

**Your air permit may require you to track a “12-month rolling sum.” This fact sheet explains the 12-month rolling sum and how to calculate it.**

The 12-month rolling sum is simply the total amount from the past 12 months. As the 12-month period “rolls” forward each month, the amount from the latest month is added and the one-year-old amount is subtracted. The result is a 12-month total that has rolled forward to the new month.

In the example below (Table 1), production started in February 2010. The emissions are totaled each month until the twelfth month of operations — January 2011 in the example. The 12-month sum of emissions for January 2011 is 32 tons. To calculate the 12-month rolling sum for February 2011, add the February 2011 emissions and subtract the one-year-old February 2010 emissions. Continue to do this each month and check that the total is below permit limits.

$$\begin{aligned}
 \text{12-month rolling sum in January 2011} &= 32 \text{ tons VOC emissions} \\
 &+ 1 \text{ ton VOC emissions in February 2011} \\
 &- 4 \text{ tons VOC emissions in February 2010} \\
 \text{12-month rolling sum for February 2011} &= 29 \text{ tons VOC emissions} \\
 &+ 3 \text{ tons VOC emissions in March 2011} \\
 &- 2 \text{ tons VOC emissions March 2010} \\
 \text{12-month rolling sum for March 2011} &= 30 \text{ tons VOC emissions}
 \end{aligned}$$

**Table 1: Example tracking log for 12-month rolling sum**

Month #	Month	Emissions for the month (tons VOC)	12-month rolling sum (tons VOC)	In compliance with emission limit in permit?	Date 12-month rolling sum was calculated for the month	Emission calculation records retained, either electronically or in paper files?
1	Feb 2010	4	4	Yes	3/12/10	Yes, paper
2	Mar 2010	2	6	Yes	4/9/10	Yes, paper
3	Apr 2010	2	8	Yes	5/14/10	Yes, paper
4	May 2010	3	11	Yes	6/11/10	Yes, electronic
5	Jun 2010	1	12	Yes	7/9/10	Yes, electronic
6	Jul 2010	3	15	Yes	8/13/10	Yes, electronic
7	Aug 2010	4	19	Yes	9/10/10	Yes, electronic
8	Sep 2010	4	23	Yes	10/8/10	Yes, electronic
9	Oct 2010	3	26	Yes	11/12/10	Yes, electronic
10	Nov 2010	3	29	Yes	12/10/10	Yes, electronic
11	Dec 2010	1	30	Yes	1/14/11	Yes, electronic
12	Jan 2011	2	32	Yes	2/14/11	Yes, electronic
13	Feb 2011	1	29	Yes	3/11/11	Yes, electronic
14	Mar 2011	3	30	Yes	4/8/11	Yes, electronic

## Requirements

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Each month your records must include the 12-month rolling sum, the date the calculations were made, and the calculations themselves. Read your permit to find out when you need to complete your monthly calculations – usually by the middle or end of the following month. Keep records on file for five years. Consider compiling all the information in a tracking log (Table 1 is an example).

## Information to gather for calculations

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Your permit will tell you if you need to use the 12-month rolling sum for tracking emissions, production limits, or operational limits. Track what is specified in your permit or what you designated in your permit application.

If your permit requires you to track the 12-month rolling sum for air emissions, you will need to know which pollutants are emitted, the materials and processes that create those emissions, the amounts used each month, and the maximum pollutant content of each material. The pollutant content is listed in the material safety data sheet (MSDS). If an MSDS is not available, you may use a signed statement from the supplier stating the maximum pollutant content.

You may have to complete 12-month rolling sums for multiple pollutants, and you may have multiple sources for each pollutant. For example, VOC emissions from a painting line and from the solvents used for cleanup should be added together and recorded as a single monthly total for VOCs. At the same shop, particulate matter (PM) emissions from milling and painting lines should be added together and recorded as a single monthly total for PM. Remember to include sources of non-process emissions, such as boilers.

Be sure to account for any control equipment that reduces the release of emissions to the environment, such as scrubbers or filters. Common control equipment is listed in MPCA Air Quality fact sheet 4-07, “Facts About Control Equipment Performance Standards,” available at <http://www.pca.state.mn.us/index.php/view-document.html?gid=2084>. Guidance on calculating emissions when pollutants such as VOCs or greenhouse gases are permanently incorporated into final products can be found in Minn. R. 7007.1130, subp 4 at <https://www.revisor.mn.gov/rules/?id=7007.1130> for Registration Option D permits and Minn. R. 7007.1147, subp 5 at <https://www.revisor.mn.gov/rules/?id=7007.1147> for capped permits.

Do not include emissions from insignificant activities. Lists of insignificant activities can be found in Minn. R. 7007.1300 at <https://www.revisor.mn.gov/rules/?id=7007.1300>, Minn. R. 7008 at <https://www.revisor.mn.gov/rules/?id=7008>, and on pages 3-6 of MPCA Air Quality Form IA-01, “Insignificant Activities Required To Be Listed” at <http://www.pca.state.mn.us/index.php/view-document.html?gid=440>.

## Benefits

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Calculating your 12-month rolling sum each month will keep you aware of how close you are to your permit limits. This will greatly reduce the risk of being out of compliance, and you can plan ahead for months with heavy production schedules to ensure you remain below your limits. If you exceed your permit limits, you will be in violation of your permit and will need to apply for a larger permit that is likely to be more complicated and more expensive. You may also receive an enforcement action, including monetary penalties.

## Where to get help

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The MPCA Small Business Environmental Assistance Program (SBEAP) offers technical assistance to independently owned businesses with fewer than 100 employees. Call 651-282-6143 or 800-657-3938, or go to <http://www.pca.state.mn.us/sbeap>. The website has spreadsheet-based calculators to help you calculate emissions, including a coatings calculator with built-in tracking for the 12-month rolling sum at <http://www.pca.state.mn.us/index.php/view-document.html?gid=5513>.

If you are approaching your emissions limits, explore opportunities to reduce your emissions. The Minnesota Technical Assistance Program (MnTAP) can help you. Call MnTAP at 612-624-1300 or 800-247-0015, or go to <http://www.mntap.umn.edu>.