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MEMORANDUM

TO: Regional Directors
Regional Air Compliance Managers
Regional Air Permit Managers
Regional Enforcement Managers
Central Office Air Managers

CC: Jeffrey Steers, Deputy Director of Central Office Operations

FROM: Michael Dowd, Director, Air Division MCD

SUBJECT: ACG-002:
Guidance for Implementing the EPA Stationary Source Audit Sampling Program (SSASP)

DATE: January 2, 2017 (Originally issued February 24, 2015)

Purpose:

The purpose of this guidance is to promote consistency regarding the evaluation of emissions data generated by or for stationary sources to demonstrate compliance with air emission standards and monitoring requirements. The goal is to provide DEQ air compliance staff with information, references, and tools regarding the implementation of the EPA Stationary Source Audit Sampling Program (SSASP).

Questions or comments concerning this guidance should be directed to the Office of Air Compliance Coordination.

Applicability:

EPA specifically requires audit sampling pursuant to 40 CFR Parts 51, 60, 61, and 63, effective September 13, 2010.[1]

Under the final rules, the requirement to analyze an audit sample during a compliance test applies to all test methods for which a commercially available audit sample is available from a certified audit sample provider. The EPA restructured program requires that two accredited providers be available, and available audit samples must be listed on the Emission Measurement Center's (EMC) website[2] 60 days before audits are required. Audit samples are not required for the following test methods: 3A, 3C, 6C, 7E, 9, 10, 18, 19, 20, 22, 25A, 303, 318, 320, and 321.

The restructuring of the audit program also revises test methods 5I, 6, 6A-C, 7, 7A-D, 8, 15A, 16A, 18, 23, 25, 25C, 25D, 26, 26A, 104, 106, 108, 108A-C, 204A-F, 306, 306A, and 308 to move any language pertaining to audit sample requirements to the General Provisions sections of Parts 51, 60, 61, and 63.

Background:

EPA implemented the audit sampling program as a measure of a laboratory's influence on data generated during laboratory analysis. Different from laboratory accreditation, which, through an application process indicates whether a laboratory has minimum requirements to perform specific methods, the audit samples are analyzed at the same time, on the same equipment, by the same analysts, to determine the level of bias the laboratory has on sample concentrations with known values.

EPA worked with The NELAC Institute (TNI) to develop the current program and accreditation for audit sample providers. Details regarding the SSASP can be found on the EPA - Emissions Measurement Center and TNI websites.[3] TNI compiled the general requirements for:

- Audit Sample Providers (Volume 1, Module 1)
- Accreditors of Audit Sample Providers (Volume 1, Module 2)
- Participators (Volume 1, Module 3)

These modules can be found on the TNI website using the search function. The third module describes how the SSASP impacts DEQ's role and it was used to develop the following procedure. A flow chart outlining the overall process of the audit sampling program can be found in Appendix A of this document.

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[1] §60.8(g), §61.13(e)(1), §63.7(c)(2)(iii), and Part 51, Appendix M, §4.0
[2] https://www.epa.gov/emc/emc-technical-support
[3] http://nelac-institute.org

Implementation:

Communication between the Facility, the Provider, and DEQ is critical to ensure appropriate implementation of EPA's SSASP. This communication should begin as early in the process as possible and may occur prior to receipt of the protocol to ensure the correct concentration is obtained and to provide ample time for the audit sample to be shipped (audit samples may take 4-6 weeks to be shipped from the Provider). The following information is provided to guide DEQ staff through the EPA SSASP process.

