

**REGULAR MEETING**  
**AIR POLLUTION CONTROL BOARD**  
**\*\*Innovation Station 3<sup>rd</sup> Floor Room 3.335a**  
**Signs will be posted for directions**  
**Additional staff will be available as well\*\***  
**312 Rosa L. Parks Avenue**  
**In Person and**  
**Remote Access Via WebEx link**

**Wednesday October 12, 2022**  
**9:30 A.M.**

|    | <b>Item</b>                                                                                                                                                                                                                                                                                                                       | <b>Presenter</b>                  | <b>Page</b> |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------|
| 1. | Roll Call                                                                                                                                                                                                                                                                                                                         |                                   |             |
| 2. | Approval of September 14, 2022, Minutes                                                                                                                                                                                                                                                                                           |                                   | 3           |
|    | <b>General Business</b>                                                                                                                                                                                                                                                                                                           |                                   |             |
| 3. | NSPS Incorporation by References Rule Revision                                                                                                                                                                                                                                                                                    | Mark Reynolds                     | 6           |
| 4. | Ambient Air Quality Standards Rule Revision                                                                                                                                                                                                                                                                                       | Mark Reynolds                     | 17          |
| 5. | TDEC Rule Retrospective                                                                                                                                                                                                                                                                                                           | Office of General Counsel         | 31          |
| 6. | Shelby County Local Program Quarterly Progress Report                                                                                                                                                                                                                                                                             | Marc Corrigan/Rep from Shelby Co. | 34          |
| 7. | Public Comment regarding Shelby Co. Health Dept. Local Program:<br><br>Pam Jackson Director of Environmental and Safety Affairs Valero-Memphis Refinery<br><br>Katherine Terry<br>Environmental, Health & Safety and Compliance Manager GP Cellulose<br><br>Bobby White<br>Chief Public Policy Officer<br>Greater Memphis Chamber |                                   |             |

The meeting will be held in compliance with Tennessee Code Annotated Section 8-44-108, as amended by Chapter 490 of the 1999 Public Acts of the Tennessee General Assembly. The meeting will be conducted permitting participation by electronic or other means of communication. Consequently, some members of the Tennessee Air Pollution Control Board are allowed to and may participate by electronic or other means of communication and may not be physically present at the announced location of the meeting.

Air Pollution Control Board  
of the  
State of Tennessee  
Regular Meeting

On Wednesday September 14, 2022, at 9:30 A.M., the Air Pollution Control Board of the State of Tennessee, (hereinafter, referred to as the “Board”), began its meeting on the 3<sup>rd</sup> Floor of the Tennessee Tower in the Nashville Room. The following Board members were physically present.

Dr. Ronne’ Adkins  
Dr. Joshua Fu  
Mr. Mike Haverstick  
Mr. Richard Holland  
Mayor Ken Moore  
Ms. Amy Spann  
Mayor Larry Waters  
Mr. Jimmy West

The following Board members joined the meeting via WebEx:

Dr. Chunrong Jia  
Mr. Stephen Moore

The following Board members were absent:

Ms. Caitlin Jennings  
Dr. John Benitez  
Dr. Shawn Hawkins

Since the Chairman, David Salyers, P.E., could not attend the meeting, Dr. Ronne’ Adkins represented the Chairman by proxy. Ms. Michelle Owenby, Director, Division of Air Pollution Control, served as Technical Secretary.

The Vice-Chairman, Mayor Larry Waters, called the meeting to order and asked for a roll call and the response was as follows:

|                |         |                |         |
|----------------|---------|----------------|---------|
| Dr. Adkins     | Present | Dr. Benitez    | Absent  |
| Dr. Fu         | Present | Mr. Haverstick | Present |
| Dr. Hawkins    | Absent  | Mr. Holland    | Present |
| Ms. Jennings   | Absent  | Dr. Jia        | Webex   |
| Mayor Moore    | Present | Mr. Moore      | Webex   |
| Ms. Spann      | Present | Mayor Waters   | Present |
| Mr. Jimmy West | Present |                |         |

Eight (8) Board members were present, two (2) participated via WebEx and three (3) were absent.

The next item on the agenda was the approval of the minutes from the June 08, 2022, Board meeting. The Vice-Chairman requested a motion to approve the minutes. Mayor Moore made a motion to approve the minutes and Ms. Amy Spann seconded the motion. The Vice-Chairman asked if there were any additions or corrections to the minutes. Hearing none, the Vice-Chair asked for a roll call and the response was as follows:

|              |        |                |        |
|--------------|--------|----------------|--------|
| Dr. Adkins   | Yes    | Dr. Benitez    | Absent |
| Dr. Fu       | Yes    | Mr. Haverstick | Yes    |
| Dr. Hawkins  | Absent | Mr. Holland    | Yes    |
| Ms. Jennings | Absent | Dr. Jia        | Yes    |
| Mayor Moore  | Yes    | Mr. Moore      | Yes    |
| Ms. Spann    | Yes    | Mayor Waters   | Yes    |
| Mr. West     | Yes    |                |        |

The motion carried with ten (10) affirmative votes; the minutes were approved as presented.

