

On-Site Solvent Reclamation

A Guide for Hazardous Waste Generators

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Rather than shipping hazardous waste solvent to a hazardous waste treatment, storage or recycling facility, generators may reclaim the spent solvent on-site using a reclamation still. This publication discusses the requirements that apply to generators reclaiming solvent and how generators should count the amount of hazardous waste generated.

A reclamation still heats the waste solvent to its boiling point. The solvent vapor is then condensed into a liquid solvent ready for re-use. The “still bottoms” are the dirt and impurities that remain after the solvent is reclaimed.

What hazardous waste requirements apply?

A listed or characteristic hazardous waste solvent that is stored prior to being placed into a still is subject to the hazardous waste requirements in ch. NR 662, Wisconsin Administrative Code. Depending on your generator classification, these requirements may include container standards, aisle space requirements, inspection requirements and accumulation time limits. The recycling process itself is exempt from hazardous waste regulation.

A waste determination must be made on the still bottoms, which are a newly generated waste resulting from the reclamation process. Still bottoms from the reclamation of a listed hazardous waste solvent carry the listed hazardous waste code (F001 to F005).

Still bottoms from the reclamation of a characteristic hazardous waste solvent may not be a D001 ignitable waste; however, they may be hazardous due to the toxicity characteristic (TCLP) for metals or volatile organic compounds (VOCs). To determine if the still bottoms are a characteristic hazardous waste, the generator may either apply knowledge or send a sample to a certified lab for analysis. Still bottoms that are a listed or characteristic hazardous waste must be managed according to the applicable generator requirements stated in ch. NR 662.

How does the generator determine the quantity of waste generated?

As stated in ss. NR 662.220(2)(c), if the waste solvent is recycled immediately upon generation, only count the quantity of hazardous waste still bottoms generated when determining your generator classification. If waste solvent is stored on-site before it is placed in the still, the quantity of spent solvent counts towards your generator status, but it is only counted once. That is, if the same solvent is reclaimed and re-used several times during the month, only the amount of waste solvent going into the still during the first run counts towards your generator status. Virgin solvent that is added during the month to make up for evaporative loss also counts towards your generator status.

“Immediately upon generation” means the solvent is placed in the still within 24 hours of being generated.

If you are a large quantity generator filling out a hazardous waste annual report and store waste solvent prior to recycling, keep accurate records of the quantities of waste solvent and still bottoms generated since you will need to complete a separate GM form for each waste type.

To determine your monthly hazardous waste generation rate when waste solvent is stored before reclamation: (1) record the initial amount of solvent waste that goes into the still at the beginning of each month; (2) subtract the quantity of hazardous waste still bottoms generated during the first run, since the still bottoms are contaminants in the initial amount of waste solvent; (3) add the amount of virgin make-up solvent; and, (4) add any additional still bottoms generated during the month. See the example below.

Counting the Quantity of Waste Generated When Using a Still			
Still Activity for the Month	Solvent waste added to the still for the first time	Still Bottoms Generated from each run	Reclaimed Solvent
First Run	5 gallons ¹ (35 lbs)	1.5 lbs	4.5 gallons
Second Run	0.5 gallons ² (4 lbs)	2.0 lb	4.0 gallons
Third Run	1 gallon ² (7 lbs)	1.0 lb	4.5 gallons
Total quantity of waste generated if solvent is stored prior to reclamation	44.5 lbs³	4.5 lb	
Total quantity of waste generated if solvent is not stored prior to reclamation		4.5 lb	

¹Count the total quantity of waste solvent placed in the still (still capacity = 5 gallons).

²Although 5 gallons of waste solvent is put in the still for each run, only count the quantity of make-up solvent if the solvent from the previous run is re-used and again becomes waste.

³35 lbs waste solvent – 1.5 lbs still bottoms + 4 lbs make up solvent + 7 lbs make up solvent = 44.5 lbs solvent waste generated during the month.

Where can I get more information?

For more information on characteristic and listed hazardous waste, see chapter NR 661:

https://docs.legis.wisconsin.gov/code/admin_code/nr/600/661/_1?up=1

For more information on generator requirements and counting waste, see chapter NR 662.

https://docs.legis.wisconsin.gov/code/admin_code/nr/600/662/_2?up=1

Contact: DNRWasteMaterials@wisconsin.gov

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Pursuant to ch. 227, Wis. Stats., the Wisconsin Department of Natural Resources has finalized and hereby certifies the following guidance document.

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On-site Solvent Reclamation A Guide for Hazardous Waste Generators

PROGRAM/BUREAU

Waste and Materials Management

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DATE SENT TO LEGISLATIVE REFERENCE BUREAU (FOR PUBLIC COMMENTS)

December 2, 2019

DATE FINALIZED

December 26, 2019

DNR CERTIFICATION

I have reviewed this guidance document or proposed guidance document and I certify that it complies with sections 227.10 and 227.11 of the Wisconsin Statutes. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is not explicitly required or explicitly permitted by a statute or a rule that has been lawfully promulgated. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is more restrictive than a standard, requirement, or threshold contained in the Wisconsin Statutes.

A handwritten signature in black ink, appearing to read 'Joseph P. Van Rossum', is written over a horizontal line.

December 26, 2019

Signature

Date