1. Determine if an audit sample is required:

   a. Ensure the test method(s) used in the testing program is not one of the test methods that are excluded from the audit sampling program. The follow methods do not require an audit sample:

   - 3A
   - 3C
   - 6C
   - 7E
   - 9
   - 10
   - 18
   - 19
   - 20
   - 22
   - 25A
   - 303
   - 318
   - 320
   - 321

   b. Check audit sample availability on the TNI website. The list of available samples is located under the SSAS tab. If a sample is not published as available on the EMC website at least 60 days prior to the performance test, an audit sample is not required. If a sample is listed as "available" but is not "on-hand", the Facility must ensure the Provider has ample time to prepare the audit sample prior to the scheduled test date.

   c. Audit sample availability is constantly changing; therefore, the availability must be checked for each stack test (i.e., if the sample was not available for a previous test, the inspector should not assume that it will not be available for a current test).

   d. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each test method.

   e. Pursuant to 40 CFR 60.8(g)(1) and 40 CFR 63.7(c)(2)(iii)(A), a facility may request a waiver from the audit requirement due to certain aspects of the test (e.g., the "commercially available" concentration is significantly above the known or expected concentration in the gas stream). In such instances, waivers are granted on a case-by-case basis by Regional staff, with OACC providing assistance, when necessary.

2. If an audit sample is not required, proceed with the standard protocol review procedure. Ensure the appropriate box regarding the SSASP requirement is checked on the test protocol form and annotated in the CEDS protocol review report.

3. If an audit sample is required, the information referenced in Module 3, must be included in the test protocol. Specifically, Module 3, Section 4, states the Facility shall inform the Regulatory Agency (i.e., DEQ) of their selected accredited Provider. The Facility shall calculate each required audit sample concentration range, and submit (to DEQ) sufficient information to confirm the range(s). Such documentation shall include, but is not limited to, the following information:

   a. Test methods
   b. Analytes
   c. Matrix or collection media, as appropriate
   d. Emission limits
   e. Estimated (or permitted, as applicable) stack flow rates
   f. In-stack concentration estimates
   g. Proposed or estimated stack gas sample volume

4. Use the audit sample calculation tool to verify the submitted audit sample concentration is within the proper range. The calculation tool can be found on the TNI website, located under the SSAS tab. Alternatively, if the Facility submits the TNI calculation tool results and supporting documentation, review the information and verify the audit sample is within the proper range. If requested by DEQ and/or the Facility, ranges that are not listed in the SSAS Table may be included in an audit sample if the purpose and technical justification are documented, and if, where appropriate, DEQ and/or Facility are notified in advance.

5. Approve/reject the submitted concentration based upon the results of step #4.

   a. Per Module 1, Section 8, the Provider shall receive an audit sample order from a Facility or its authorized Representative. The Provider shall contact DEQ within (5) business days to request any specific requirements (e.g., changes to the audit sample concentration and/or shipment address) prior to shipment of the audit sample. The Provider may ship the audit sample if a response from DEQ is not received within fifteen (15) calendar days of such request.

   b. The "blind" audit sample(s) will be shipped directly from the Provider to the Facility, who will then forward the sample(s) to the Source Tester. The Source Tester must have them available at the test site during testing, and add them to the batch of field samples sent for analysis, unless otherwise authorized by DEQ. The Source Tester shall deliver the reference method test samples and the audit samples to the Laboratory at the same time.

6. A valid VELAP certification for the lab is also required. Associated VELAP information must be included in the test protocol and final test report. Ensure the appropriate box regarding VELAP is checked on the test protocol and annotated on the CEDS protocol and stack test observed (or unobserved) reports.

7. The audit sample results are provided to DEQ from the accredited Laboratory and/or the Provider. The results must also be included with the final test report. Verify that the results from the Laboratory, Provider, Facility, and final test report coincide with each other (if applicable).

8. The Laboratory uses the SSAS Table on the TNI website to evaluate the sampling results. The Table can be found under the General Resources section of the TNI website, under the SSAS tab. Based on the results of the audit sample:

   a. Pass: Proceed with the review of the final test report.

   b. Fail: Retests are required due to a failure to produce acceptable results for the audit sample. However, if the audit results do not affect the compliance status of the affected facility (after the bias correction factor is applied), DEQ may waive the re-analysis requirement, further audits, or retests, and accept the results of the compliance test. Regional staff is strongly encouraged to contact OACC for assistance with any such waiver requests.