The Vice-Chairman called on Mr. Travis Blake with Air Pollution Control to provide an update on the SO<sub>2</sub> attainment demonstration for Sullivan County

Mr. Blake stated that the Division was completing work on a draft attainment demonstration and expected to begin public participation for this demonstration in October 2022. The attainment demonstration must be submitted to U. S. EPA by April 5, 2023. Mr. Blake addressed questions from the Board.

The Vice-Chairman then asked Mr. Blake to provide the Board with an update on the status of Tennessee's SO<sub>2</sub> 111(d) plan for municipal solid waste landfills.

Mr. Blake stated that the 111(d) plan regulates emissions from municipal solid waste landfills constructed, modified, or reconstructed prior to 2014, as required by 40 CFR 60 Subpart Cf. Mr. Blake discussed the history of the plan and informed the Board that public participation on the plan was expected to begin in October or November 2022.

The Vice-Chairman called on Ms. Mary Margaret Chandler, Budget Administrator, with Air Pollution Control, to present the Title V Fee Diversification update.

Ms. Chandler stated that, with the assistance of TDEC's Office of External Affairs, the Division had developed an engagement plan with the goal of engaging stakeholders to develop a sustainable Title V fee structure. Ms. Chandler briefed the Board on the progress of the engagement and discussed upcoming process plans. The Board was referred to the Title V Fee Engagement web page.

There being no further business to discuss before the Board, nor members of the public wishing to address the Board, the meeting was adjourned at 10:16am.

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(Signed) Michelle Owenby, Technical Secretary  
Tennessee Air Pollution Control Board

Approved at Nashville, Tennessee on October 12, 2022

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(Signed) Mayor Larry Waters, Vice-Chairman  
Tennessee Air Pollution Control Board

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(Signed) David Salyers, Chairman  
Tennessee Air Pollution Control Board



Department of  
**Environment &  
Conservation**

# NSPS Rules Incorporation by Reference

# NSPS Rules

- Federal NSPS Rules
- 40 CFR Part 60
- New Source Performance Standards (NSPS)
- TDEC proposes to incorporate federal rules by reference into state rules

# NSPS Rules

- NSPS are technology-based standards
- NSPS apply to new, modified and reconstructed affected facilities in specific source categories such as manufacturers of glass, cement, and rubber tires
- 90 source categories

# NSPS Rules

- In June 2022, Board passed NESHAP rule revision
- National Emission Standards for Hazardous Air Pollutants (NESHAP)
  - 40 CFR Parts 61 & 63
- Federal NESHAP rules were incorporated by reference into state rules
- NSPS rule revision is similar to NESHAP rule revision

# NSPS Rules

- Currently, some federal NSPS rules are in state rules
  - Chapters 6, 16, and 39
- Mostly word-for-word basis
- Difficult to keep up-to-date if federal rule is amended

# NSPS Rules

- Most state rules started out as an exact word-for-word copy of federal rules
- Federal rules have been amended over time while state rules have not been kept up-to-date
- Some state rules are now less stringent than federal rule; some are more stringent

# NSPS Rules

- In some cases, EPA has lost a court case
- The original federal standard has been replaced by a less stringent standard
- State rule was never updated to reflect less stringent standard
- Thus, state standard is now more stringent than federal standard
- TDEC never intended to have more stringent standards

# NSPS Rules

- Currently, the requirements of a NSPS that are not reproduced through the current regulations must be placed in a permit before they can be enforced
- By adopting federal NSPS rules by reference, the Board will be able to keep the state regulations in line with the federal regulations and will be able to enforce the federal regulations directly

# NSPS Rules

- TDEC proposes to repeal current NSPS rules that are in state rules
- TDEC proposes to adopt by reference all Part 60 rules, except emission guidelines, which are not appropriate to adopt by reference since they require the submission of state plans
- Adopt July 1, 2022, version of CFR

# Proposed Timeline

| Event                                 | Date          |
|---------------------------------------|---------------|
| Finalize OGC review                   | October 2022  |
| Pre-Draft of Rule sent to EPA         | November 2022 |
| Receive comments from EPA             | December 2022 |
| Governor's Office approval            | December 2022 |
| Public Notice (45-day comment period) | January 2023  |
| Public Hearing                        | February 2023 |
| APC Board Approval                    | March 2023    |
| Rule becomes State effective          | June 2023     |
| Submit final rule to EPA              | June 2023     |

# Questions

Mark A. Reynolds

Environmental Consultant

Tennessee Department of Environment and  
Conservation

Division of Air Pollution Control

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Department of  
**Environment &  
Conservation**

# Ambient Air Quality Standards Rule Revision

# Ambient Air Quality Standards

- EPA has set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants
  - Particulate Matter (PM<sub>2.5</sub>, PM<sub>10</sub>)
  - Sulfur Dioxide (SO<sub>2</sub>)
  - Carbon Monoxide (CO)
  - Ozone (O<sub>3</sub>)
  - Nitrogen Dioxide (NO<sub>2</sub>)
  - Lead (Pb)

# Ambient Air Quality Standards

- Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly
- Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings

# Ambient Air Quality Standards

- Currently, state ambient air quality standards are not up-to-date
- TDEC proposes to update the state standards so that they match the current federal NAAQS

# Ambient Air Quality Standards

- Currently state standards in 1200-03-03
- Proposing to move entire chapter to 0400-30-03

