Common Pitfalls Typical of a Compliance Stack Test

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What is covered in the presentation:

- Overview of a compliance stack test
- Who is involved with a compliance stack test
- Steps associated with a compliance stack test
- Pitfalls associated with a compliance stack test

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Compliance Stack Test

- Typical compliance stack test follow USEPA test methods. Common test methods 1, 2, 3A, 4, and 5.

  - Three test runs required

- Relative Accuracy Test Audit (RATA) of Continuous Emissions Monitoring (CEM) system, USEPA test methods 3A, 6C, 7E, and 10.

  - Nine test runs required

- Compliance stack testing – may be one time test, once every 5 years (or longer), every 3 years, annually or semi-annually (or at DES request).

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Who is involved

- Plant Manager, Facility Environmental Officer, Facility CEM Operator
- Stack Testing Consultant/Engineering Firm
- NHDES Testing and Monitoring Section
- USEPA

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Compliance Stack Test

Stack Test Process/Steps

- Notification
- Pre-test protocol submit/Review/Provide Comments
- Pre-test meeting/Review Pre-test protocol & Discuss Comments
- Stack Test or RATA (Observed by NHDES)
- Submit Final Report/Review & Provide Comments
- NHDES or USEPA issue Acceptance Letter

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Typical Pitfalls of a Compliance Stack Test: Pre-test Protocol/Meeting

- Incomplete Pre-test Protocol:
  - Lack of detail.
  - Missing calculations.
  - Doesn't meet minimum requirements of NH Code of Admin. Rules Env-A 802.04.

- Missing from many Pre-test Protocols is a detailed schedule of the test program. This schedule helps a Facility plan production for the day of the stack test.

- Emission Unit Operating Condition/Operating Load

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Typical Pitfalls of a Compliance Stack Test: Pre-test Protocol/Meeting

- Emission Unit Operating Condition during a compliance test:

Env- A 802.10 Operating Conditions

- 90 to 100 percent of maximum production rate or rated capacity;
- Production rate at which maximum emission occur; or
- Conditions agreed upon during pre-test meeting.

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Typical Pitfalls of a Compliance Stack Test: Pre-test Protocol/Meeting

- Common language in a pre-test protocol, the operating load of the Emission Unit is going to be at "Normal Load" or "90% of Emission Unit rated capacity".
- How is Operating Load going to be determined (fuel flow, steam flow, gallons of coating applied)?
- What calculations will be used to demonstrate operating load?

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Typical Pitfalls of a Compliance Stack Test: Pre-test Protocol/Meeting

- Is the production schedule sufficient for the test program to be completed while the unit is at maximum capacity. Three 1-hr tests may take 4 hours or longer to finish. Some test runs are 2, 3 or 4 hours long.

- Engine generator testing and operating load.
  - How do you plan to show operating load (Horsepower or KW)?
  - Are there ample raw materials (rock to crush)?
  - Personnel availability?

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Typical Pitfalls of a Compliance Stack Test: Pre-test Protocol/Meeting

- VOC Coating Operation – Operating Condition
  - Production Schedule
  - Hours to coat a roll of fabric/web
  - Coating usage (May need Safety Data Sheets)
  - Staffing availability

