Air Emissions Inventory (EI) – Running and reviewing a Quality Assurance (QA) Report

July 2021

Summary

- General

- Running a QA report

- Reviewing a QA report

- Sections of the QA report

  - Employee number check

  - Facility area check

  - Permit class code check

  - Throughput information checks

  - PM vs. PM10 vs. PM2.5 checks

  - PM, ROG, TRS (total reduced sulfur) and glycol ether component checks

  - Stack parameters checks

  - Help

General

- After all required data has been provided and the emissions calculator has been run successfully, a quality assurance (QA) report should be generated and reviewed before submitting an EI.

- A QA report lists potential and actual problems in an EI.

- View the [list](#) of QA messages and suggested actions.

- If any revisions impact emissions, run the emissions calculator again.

Running a QA report

1. In the blue column on the left, click *Emissions & Billing, QA, Summary Reports, Certification and Under-Thresholds-Notification (UTN).*

Running a QA report

2. On the ARS Summary Data page on the QA tab, click *QA Report*. This will generate a pdf file containing the report.

Reviewing a QA report - general

- The QA report is broken into different sections by type of QA check.

- Checks that compare data from different EI years use the current and previous year's EI.

- Many messages are potential problems, not necessarily actual problems.

Reviewing a QA report - sections

1. Employee number check – Number of employees reported must be greater than 0.

```
*****************************************************************************
*****************************************************************************
                        Employee Number QA Check
*****************************************************************************
*****************************************************************************

Meets Test
```

Reviewing a QA report – sections

2. Facility area check – The facility area must be greater than 100 square feet.

****
****
FACILITY AREA QA Check
****
****
FACILITY AREA meets QA Check

Reviewing a QA report – sections

3. Permit class code check – EPA Class Code does not match emissions.

Permit Class Code QA Check

****

****

DNR Class Code: A

Class Code Determined From Reported Emissions: Class Code A - Emissions Verified as A Source - Max Criteria:
Pollutant-NOX Amount (tons):   2,764.70 Max HAP: Pollutant CYANIDE Amount (tons):   3.96 HAP Sum(tons):
20.91

Note: Please review your emissions if the
Determined Emission Class Code is an SM80 or A and the DNR Class Code is an SM or B

Reviewing a QA report – sections

4. Thruput information checks – The following do not necessarily indicate a problem:

   a. Throughput did not change in consecutive years.

   b. Throughput reported in prior year but not in current year.

   c. Throughput decreased over two years, but emissions increased.

Thruput Information QA Check

```
************************************************
************************************************
B01- 02 Different Units over two years
B01- 03 Different Units over two years
B01- 6 Thruput Went to 0 Current Year
```

```
B01- 99 Both last year and current year throughputs are 0
B01- 77 Different Units over two years
B01- 88 Both last year and current year throughputs are 0
B01- 66 Both last year and current year throughputs are 0
B02- 02 Both last year and current year throughputs are 0
B02- 20 Thruput Went to 0 Current Year
M01- 01 Both last year and current year throughputs are 0
```

Reviewing a QA report – sections

5. PM vs. PM10 vs. PM2.5 checks:

   a. PM2.5 not greater than PM10

   b. PM2.5 not greater than PM

   c. PM10 not greater than PM

```
                        PM vs PM10 vs PM2.5 QA Check
**********************************************************************************
**********************************************************************************
B21-03 PM2.5 greater than PM10. (PM2.5: 124.0651lb, PM10: 3.31374lb)
B21-03 PM2.5 greater than PM. (PM2.5: 124.0651lb, PM: 4.75449lb)
B22-03 PM2.5 greater than PM10. (PM2.5: 395.62975lb, PM10: 2.935lb)
B22-03 PM2.5 greater than PM. (PM2.5: 395.62975lb, PM: 4.212lb)
```

Reviewing a QA report – sections

6. PM, ROG (Reactive Organic Gases), TRS (total reduced sulfur) and glycol ether component checks:

   a. Sum of individual PM toxics greater than PM. See list of PM toxics.

   b. Sum of individual ROG toxics greater than ROG. See list of VOC toxics.

   c. Sum of reduced sulfur compounds greater than TRS. See list of reduced sulfur compounds.

   d. Sum of glycol ethers toxics greater than glycol ethers. Also, note the glycol ethers are ROG toxics too. See list of glycol ethers.

   *See an example on the next slide.

Reviewing a QA report – sections

```
*****************************************************************************
                     PART, VOC, TRS, Glycol Ether Component QA Check
*****************************************************************************
*****************************************************************************
B01-02VOC components          15.00greater than VOC Total          .00The VOC Components are: ACETIC ACID
55858-P01 PARTICULATE components ############### greater than Particulate Total          .00The Particulate
Components are: 1,3,5 TRIGIY
1102-01 PARTICULATE components          .00 greater than Particulate Total          .00The Particulate Components
are: 1,3,5 TRIGIY
1004-mVOC components          125.00greater than VOC Total          .00The VOC Components are: BUTYL CELL,
GLYCOL ETHER, ISOPROP 2
1004-mGlycol Ether components          125.00greater than Glycol Ether Total          50.00The Glycol Ether Components
are: BUTYL CELL, ISOPROP 2
B01-999 PARTICULATE components          98.00 greater than Particulate Total          .00The Particulate Components
are: ADIPIC ACID
```

Reviewing a QA report – sections

7. Stack parameters checks
    a. Stack Height less than 500 feet
    b. Stack diameter less than 10 feet
    c. Stack exit velocity is between 0 and 200 feet per second
    d. Stack temperature is not 0, negative or greater than 1,500 degrees Fahrenheit
*See an example on the next slide.

Reviewing a QA report – sections

```
                        STACK PARAMETER  QA Check
***********************************************************
***********************************************************
S001 Stack Exit Temperature   of      -351.40 def F is negative
S003 Stack Exit Temperature   of      -279.40 def F is negative
S16 Stack Diameter  of   16.40  feet exceeds 10 feet
S16 Stack Exit Velocity   of        .00  fps is 0
S16 Stack Exit Temperature   of       -9.40 def F is negative
S19 Stack Exit Velocity   of        .00  fps is 0
S19 Stack Exit Temperature   of      -459.40 def F is negative
S199 Stack Exit Velocity   of        .00  fps is 0
S79 Stack Exit Velocity   of        .00  fps is 0
S88 Stack Exit Velocity   of        .00  fps is 0
S88 Stack Exit Temperature   of      -459.40 def F is negative
SSS Stack Exit Velocity   of        .00  fps is 0
SSS Stack Exit Velocity   of        .00  fps is 0
SSSS Stack Exit Velocity   of        .00  fps is 0
s789 Stack Exit Velocity   of        .00  fps is 0
s99 Stack Exit Velocity   of        .00  fps is 0
snake Stack Exit Velocity   of        .00  fps is 0
sssss Stack Exit Velocity   of        .00  fps is 0
stack Stack Exit Velocity   of        .00  fps is 0
stack Stack Exit Temperature   of      -459.40 def F is negative
stack1 Stack Exit Velocity   of        .00  fps is 0
stack2 Stack Exit Velocity   of        .00  fps is 0
```

For EI and Air Reporting Switchboard Help

- Contact the facility-assigned compliance engineer. On DNR's website, find the compliance engineer's contact information by using the Air Permit Search Tool to locate the facility and select the DNR Air Contacts tab.

| General Facility Information | Facility Contacts | DNR Air Contacts | Permits and Permit Applications | Emission Inventory Reports | Industrial Monitoring Data |

  - OR -

- Email: DNRAMEmissionsInventory@wisconsin.gov