# Particulate Matter (PM<sub>2.5</sub>) Standard

- Primary Standard
  - 12  $\mu\text{g}/\text{m}^3$  (annual)
  - 35  $\mu\text{g}/\text{m}^3$  (24-hour)
- Secondary Standard
  - 15  $\mu\text{g}/\text{m}^3$  (annual)
  - 35  $\mu\text{g}/\text{m}^3$  (24-hour)

# Particulate Matter (PM<sub>10</sub>) Standard

- Primary and Secondary Standard
  - 150 µg/m<sup>3</sup> (24-hour)

# Sulfur Dioxide (SO<sub>2</sub>) Standard

- Primary Standard
  - 75 ppb (1-hour)
- Secondary Standard
  - 0.5 ppm (3-hour)

# Carbon Monoxide (CO) Standard

- Primary Standard
  - 9 ppm (8-hour)
  - 35 ppm (1-hour)

# Ozone (O<sub>3</sub>) Standard

- Primary and Secondary Standards
  - 70 ppb (maximum daily 8-hour average)

# Nitrogen Dioxide (NO<sub>2</sub>) Standard

- Primary Standard
  - 53 ppb (annual)
  - 100 ppb (1-hour)
- Secondary Standard
  - 53 ppb (annual)

# Lead (Pb) Standard

- Primary and Secondary Standard
  - 0.15  $\mu\text{g}/\text{m}^3$  (arithmetic mean concentration over a 3-month period)

# NAAQS Review

- Periodically, EPA reviews the NAAQS
- Currently, EPA is conducting a NAAQS review of PM<sub>2.5</sub> and Ozone
- These could be finalized in 2023

# Questions

Mark A. Reynolds

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Tennessee Department of Environment and  
Conservation

Division of Air Pollution Control

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# State of Tennessee

## PUBLIC CHAPTER NO. 328

HOUSE BILL NO. 566

By Representatives Ragan, Howell, Crawford, Smith

Substituted for: Senate Bill No. 1087

By Senator Roberts

AN ACT to amend Tennessee Code Annotated, Title 4, relative to the Uniform Administrative Procedures Act.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. Tennessee Code Annotated, Title 4, Chapter 5, Part 2, is amended by adding the following as a new section:

(a) For the purposes of this section:

(1) "Chapter" means the grouping of rules in the secretary of state's numbering system that follows the entity control number and division, if any, but is before the individual rule number; and

(2) "Department" means an administrative department of state government included in § 4-3-101 or any other agency not administratively attached to an administrative department.

(b) By December 1, 2023, and every eight (8) years thereafter, a department with rules promulgated and published on the secretary of state's website pursuant to § 4-5-220, or with an administratively attached agency with rules promulgated and published on the secretary of state's website pursuant to § 4-5-220, shall submit a report of the department's chapters in effect as of July 1 of the year that the report is due to the chair of the government operations committee of the senate and the chair of the government operations committee of the house of representatives. The report includes:

(1) A brief description of the department's operations that each chapter affects;

(2) For each rule in a chapter, the rule's administrative history, including, but not limited to, the original date the rule was promulgated and the date the rule was last amended;

(3) A determination of whether each rule in the chapter should:

(A) Be amended or repealed;

(B) Be reviewed further; or

(C) Continue in effect without amendment; and

(4) A determination of whether each rule in the chapter adheres to current state and federal law, to court rulings, and to any other standards that affect the rule.

(c) The department shall certify the report submitted under this section. If a department intentionally makes a false statement in the report, then the government operations committee of the senate and the government operations committee of the house of representatives, meeting jointly or separately, may vote to request the general assembly to repeal a rule, or suspend any or all of the department's rulemaking authority for any reasonable period of time or with respect to any particular subject matter, by legislative enactment.

**HB566**

SECTION 2. This act takes effect July 1, 2021, the public welfare requiring it.

HOUSE BILL NO. 566

PASSED: April 19, 2021

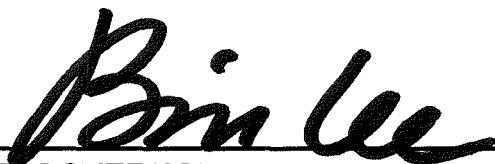


CAMERON SEXTON, SPEAKER  
HOUSE OF REPRESENTATIVES



RANDY MCNALLY  
SPEAKER OF THE SENATE

APPROVED this 4<sup>th</sup> day of May 2021



BILL LEE, GOVERNOR



LEE HARRIS  
MAYOR

# SHELBY COUNTY HEALTH DEPARTMENT

MICHELLE A. TAYLOR, MD DRPH, MPA  
HEALTH DIRECTOR

BRUCE RANDOLPH, MD, MPH  
HEALTH OFFICER



September 30, 2022

Michelle B. Walker  
Technical Secretary  
Division of Air Pollution Control  
15<sup>th</sup> Floor, William R. Snodgrass Tennessee Tower  
312 Rosa Parks Avenue  
Nashville, TN 37243

**RE:** First Quarterly Report for Board Order 22-008 Shelby County Health Department Air Pollution Control Program

In accordance with Board Order 22-008 related to the conditional Certificate of Exemption (COE) issued June 8, 2022 this report provides the information required for Shelby County's first quarterly report. It will address issues presented in the order.