- What other Pitfalls could delay a test program…

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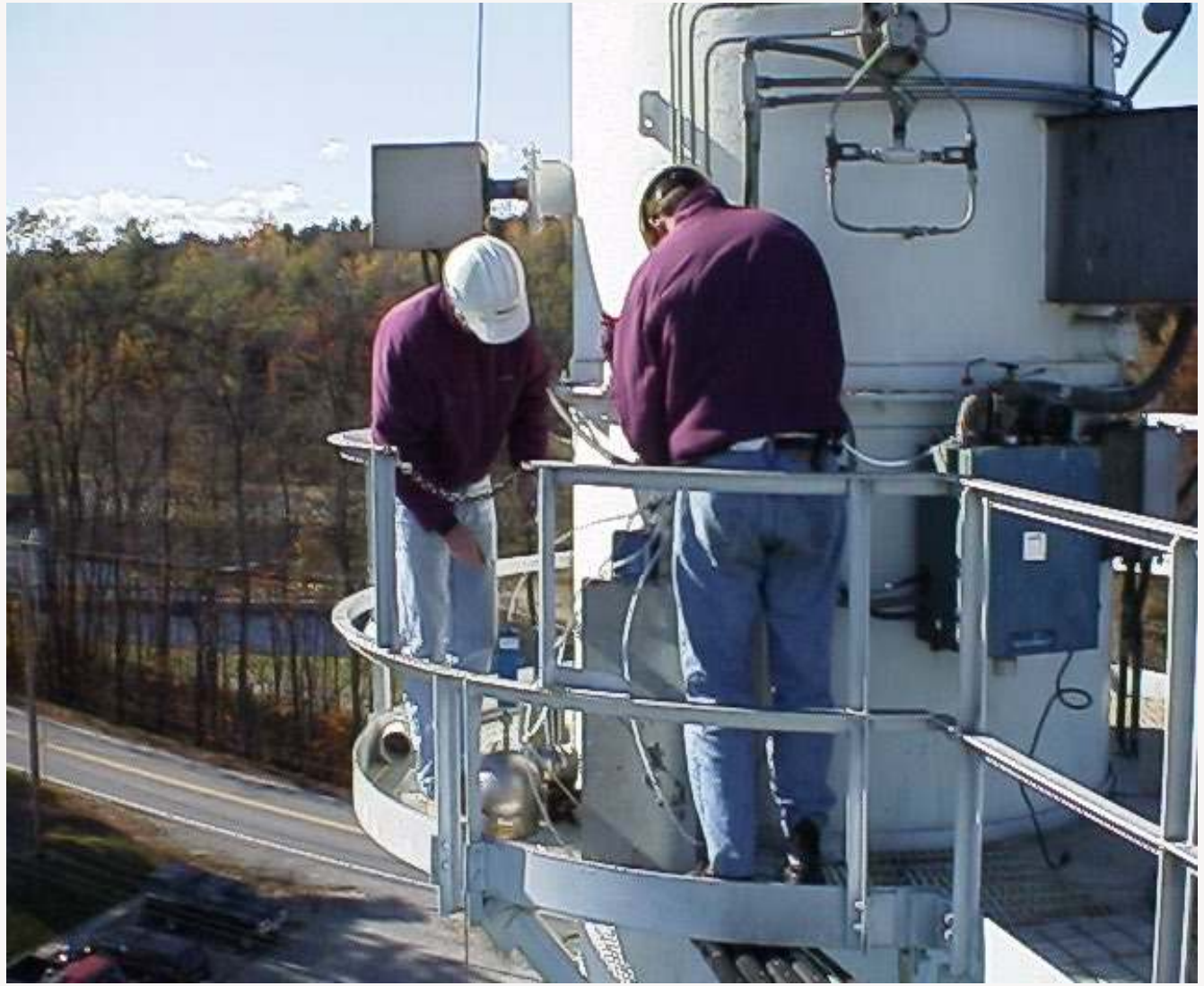
Typical Pitfalls of a Compliance Stack Test

Narrow stack platform.



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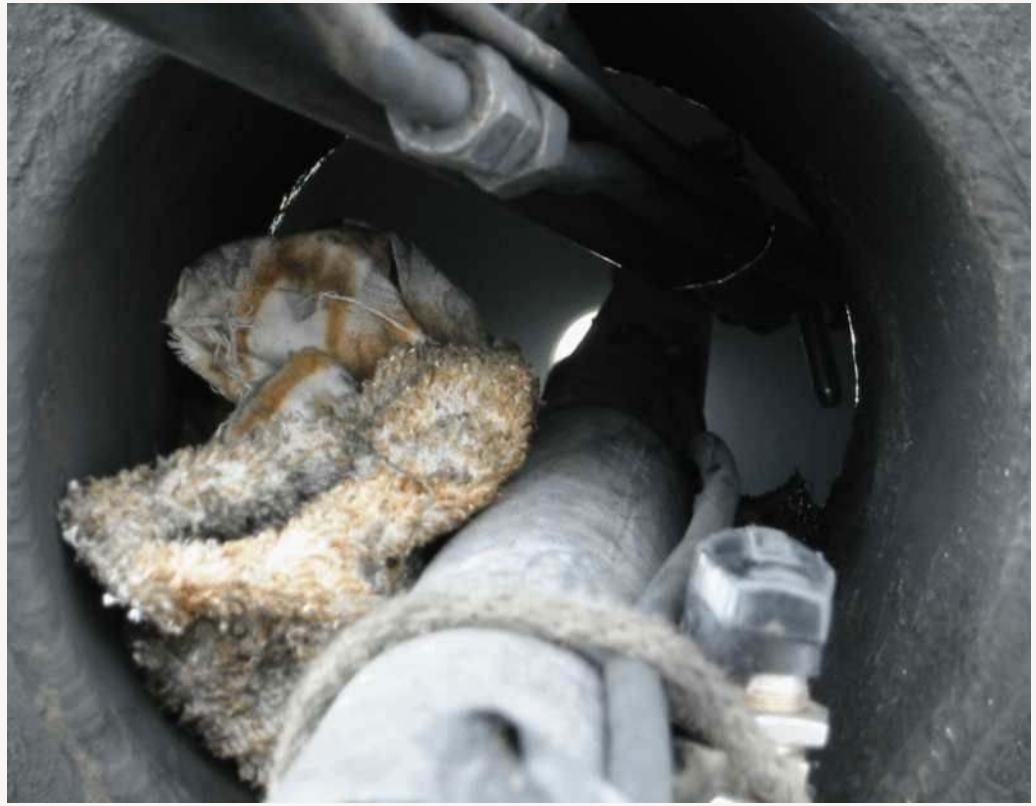
Typical Pitfalls of a Compliance Stack Test

Additional sample ports may be needed to complete the required testing.



