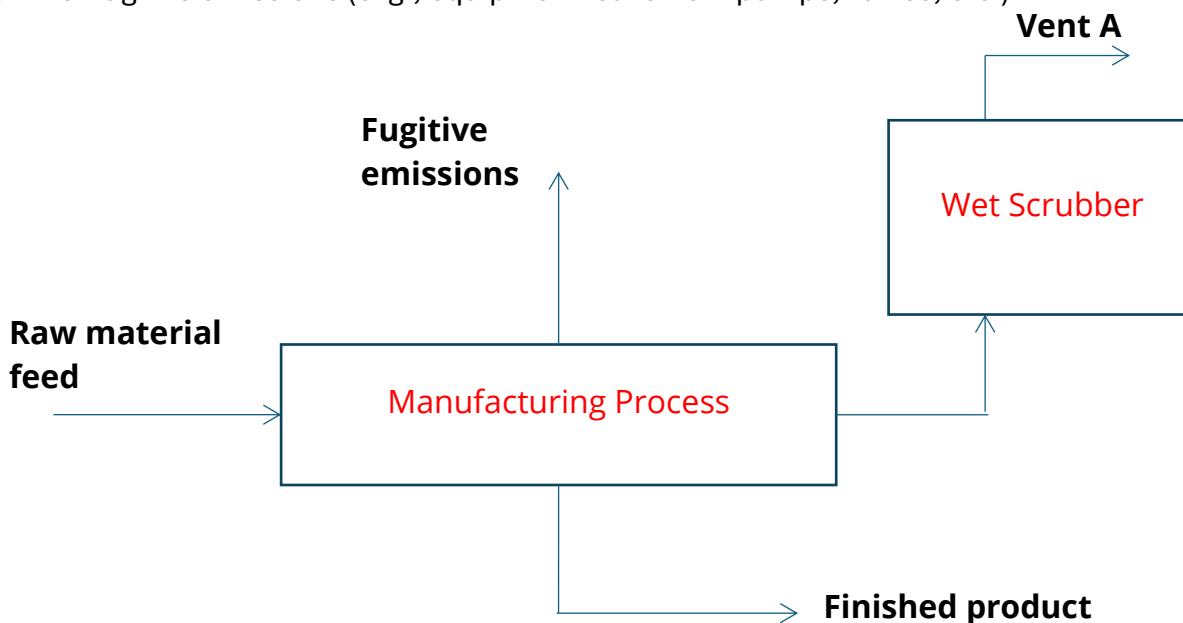


Handout – Title V Example

Here's a generic example to illustrate how to determine deviations, excursions and exceedances that are to be included in the Semiannual Reports (SARs) and the Annual Compliance Certifications (ACCs). This is a generic manufacturing process, which is based on a chemical manufacturing operation. The example shows a raw material feed, a finished product stream, one stack emission point (Vent A wet scrubber), and an emission point for fugitive emissions (e. g., equipment leaks from pumps, valves, etc.).



Vent A in the above process diagram has the following VOC emission limit condition in the permit.

E3-1. VOC emissions from Vent A shall not exceed 8.5 pounds per hour on a daily average basis.

Compliance Method: The permittee shall maintain a minimum water flow rate of 4.0 gallons per minute (24-hour block average) through the Vent A scrubber, and the scrubber flow rate shall be continuously monitored and recorded.

24-hour block averages shall be calculated from midnight of each day to midnight of the following day and shall consist of all valid one-hour averages recorded during the period. One-hour averages shall be calculated from four or more equally spaced data averages over each one-hour period. Valid averages must include at least 75% percent of the measured values within the averaging period.

In preparing the data for the SAR or ACC, the following items were noted regarding the data gathered for the six-month period.

1. Four missing/invalid hours of data on 3/25/2019. Daily average flow rate was 4.5 gallons/minute.
2. Invalid 24-hour averages on April 1, 2, and 3, 2019. The source operated for 130 days during the reporting period.
3. Daily average scrubber flow rate was 1.1 gpm on May 1, 2019. **How many values must be reported in the SAR?**
4. Stack test indicates 12 lb/hr VOC (24-hour average). **Is this required by the permit condition?**

Breaking it down and looking at it per item:

1. Four missing/invalid hours of data on 3/25/2019. Daily average flow rate was 4.5 gallons/minute (gpm).

Looking at the data collected, 20 hours out of 24 hours was collected. This means that 83% of measured values was collected during the averaging period, so the daily average value is valid since this is more than the 75% required per the compliance method. The daily average scrubber flow rate was 4.5 gpm, which is above the minimum of 4.0 gpm. There is no deviation or excursion or exceedance.

2. Invalid 24-hour averages on April 1, 2, and 3, 2019. The source operated for 130 days during the reporting period.

This depends on how the permit is written. In this case, we are assuming that you must meet 95% operational availability. There are 3 days with invalid data and the source operated for 130 days during the semiannual reporting period. Therefore, the source had 2.3% of invalid data or 97.7% data availability. **Even if this is not a deviation, facilities must report sufficient information for the reviewer to evaluate compliance.**

3. Daily average scrubber flow rate was 1.1 gpm on May 1, 2019.

This value is below the minimum scrubber flow rate of 4.0 gpm, so this is a deviation and should be noted as a deviation in the semiannual report.

4. Stack test indicates 12 lb/hr VOC (24-hour average).

This is a deviation of the VOC limit 8.5 lb/hr of a daily basis and shall be reported in the semiannual report.

Vent A of the example has a condition that limits the fugitive VOC emissions. The condition is as follows:

- E3-3. Fugitive VOC emissions from equipment leaks shall not exceed 9.9 tons per year.

Compliance Method: A leak inspection of all equipment in VOC service (contains or contacts a process fluid that is at least 10% VOC by weight) shall be performed once per calendar quarter, and leaks shall be repaired within 10 days of discovery.

The following are some questions that could arise when preparing the SAR and data:

1. Is this an emission limit?

Yes.

2. What must be reported in the semiannual report?

You must report your inspections, inspection dates, number of leaks identified, when they were discovered and when they were repaired.

3. If there are four leaks during the reporting period, how many deviations do we report?

This was a trick question. There are zero deviations since a leak isn't a deviation in this example.

Further explanations regarding SAR and ACC formats and providing the required information can be found in the Title V Field Services and Reporting presentation and the Handout - Title V Compliance Certification & Reporting.