## Mission

*To promote, protect and improve the health of ALL in Shelby County.*

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814 Jefferson Avenue ♦ Memphis, TN 38105 ♦ 901 222-9000 ♦ [www.shelbytnhealth.com](http://www.shelbytnhealth.com)

## 1. Findings and Concerns SCHD's 2019 Technical System Audit (TSA) Report

This chart lists the findings and concerns already closed out and in red are the finding and concerns that remain and are being addressed.

**Finding 4.5.2 Out of Date SOPS-** On 09/16/2022 five (5) Standard Operating Procedures were revised and submitted to EPA Region 4 Quality and Support Branch by the Deputy Administrator. The five previously submitted revision will be added to the list for additional revisions and re submission. After discussion with Administration, it was decided due to the technical nature of Standard Operating Procedure creation and revision, outside consulting would be needed for accuracy and compliance. On 09/23/2022 SCHD requested and received proposals from three (3) consulting firms to complete this work. Consultants submitting proposals are: **1).** Joel Craig Environmental Consultant 68251 Farrell Lane Cathedral City, CA 92234 (805) 712-5701 [craigairmonitoring@att.net](mailto:craigairmonitoring@att.net) **2).** Maggie Strom Tioga Environmental Consultants, Inc 357 North Main St. Memphis, TN 38103 (901) 791-2432 [mstrom@tiogaenv.com](mailto:mstrom@tiogaenv.com) and **3).** Eric Hebert EEMS (Environmental Engineering & Measurement Services, Inc) P. O. Box 357593 Gainesville, FL 32635-7593 (352) 262-0802 [www.ee-ms.com](http://www.ee-ms.com). The SCHD received three responses by the close of the bidding deadline on Thursday, September 29, 2022. The SCHD will complete the scoring **on Monday, October 3, 2022**, and it will take approximately 2-3 weeks for Purchasing and Legal to complete and work to start. The Air Monitoring Branch and all instrumentation currently being used will be evaluated by the consultant to determine if additional SOP's need to be created besides the one that details Data Handling.

The consultant contracted along with the remaining staff will create and revise all SOP's necessary for the SCHD Air Monitoring Program to fulfil the findings and concerns cited in the 2019 TSA report. New measures will be put in place such as annual SOP and forms review used by the section to avoid delinquent submissions and improve audit readiness moving forward.

**Concerns 4.3.1, 4.3.2-** Revised forms for data validation, instrument certification and quality control for pollutants Nitrogen Oxide (NO, NO<sub>y</sub>), Carbon Monoxide (CO), Sulfur Dioxide (SO<sub>2</sub>), Ozone (O<sub>3</sub>) as well as the PM 2.5 weekly flow verification were all updated 10/22/2020 and submitted to EPA Region 4 Quality and Support branch on 10/29/2020.

After inquiry the forms that were submitted 10/29/2020 still lacked the details needed and were still being revised by the section, but had not been resubmitted per EPA Region 4 11/06/2020 email. Email communication regarding concerns 4.3.1 and 4.3.2 are attached to this report in the Appendix. All air monitoring-related forms will be updated by the vendor selected during SOP revision.

| <b>2019 TSA Audit Report Findings/Concerns &amp; SCHD Response (*markings in red are ongoing/unresolved)</b>                                                                  |                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Finding / Concern</u></b>                                                                                                                                               | <b><u>How was the item resolved / Status</u></b>                                                                                                                                                                                               | <b><u>EPA Concurrence</u></b>                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Finding 4.1.1</b> Unapproved fittings were observed in the sampling train of a gaseous pollutant.                                                                          | Kynar fittings were replaced with Teflon fittings<br><br><i>Submitted 12/30/19</i>                                                                                                                                                             | <i>Completed and closed</i>                                                                                                                                                                                                                                                                                                                                                                                     |
| Concern 4.1.2 Moisture was observed in the CO and NO2 sample lines at the STCC site (47-157-0100).                                                                            | Additional heat tape was added to the sample lines<br><br><i>Submitted 12/30/19</i>                                                                                                                                                            | <i>Completed and closed</i>                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Finding 4.2.1</b> Logbook records indicate temperature and relative humidity (RH) filter conditioning requirements were not met during some PM10 filter weighing sessions. | The PM10 data impacted in 2016 thru 2018 by the temperature and relative humidity was reviewed. Data was invalidated if conditioning requirements were not met. The affected data was resubmitted to the EPA.<br><br><i>Submitted 04/23/20</i> | <i>I finally had a chance to review the materials you sent. I appreciate you guys doing all this. The explanation and highlighted logbooks made things much easier. Based on the materials provided, I have closed out 4.2.3 and agree with the 4.2.1 assessment. Once corrections and flags are applied in AQS, please send an AMP 350 and I will close out 4.2.2 and 4.2.3.</i><br><br><i>Closed 06/03/20</i> |
| <b>Finding 4.2.2</b> Traceability of laboratory standards/equipment was not maintained in accordance with SOP requirements.                                                   | All Certificates of Calibrations for the balance and weights used for PM10 weighing were provided. AMP 350 Report was submitted. This finding is related to Finding 4.2.1.<br><br><i>Certifications submitted 12/30/19</i>                     | <i>I finally had a chance to review the materials you sent. I appreciate you guys doing all this. The explanation and highlighted logbooks made things much easier. Based on the materials provided, I have closed out 4.2.3 and agree with the 4.2.1 assessment. Once corrections and flags are applied in AQS, please send an AMP 350 and I will close out 4.2.2 and 4.2.3.</i><br><br><i>Closed 06/03/20</i> |

