



# Stationary Source Audit Sample Program

Stanley Tong - EPA Region 9

Michael Klein - NJDEP

Gregg O'Neal - NCDENR

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# Topics

- ▶ Updates
- ▶ Audit Sample Program Statistics
- ▶ Options for Expanding the Audit Sample Table
- ▶ Open discussion

## Updates

- ▶ 2011 EPA approved TNI's program
- ▶ 2013 Audit samples became available
- ▶ States signed up to access the program

## Updates (cont.)

- ▶ TNI's Stationary Source Audit Sample (SSAS) documents: 3 modules
- ▶ Vol 1 Mod 1 (Sample Providers) 3/2/14 (not yet submitted to EPA)
  - ▶ Manufacturing Lot: A group of audit samples made at one particular time in one particular place for one particular method at one particular concentration.
  - ▶ Provider shall not send ~~the same~~ an audit sample from the same manufacturing lot ~~twice~~ to the same Facility or Laboratory consecutively, or more than once in a calendar month, or more than eight (8) times in a twelve month period.

Reason for this change: running out of available audits 4

## Updates (not yet submitted to EPA)

- ▶ Vol 1 Mod 1 (Sample Providers)
- ▶ Providers shall supply audit samples that *are within reflect* the concentration ranges in the SSAS Table.

~~*If requested by the Regulatory Agency 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, the Regulatory Agency and/or Facility are notified in advance.*~~

Redline showing text being deleted

## Updates (not yet submitted to EPA)

- ▶ Samples outside of the SSAS Table concentration range:

- ▶ *NOTE: A Provider may, upon request, supply samples, similar in composition to audit samples, which have concentrations outside the ranges in the SSAS Table. **By definition, such samples would not be considered audit samples, and are, therefore, outside the scope of this Standard.***

## Updates (not yet submitted to EPA)

- ▶ Providers shall contact the Regulatory Agency (RA) within 5 business days for any specific RA requests
  - ▶ e.g., changes to audit sample concentration/shipment address
- ▶ Providers assign audit samples based on lab-specific information at the time of the initial order
- ▶ Provider shall notify the RA within 2 business days if the Facility modifies audit sample order (including Tester and/or laboratory)

## Updates (not yet submitted to EPA)

- ▶ Audit samples are laboratory specific
  - ▶ If a different lab than the one on the original order submits the audit results, the Facility shall inform the Provider prior to sending the audit sample to a new or alternate lab.
    - ▶ Provider shall:
      - ▶ Notify the Regulatory Agency within 2 business days for approval to submit the evaluation results.
      - ▶ Submit the results if no reply from the Regulatory Agency after 3 business days.



## Updates (not yet submitted to EPA)

- ▶ Evaluation Report
  - ▶ Inadvertently deleted requirement for Provider to include unusual details of the audit sample (e.g., need to change an assigned value or delete an analyte from evaluation) (Section 11.2.1 i) will be restored)
- ▶ Regulatory Agency Responsibility
  - ▶ Clarified items RA should review during the 15 day period:
    - ▶ Evaluate method, container, matrix, analytes, requested value.
    - ▶ Notify Facility and Provider if sample must be changed so the Facility can modify its order with the Provider.
  - ▶ **NEVER** notify the Facility about a change in concentration

## Updates (not yet submitted to EPA)

- ▶ Complaint Procedure (e.g., inaccurate audit sample value)
  - ▶ Provider - include with reporting forms:
    - Regulatory agency contact information
    - Webpage link to submit a complaint
- ▶ Important that States respond ASAP to Provider's communications
  - ▶ i.e., audit sample order / audit sample order changes

# Audit Sample Program Statistics

- ▶ Audit samples analyzed to date (~1000 samples ordered to date)
- ▶ Pass rate generally 90% or higher
- ▶ TNI members page statistics
  - ▶ <http://www.nelac-institute.org/index.php>
  - ▶ click on “member page” tab at top right

# Audit Sample Program Statistics (cont.)

The screenshot shows the website for The NELAC Institute. At the top left is the logo with a sun icon and the text "THE NELAC INSTITUTE". To the right of the logo is the text "The NELAC Institute". Further right are a "Google™ Custom Search" box with a "Search" button, a "Contact TNI" button, and a "Member Page" button which is circled in red. Below the header is a blue navigation bar with links: Home, About TNI, Calendar, TNI Programs, TNI Standards, Conferences, Professional and Technical Resources, Documents, and Education Delivery System. The main content area is titled "TNI Members" and contains the text "This area of the TNI website is for members only!". Below this is a section for "NELAP Interim Standard (IS) Ballot" with contact information for Stanley Tong. A "Committee Application" section is also visible. In the "Member Directory" section, the link "SSAS Central Database Statistics" is circled in red. At the bottom left is a "Logout" button. On the right side of the page is a "news" section with several articles, including "Updated FoPT Table for Non-Potable Water Accreditation" and "Comment Period for Modified Working Draft Standard - V1M5 Microbiology".

