)	Compound B (DL 5 ppm)	Compound C (DL 5 ppm)	Compound D (DL 5 ppm)
-0.002	2.69	2.42	0.54
-0.003	2.68	1.35	0.55
-0.0025	2.42	1.47	0.56
-0.0024	2.12	1.56	0.58
-0.001	1.98	2.52	0.59
-0.004	1.91	2.59	0.52
-0.0035	1.63	2.79	0.49
-0.0022	1.21	3.12	0.42
-0.0015	1.24	3.21	0.22
-0.0018	1.25	3.79	0.32
-0.0027	1.35	3.91	0.5
-0.003	1.73	3.01	1.2
-0.002	1.62	3.72	1.8
0.02	1.91	2.49	2.7
0.3	1.81	2.45	3.8
0.8	1.74	2.36	4.9
1.1	1.92	2.11	6.2
0.8	2.01	2.99	4.1
0.35	2.12	3.24	3.1
-0.9	2.49	3.15	2.1
-0.009	2.66	2.75	1.5
-0.0075	2.67	2.69	0.8
-0.005	2.72	2.55	0.5
-0.005	2.79	2.01	0.5



Fire away!

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Thank You