|                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Concern 4.2.3 PM10 filter conditioning data summary calculations were not calculated properly and no independent validation               | Conditioning temperature and RH were recalculated. The conditioning data was labeled as "as found" if the data logger was not available. Any data not meeting requirements were invalidated. The updated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <i>I finally had a chance to review the materials you sent. I appreciate you guys doing all this. The explanation and highlighted logbooks made things much easier. Based on the materials provided, I have closed out 4.2.3 and agree with the 4.2.1 assessment. Once</i> |
| was conducted to identify the mistakes.                                                                                                   | information was provided and resubmitted into AQS. This concern is related to Finding 4.2.1. ( <i>attachment AMP 350 Shelby County TN 2016 PM 10 dataset</i> )<br><br><b>Submitted 04/23/20</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>corrections and flags are applied in AQS, please send an AMP 350 and I will close out 4.2.2 and 4.2.3.</i><br><br><b>Closed 06/03/20</b>                                                                                                                                |
| Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to fully verify and validate data. | Forms will continue to be updated and included in the revised Standard Operating Procedures. Two Data Analyst positions were added to the section, and interviews are taking place Tuesday, October 4, 2022. The Data Analyst will work with the consultant and update and align the forms with industry standards and requirements. (forms that were submitted are <i>Carbon Monoxide T300U Quality Control Check Form; Level 2 OTS certification form 700EU with T703; Level 2 OTS certification form 703E with T703; Level 2 OTS certification form T703 with T703; Nitrogen Dioxide T200U Quality Control Check Form; Ozone Teledyne T400 Quality Control Check Form; PM 2.5 Weekly Flow Verification; Sulfur Dioxide Teledyne 100EU Quality Control Check Form; Total Reactive Oxides of Nitrogen T200U QC Form</i> ) <b>Submitted 10/29/20</b> |                                                                                                                                                                                                                                                                            |

|                                                                                                         |                                                                                                                                                                                                                                                                                                              |                               |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Concern 4.3.2<br>Information recorded on forms and in logbooks was incomplete and/or missing.           | Forms will continue to be updated and included in the revised Standard Operating Procedures ( <i>see "How Item was resolved in Concern 4.3.1"</i> )<br><br><b>Submitted 10/29/20</b>                                                                                                                         |                               |
| Concern 4.3.3<br>Improvements are needed in electronic records management and storage.                  | The Shelby County Air Monitoring Branch will continue to work with the IT Department to improve our electronic shared drive.                                                                                                                                                                                 | <b><i>Closed 07/21/20</i></b> |
| Concern 4.3.4<br>Vulnerabilities were                                                                   | New COC ("Shelby County Pollution Control PM 2.5 and                                                                                                                                                                                                                                                         | <b><i>Closed 07/21/20</i></b> |
| observed in SCHD's PM2.5 chain of custody.                                                              | PM 10 Chain of Custody Form") was developed and implemented.<br><br><b><i>Submitted 04/15/20</i></b>                                                                                                                                                                                                         |                               |
| <b>Finding 4.4.1</b> Not all quality assurance and quality control checks (QA/QC) were reported to AQS. | All nightly checks from 2019 data set were submitted into AQS. The AMP 251 QA Raw Assessment Report (attachment <i>2019 QA Raw Assessment Report AMP251 1830068 and 2019 QA Raw Assessment Report for criteria pollutants and NO AMP 251 1830068</i> ) was provided.<br><br><b><i>Submitted 04/15/20</i></b> | <b><i>Closed 07/21/20</i></b> |

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Finding 4.4.2</b> Filter-based PM2.5 data has not been fully validated. | The 2016 thru 2018 filter-based PM 2.5 data sets have been reviewed and 7 updates were made to the data set due to filters being used that had exceeded the 30 day tare time frame. These dates of the filters affected from Guthrie 1 are June 26, 2016; November 17, 2016; November 20, 2016; November 23, 2016; November 26, 2016 and November 29, 2016. The date of the filter affected from the Shelby Farms POC 2 sampler was June 7, 2018. These previous records were removed and a Null Value Code of AS was inserted into AQS for each respective date. The AMP 350 Report is attached along with the filter reports from Inter-Mountain Laboratories for 2016 through 2018. (attachment <i>updated 2016 thru 2018 Raw Data</i> ) | <b><i>Closed 07/21/20</i></b> |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|

|                                                                                                              |                                                                                                                                                                                                               |  |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                              | <i>Report for PM 2.5 AMP 350 1830084)</i><br><br><b><i>Submitted 04/15/20</i></b>                                                                                                                             |  |
| Concern 4.4.3 Data are not being fully validated to ensure all measurement quality objectives are satisfied. | The contractor and two new Data Analysts will work on SOPs as staffing levels increase. Our meteorologist is assisting with data validation as of 9/1/22. He has the skillsets and background to offer input. |  |