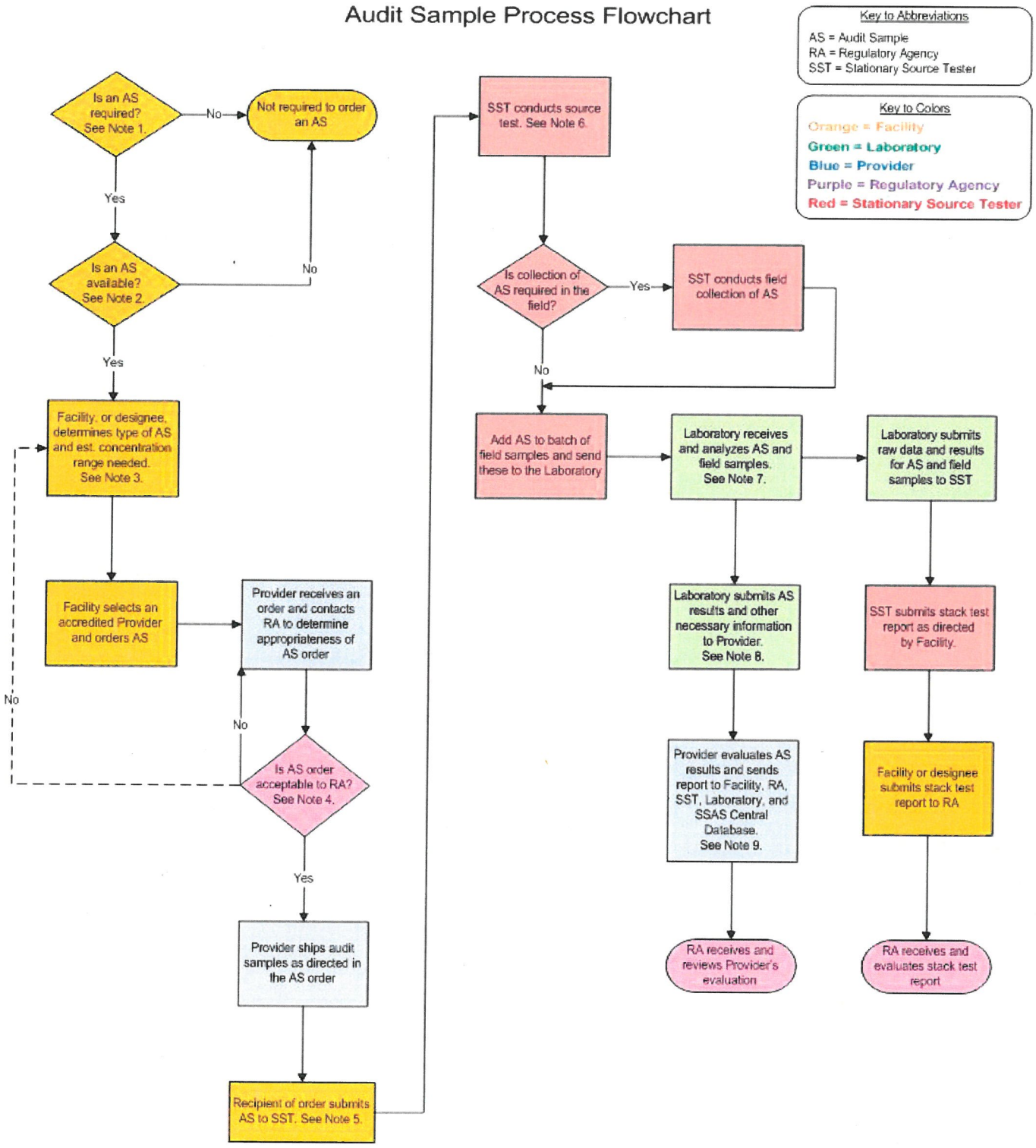
9. The SSASP requirements are to be addressed in DEQ generated reports as follows:

   a. Protocol Review Report: Document information regarding the applicability of the audit sampling program, the availability of the samples, and if the sample concentrations are within the proper range. Ensure the SSASP field on the CEDS protocol review report has been addressed.

   b. Stack Test Observation Report: Document information regarding the audit samples on-hand for the test, the manner in which the samples were handled, and the laboratory the samples will be sent to for analysis. Ensure the SSASP field on the CEDS report has been addressed.

   c. Final Stack Test Review Report: Document if the audit sample results met the acceptance criteria, the bias identified, and, if applicable, the bias corrected emission results. Any problems and/or issues associated with the audit samples should be thoroughly discussed.