# Audit Sample Program Statistics (cont.)

**SSAS Statistics** Export Print all pages Print current page

Refresh

Method	Analyte	Matrix	TOTAL	PASS	FAIL	PASS RATE
abc	abc	abc				
101A	Mercury	AMPULE	6	6	0	100%
101A	Mercury	FILTER	2	2	0	100%
12	Lead	AMPULE	77	75	2	97%
12	Lead	FILTER	78	77	1	99%
13A	Fluoride	AMPULE	7	7	0	100%
13B	Fluoride	AMPULE	119	104	13	87%
26	Hydrogen Chloride	AMPULE	93	88	5	95%
26	Hydrogen Fluoride	AMPULE	14	11	3	79%
26A	Hydrogen Chloride	AMPULE	344	321	23	93%
26A	Hydrogen Fluoride	AMPULE	92	83	9	90%
29	Antimony	AMPULE	41	41	0	100%
29	Antimony	FILTER	47	46	1	98%
29	Arsenic	AMPULE	125	123	1	98%
29	Arsenic	FILTER	134	131	2	98%
29	Barium	AMPULE	18	18	0	100%
29	Barium	FILTER	16	15	1	94%
29	Beryllium	AMPULE	110	110	0	100%
29	Beryllium	FILTER	120	119	1	99%
29	Cadmium	AMPULE	178	176	2	99%
29	Cadmium	FILTER	199	196	3	98%

## Audit Sample Program Statistics (cont.)\*

- ▶ Mth 8 Sulfuric Acid Mist: (120/147) 82%
- ▶ Mth 13b Fluoride: (104/120) 87%
- ▶ Mth 26 Hydrogen Fluoride (11/15) 73% (small sample size)
  
- ▶ Identifiable Trends?
- ▶ Program is working to find problems

\* As of 1/15/2015

# Options for Expanding the Audit Sample Table

- ▶ What we found:
  - ▶ Custom audit assigned values in the Central Database: 146
    - ▶ 141 of these were for lower concentrations
    - ▶ 112 were for Method 29
    - ▶ 15 failed (Cr, Pb, Ni, Cu, Ba, Zn, HCl, SO<sub>2</sub>) Sb, 6- M13b
  - ▶ What happens if results differ “significantly” from the assigned value?
  - ▶ Audit samples outside the Audit Sample Table acceptance range will no longer be provided.
    - ▶ How do we move forward?

# Options for Expanding the Audit Sample Table(cont.)

- ▶ Determining the acceptance criteria
  - ▶ 40 CFR 60.8 Based on “well established statistical methods”
  - ▶ Possible options to move forward: Temporary acceptance limit; re-establish after new historical data.
    - ▶ Extrapolate existing data on what labs can achieve; or
    - ▶ Temporary limit of 10x of Provider's repeatability limit
- ▶ Goal: Audit samples that challenge both the tester and the lab
  - ▶ Method 25Z
- ▶ TNI: Investigate Method 8 failure rate
- ▶ Need new members - NJ, NC, EPA Region 9 termed out
  - ▶ <http://www.nelac-institute.org/amember/signup.php>
  - ▶ Generally meet every other Monday 2pm Eastern

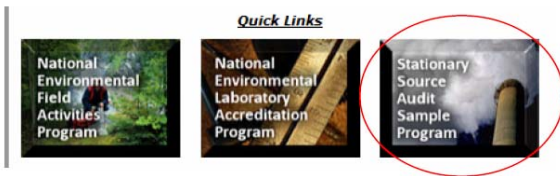


## Open Discussion

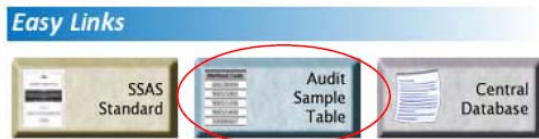
- ▶ Reuse of residual excess audit sample as a QC sample
- ▶ Audit results that are beyond the acceptance range
  - ▶ Biased high
  - ▶ Biased low
- ▶ Review spreadsheet of low bias failures
  - ▶ EPA Region 9 investigation - HF (Lab determined its cleanup cartridge caused low bias) / Ag (no regulatory requirement, results accepted)
  - ▶ Open forum to discuss how States investigated failures and the outcome
- ▶ Feedback for audit sample Providers

# Audit Sample Table – avail analytes/conc. ranges

- ▶ <http://www.nelac-institute.org/index.php>
- ▶ Click link to Stationary Source Audit Sample Program



- ▶ Click link to Audit Sample Table



- ▶ Click link to Stationary Source Audit Sample Table



# Audit Sample Calculation Tool

- ▶ Three lines below the Audit Sample Table link is the link to the Audit Sample Calculation Tool - <http://nelac-institute.org/ssas/calctool.php>

## Audit Sample Calculation Tool

Click [here](#) to access the Audit Sample Calculation Tool, used to calculate the concentrations needed when ordering audit samples.

### AUDIT SAMPLE INFORMATION PER SECTION 4.1.1 OF VOLUME 1, MODULE 3 REQUIREMENTS FOR PARTICIPATION IN THE TNI STATIONARY SOURCE AUDIT SAMPLE PROGRAM

[\[CLICK FOR INSTRUCTIONS\]](#)

TEST METHOD:  MEDIA:

#### DATA ENTRY:

Checkmark to include in order: [\(toggle all\)](#)

Analyte:

Emission Limit (lb/hr):

Est. In-Stack Gas Concentration (mg/dscm):

Stack Flow Rate (dscfm):

Estimated or permitted as applicable

Sample Rate (m<sup>3</sup>/hr):

Sample Time (hr):

Final Diluted/Concentrated Volume per Method (mL):

Enter if audit is in terms of mass/liquid sample volume.

#### CALCULATED VALUES:

Analyte Molecular Weight (g/mol):