|                                                                                                                                                             |                                                                                                                                                                                                                                                                                            |                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <p><b>Finding 4.5.1</b> Criteria pollutant data were collected at SLAMS monitoring stations and reported to AQS without a current approved QAPP.</p>        | <p>The "6" QA flag has been inserted for all criteria pollutant collected at the SLAMS monitoring stations for the 2016 thru 2018 data set. (see <i>attachment 2016 thru 2018 Raw Data Report with 6 flag except for PM 10 hi vol AMP350 1830086</i>)</p> <p><b>Submitted 04/15/20</b></p> | <p><b>Closed 07/21/20</b></p> |
| <p><b>Finding 4.5.2</b> Standard operating procedures are out of date and do not reflect current practices. A data handling SOP has not been developed.</p> | <p>The SCHD submitted five revised SOPs to the EPA as of <b>September 2022</b>. After review the five revised SOP's will be added to the list for additional work. The consultant will complete the creation and revision of SCHD AMB SOPS's.</p>                                          |                               |
| <p><b>Concern 4.5.3</b> Additional resources are needed for the quality assurance component of the Department's monitoring program.</p>                     | <p>Two Data Analyst were added in addition to hiring consultants. Salaries were increased for current positions. All positions remain posted and qualified persons will be interviewed.</p>                                                                                                |                               |

**Concern 4.4.3** List of Standard Operating Procedures used by the SCHD Air Program

1. Standard Operating Procedure for Ozone Transfer Standard Verification
2. Standard Operating Procedure for Mass Flow Controller Calibration/Verification
3. Standard Operating Procedure for Orifice Transfer Standard Calibration
4. Standard Operating Procedure for Monitoring Carbon Monoxide (CO) using Teledyne API Models 300E, 300EU and T300U
5. Standard Operating Procedure for Monitoring PM<sub>2.5</sub> Speciation using Met One SASS Sampler
6. Standard Operating Procedure for Monitoring Sulfur Dioxide (SO<sub>2</sub>) using Teledyne 100EU
7. Standard Operating Procedure for Monitoring Nitrogen Dioxide (NO<sub>2</sub>)/ (NO<sub>y</sub>) using Teledyne API T200U/200EU
8. Standard Operating Procedure for Monitoring Particulate Matter using R&P TEOM 1405
9. Standard Operating Procedure for Sequential Particulate Speciation System URG 300N
10. Standard Operating Procedure for Monitoring Ozone (O<sub>3</sub>) using Teledyne API Model 400E and T400
11. Standard Operating Procedure for Monitoring PM<sub>2.5</sub> Using R&P Sequential Model 2025/2025i
12. Standard Operating Procedure for Monitoring Nitrogen Dioxide (NO<sub>2</sub>) using Teledyne T500
13. Standard Operating Procedure for Monitoring PM<sub>10</sub> using Teledyne T640/640X
14. Standard Operating Procedure for Processing and Validating Air Quality Monitoring Data

Revised copies of Standard Operating Procedures number 1, 2, 3, 4 and 8 (from listing above) were submitted on 09/16/2022 to EPA Region 4 Quality and Support Branch for review and approval. After the EPA's review of SOP's listed above, they will be added to the list for additional revision and re submission. The remaining SOP's will be revised and/or created by the consultant. In the interim Michael Goldstein (staff Meteorologist) is assisting the Air Monitoring staff with data input, review, and validation. Two Data Analyst were added to the section and will receive the necessary training before starting the data handling duties.

## 2. SCHD's Air Monitoring Branch Staffing Update

Since the June 8, 2022, the Shelby County Health Department's Air Program has had staffing changes. Judy Low (previous Supervisor) left the department as of 09/15/2022. Her technical and general knowledge of SCHD's air program will surely be missed. Young Cai, has been with the program since 2014, he is also the Lead Technical Specialist and worked very closely with Judy in recent years and is capable of performing many of the section's duties. On 09/19/2022 Joonki Yoon joined the staff and is currently in training. Once fully trained, he will also assume additional duties that were previously performed by the supervisor until that position is filled.

The Air Monitoring positions have been reclassified to increase base pay to attract qualified applicants. A hiring bonus is being considered to increase the applicant pool. Shelby County Health Department Human Resources is implementing a pay schedule for all Technical Specialist to increase the number of applicants. Positions remain posted on several employment formats (Indeed, AAPCA weekly) and our local website until 12/31/2022. All qualified applicants will be interviewed.

On 09/15/2022 the formal bidding process began for contract work. Three proposals have been received as of 09/28/2022. Bidding closed 09/29/2022 at 4:00 pm. Scoring will be completed on **Monday, October 3, 2022**. The firms submitting bids were: 1). **Eric Hebert EEMS** (Environmental Engineering & Measurement Services, Inc) P. O. Box 357593 Gainesville, FL 32635-7593 (352) 262-0802 [www.ee-ms.com](http://www.ee-ms.com). 2). **EnSafe** Engineering, Environment, Health & Safety, Technology 5724 Summer Trees Drive Memphis, TN. 38134 (901) 372-7962 [www.ensafe.com](http://www.ensafe.com). 3). Maggie Strom **Tioga Environmental Consultants, Inc** 357 North Main St. Memphis, TN 38103 (901) 791-2432 [mstrom@tiogaenv.com](mailto:mstrom@tiogaenv.com). Bids were sought from firms familiar with the instrumentation and processes performed by SCHD Air Monitoring branch so that immediate assistance could be provided.

In the interim Michael Goldstein (staff Meteorologist) is assisting the Air monitoring staff with data editing, formatting, reviewing, validating, and uploading into the AQS system.