APPENDIX A


Audit Sample Process Flowchart
Key to Abbreviations
AS = Audit Sample
RA = Regulatory Agency
SST = Stationary Source Tester
Key to Colors
Orange = Facility
Green = Laboratory
Blue = Provider
Purple = Regulatory Agency
Red = Stationary Source Tester
Is an AS required? See Note 1.
No
Not required to order an AS
Yes
Is an AS available? See Note 2.
No
Yes
Facility, or designee, determines type of AS and est. concentration range needed. See Note 3.
Facility selects an accredited Provider and orders AS
Provider receives an order and contacts RA to determine appropriateness of AS order
No
Is AS order acceptable to RA? See Note 4.
No
Yes
Provider ships audit samples as directed in the AS order
Recipient of order submits AS to SST. See Note 5.
SST conducts source test. See Note 6.
Is collection of AS required in the field?
Yes
SST conducts field collection of AS
No
Add AS to batch of field samples and send these to the Laboratory
Laboratory receives and analyzes AS and field samples. See Note 7.
Laboratory submits raw data and results for AS and field samples to SST
Laboratory submits AS results and other necessary information to Provider. See Note 8.
SST submits stack test report as directed by Facility.
Provider evaluates AS results and sends report to Facility, RA, SST, Laboratory, and SSAS Central Database. See Note 9.
Facility or designee submits stack test report to RA
RA receives and reviews Provider's evaluation
RA receives and evaluates stack test report

Flow Chart 1 Notes[4]

1. Facility or designee (e.g., Stationary Source Tester, consultant, etc.) must determine whether one or more audit samples are required for each test method, matrix, and analyte.
The TNI SSAS Program recommends consulting with your Regulatory Agency.

2. Consult the SSAS Table published on the TNI website and the list of Providers published on the Provider Accreditor's website and on the TNI website.

3. Consult the Regulatory Agency or the EPA for guidance.

4. Per Section 8.0 of the Provider Standard (Volume 1, Module 1), the Provider may ship the audit sample as ordered, if response is not received from the Regulatory Agency within fifteen (15) calendar days of such request.

It is the responsibility of the Regulatory Agency to evaluate the method, container, matrix, analytes, and analyte levels proposed for the audit sample and to choose, in consultation with the Provider, analyte levels that best audit the test and are blind to the other Participants. If any aspects of the audit sample except the analyte levels must be changed, the Regulatory Agency shall inform the Facility as well as the Provider so that the Facility can also change the order as the Regulatory Agency requires.

5. If there are questions or complaints regarding the audit sample order, consult Section 6.0 of The Participants Standard (Volume 1, Module 3) on the procedures to follow to submit your questions/complaints.

6. The Stationary Source Tester must ensure that the audit sample is available on-site when conducting the stack test.

7. The Laboratory must handle, store, and analyze each audit sample in the same batch and in the same manner as the stationary source test samples for the test method and analyte being audited. For more details, see Section 4.4 of the Participants Standard (Volume 1, Module 3). Additional instructions from the Providers must be followed.

8. The Laboratory submittal to the Provider must include the Stationary Source Test Project ID and other pertinent information defined in Section 11.2 of the Provider Standard (Volume 1, Module 1), to enable the Provider to generate its evaluation report.

9. If there are questions or complaints regarding the Provider's evaluation of the audit sample results, consult Section 6.0 of the Participants Standard (Volume 1, Module 3) on the procedures to follow to submit your questions/complaints.

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[4] Flow diagram and associated notes can be found on the TNI website in Volume 1, Module 3, under the SSASP tab