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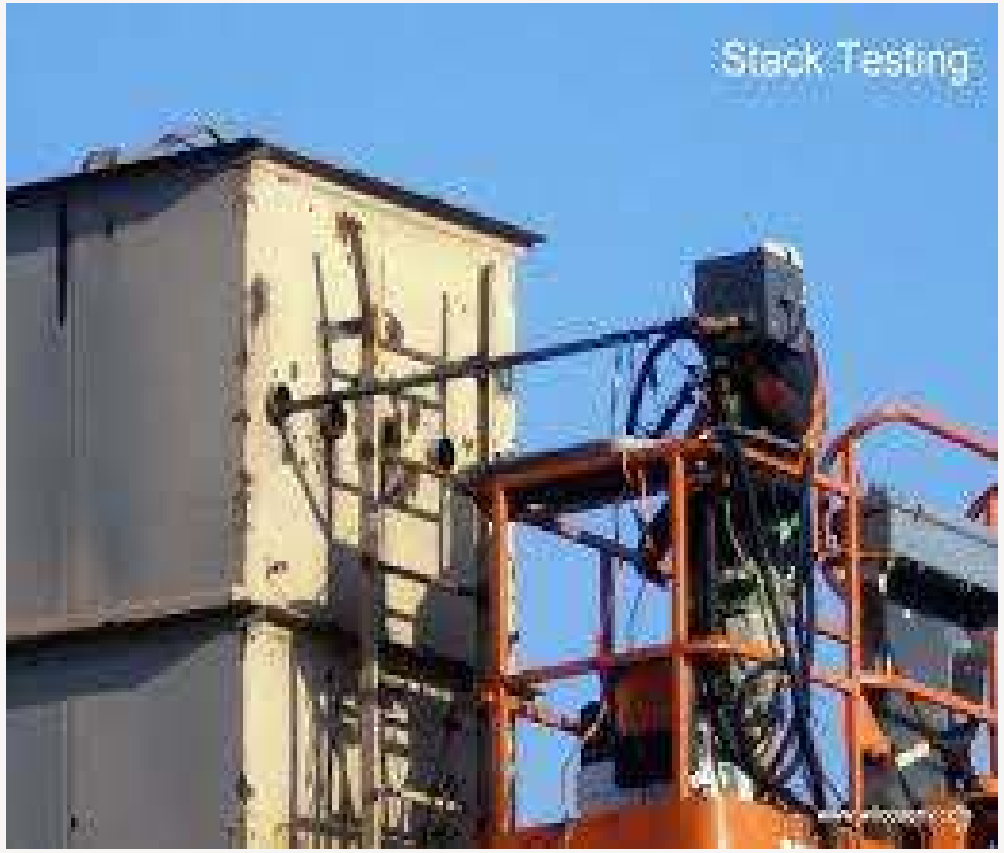
Typical Pitfalls of a Compliance Stack Test

Stack Testing from a manlift is challenging but sometimes unavoidable.

Advance planning is necessary when stack testing from a manlift.



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Typical Pitfalls of a Compliance Stack Test

Testing occurs in all kind of weather!

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Thank you

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Common Compliance Pitfalls Seen During Inspections/Evaluations

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Compliance Inspection Deficiencies and Permit Awareness

- The leading cause of compliance deficiencies from the inspection standpoint is lack of familiarity/comprehension of the permit itself.
- Much less common in the larger sources (Title V) than it is in some of the smaller sources, but still occurs.
- Root cause is frequently a changeover in personnel, lack of a right seat/left seat training for incoming personnel, as well as a consolidation of responsibilities, which became more prevalent during the pandemic.

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Compliance Inspection Deficiencies – Outdated RTAP Demonstration:

- NHDES periodically revises the list of RTAPs and or their respective AALs or classifications.
- If a facility which is subject to needs to obtain or modify the permit as a result of this revision, the facility has 90 days to complete and file an application for that permit or permit modification.
- All of which means, the facility needs to have determined its compliance status well in advance of the 90-day window. (de minimis, in stack, adjusted in stack, modeling)

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Compliance Inspection Deficiencies – 12 Month Rolling Totals:

- This is frequently calculated as a 12-month calendar total, however most of the emission limitations stated in tons per year, are actually tons per consecutive 12-month period.
- We provide compliance assistance to the facilities regarding keeping this calculation available for review on a month by month basis.

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Compliance Inspection Deficiencies – New Equipment Installation:

- A final common compliance issue is the installation or replacement of new equipment at the facility, and the lack of understanding of which equipment requires a permit or permit modification.
- Typically advise the facility rep, if there is any question whether the equipment exceeds permitting thresholds. It's much easier to contact either the compliance assessment section or permitting group to verify.

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Compliance Inspection Deficiencies – Conclusion:

- Compliance starts with thorough permit awareness, and requirements and timelines are communicated and tracked.
- Whenever possible, a dedicated EHS position should be available, or at minimum dedicated time and relevant training for non-EHS personnel.
- Facilities should be receiving the DES Newsletter for updates, particularly relevant to Env-A 1400
- 12 Month rolling total and equipment installation come back to awareness of the original permit, and retention of lessons learned.

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Thank you

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