The SCHD is collaborating with the Tennessee Department of Environment and Conservation (TDEC) and the Environment Protection Agency (EPA) Region 4 with data editing, formatting, reviewing, validating bringing additional capacity to this effort. Long term, we will have a contractor and a full staff doing the work. The described process is temporary. On 09/27/2022 a two-week extension to complete the upload process into the EPA AQS database was requested from Darren Palmer, EPA Region 4 Air and Radiation Division and granted on 09/28/2022 to ensure accurate and complete 2<sup>nd</sup> quarter data is uploaded.

### **3. SCHD Title V Program**

Included is a chart listing of Title V backlog permitting activities. It also includes the steps being taken to a). hire two additional engineers, b). the progress of completing the fee increase and c). the status of backlogged activities, along with a detailed plan and time frame for completion.

The Shelby County Commission must complete three (3) readings before an ordinance or resolution can be approved. The Title V proposal had its first reading by the commission on 09/07/2022, the second reading 09/26/2022 and the third reading will occur on October 5, 2022. After the third reading by the commission, the ordinance or resolution is adopted and is then sent to the Mayor's office for final approval and signing. Fifteen (15) days after final approval the ordinance becomes law. All municipalities in Shelby County will be notified and given a copy of the new ordinance for adoption.

The Shelby County Mayor's Office as well as the Shelby County Health Department's Administration recognizes the seriousness of the issues facing the local Air Monitoring Program. Health Director Dr. Michelle Taylor and Deputy Director Green of the Shelby County Health Department have met with the Mayor's executive leadership. All, including the Mayor, have been briefed and communicated their support for the Air Monitoring program's issues. In response, two additional positions were added and funding for consultants. They all are committed to resolving these issues by continuing to hire qualified staff and use consultants for contract work to fulfill EPA and State requirements and remain in compliance.

## Quarterly Update for TN Air Board Major Sources Branch September 2022

**1- Plan for Title V fee increase:**

The project was presented to the County Commission on 9/7/2022 for the first reading.  
The Project was presented to the County Commission on 9/26/22 for the second reading.  
The third reading is scheduled for Wednesday, October 5, 2022.

**2- Plan for hiring an engineer:**

Position was posted on 9/08/2022 to hire two engineers.

**3- Progress on inspections:**

All inspections are current and on schedule.

**4- Progress on the current permitting backlog:**

|                             | Total Projects      |                             |  | 18-Month Old Projects Only |                    |
|-----------------------------|---------------------|-----------------------------|--|----------------------------|--------------------|
| Activity Type               | Total Completed YTD | Total Current Open Projects |  | 18-M Completed YTD         | 18-M Open Projects |
| Renewals (R)                | 31                  | 11                          |  | 1                          | 8                  |
| Modifications (M)           | 46                  | 21                          |  | 5                          | 4                  |
| 1 <sup>st</sup> Permit (1M) | 3                   | 11                          |  | 2                          | 9                  |
| Exemptions (E)              | 9                   | 3                           |  | 1                          | 2                  |
| Name Change (NC)            | 6                   | 7                           |  | 2                          | 3                  |
| Roll into TV (RTV)          | 2                   | 6                           |  | 2                          | 1                  |
| Construction (C)            | 3                   | 6                           |  | 0                          | 0                  |
| TV Renewal (TVR)            | 5                   | 2                           |  | 3                          | 2                  |
| Initial Filing (IF)         | 1                   | 1                           |  | 0                          | 0                  |
|                             |                     |                             |  |                            |                    |

Note: We receive projects every week and, therefore, these numbers are dynamic and migration could take place to the 18-month category depending on the circumstance as permit analysis progresses. The permitting process involves parts that are within our control and also parts that are not. Often times we have to keep the source priority in mind to prioritize these projects. We are focused and will continue to be so on parts that are within our control. High priority is given to finishing the backlogged projects. This summary does not include enforcement projects, stack testing, and special project activities (such as the EtO project) that the engineers are also involved in.

The current 18-month backlog is being addressed by the existing workers. Following is the list of sources associated with the 18-month-only backlog, engineers who are working to resolve that backlog, and the estimated time for the project completion. A consultant is being evaluated to assist in reducing the backlog. A go or no go on the consultant will be completed **on Friday, October 7, 2022**. If we move forward with the consultant, we anticipate the vendor being hired **by December 2022 or January 2023**

| Source          | Item                | Engineer        | Projected Completion Quarter |
|-----------------|---------------------|-----------------|------------------------------|
| Valero Refinery | 1P, M, R, C, E, RTV | Mark Landry     | Q2, 2023                     |
| Nucor Steel     | C, M, E, RTV        | Mark Landry     | Q3, 2023                     |
| Covoro          | NC, TVR             | Gregg Fortunato | Q1, 2023                     |
| Penn-A-Kem      | M                   | Gregg Fortunato | Q1, 2023                     |
| Ergon           | R, M                | Deborah Liu     | Q4, 2022                     |
| American Yeast  | M, TVR              | Jeff Grill      | Q4, 2022                     |
| St. Jude        | TVR, E, M, C        | Wasim Khokhar   | Q4, 2022                     |
|                 |                     |                 |                              |

Permit writers are working as hard and fast as possible without sacrificing accuracy and thoroughness.

## **APPENDIX**

**From:** [Harris, Keith](#)  
**To:** [Cook-Pryor, Karen](#)  
**Cc:** [Ackerman, Laura](#)  
**Subject:** RE: Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data  
**Date:** Thursday, September 29, 2022 4:03:33 PM

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Correct. The TSA report asked that forms be revised so that they capture all the information required to validate the data against the MQO's stated in your QAPP (Section 7). There was not an approved QAPP in place for the data reviewed during the TSA so we were comparing the forms to best practices. The QAPP was approved prior to the onsite TSA so we knew that SOPs and forms would need to be updated to reflect the newly approved QAPP. That's the core of this concern, similar to the SOP related findings.

Given that SOPs also need to be revised, it's probably best to perform these two exercises together, as forms are usually attachments to the SOPs they support.

---

**From:** Cook-Pryor, Karen <Karen.Cook-Pryor@shelbycountyttn.gov>  
**Sent:** Thursday, September 29, 2022 3:08 PM  
**To:** Harris, Keith <Harris.Keith@epa.gov>  
**Cc:** Ackerman, Laura <Ackerman.Laura@epa.gov>  
**Subject:** RE: Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data

So to be clear, these last forms submitted by Judy still needed additional information to meet the EPA's criteria correct?

---

**From:** Harris, Keith <[Harris.Keith@epa.gov](mailto:Harris.Keith@epa.gov)>  
**Sent:** Thursday, September 29, 2022 10:29 AM  
**To:** Cook-Pryor, Karen <[Karen.Cook-Pryor@shelbycountyttn.gov](mailto:Karen.Cook-Pryor@shelbycountyttn.gov)>  
**Cc:** Ackerman, Laura <[Ackerman.Laura@epa.gov](mailto:Ackerman.Laura@epa.gov)>  
**Subject:** FW: Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data

FYI, email traffic related to Concern 4.3.1.

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**From:** Low, Judy <[Judy.Low@shelbycountyttn.gov](mailto:Judy.Low@shelbycountyttn.gov)>  
**Sent:** Friday, November 06, 2020 10:45 AM  
**To:** Harris, Keith <[Harris.Keith@epa.gov](mailto:Harris.Keith@epa.gov)>  
**Subject:** RE: Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data

Good Morning Keith,

Please see the responses below.

Judy

**Judy Low**

Supervisor A  
Shelby County Health Department  
Pollution Control/Air Monitoring Branch  
1826 Sycamore View Rd. Room 149  
Memphis, TN 38134  
(901) 222-9581 Office  
(901) 222-9561 Fax  
Email: [judy.low@shelbycountyttn.gov](mailto:judy.low@shelbycountyttn.gov)  
[www.shelbycountyttn.gov](http://www.shelbycountyttn.gov)

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**From:** Harris, Keith [<mailto:Harris.Keith@epa.gov>]  
**Sent:** Thursday, October 29, 2020 12:22 PM  
**To:** Low, Judy  
**Subject:** RE: Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data

[ This EMAIL was not sent from a Shelby County Government email address. Please use caution. ]

Thanks for these, Judy. I took a quick pass.

The PM forms show a revision date prior to the TSA, where these updated and that not changed, or these are the original? **These are the original. No changes were made.**

The 5 point span and intercept recorded at the top of the gaseous forms, is how is this information used? **This is used for traceability. The slopes and intercepts are inserted into the data logger for the ozone calibrator/analyzer. It's mainly used to determine the linear relationship and how good or bad the data is.** I recall talking about it in the TSA and I want to say it's not used for anything from an action or validation standpoint. **We remembered before this was a request to help in determining the traceability and that's why it was inserted.** You might be able to use that space for more valuable information. For example, the way the forms are set up, the user has to hand calculate the %d and enter that information. You may want to put the formula on the form to make sure everyone calculates it properly. **We can insert a formula. Ideally, I would like for the operators to insert this information into a spreadsheet and submit this electronically to minimize hand calculations. We will try to work with IT on this. Are there specific information that you would like**

on the forms? Do you have examples of forms with the information that you would like on it? This

will help us from continuing to redo forms that we've been using. It's just Yong, Betty and me trying to keep this operation going and we are swamped.

Beyond that, calibration forms were mentioned in the report so if you could provide those once updated, I would appreciate it. See attachments. Are there any other methods that you haven't provided? I think you guys operate a T640 now, correct. See attachment. Also, the spreadsheet used to calculate the OTS certifications is attached. Let me know if you have any questions. I'll be dealing with you level two today and tomorrow but can have a call next week if you prefer. We received this yesterday.

Keith

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**From:** Low, Judy <[Judy.Low@shelbycountyttn.gov](mailto:Judy.Low@shelbycountyttn.gov)>

**Sent:** Wednesday, October 28, 2020 11:52 AM

**To:** Harris, Keith <[Harris.Keith@epa.gov](mailto:Harris.Keith@epa.gov)>

**Subject:** Concern 4.3.1 Forms used to document verifications and calibrations do not have sufficient information to verify and validate data

Hi Keith,

Please find attached the updated quality control check and flow verification forms used for the different pollutants. The Technical Specialists have been notified of the changes and will begin using the updated forms November 1<sup>st</sup>. We will continue to work on updating the appropriate SOPs.

Please let me know if you have any questions.

Judy

**Judy Low**

Supervisor A

Shelby County Health Department

Pollution Control/Air Monitoring Branch

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