

# Volatile Organic Compound Parameters for Landfill Gas Monitoring at Municipal Solid Waste Landfills



Waste & Materials Management  
 P.O. Box 7921  
 Madison, WI 53707-7921

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This guidance provides a recommended list of Volatile Organic Compound (VOC) parameters for landfills whose plan of operation requires landfill gas monitoring for VOCs. Typically, landfill plan of operation approvals have not included a specific list of VOC parameters. Certain approvals have specified EPA Test Method TO-14A or TO-15, or similar methods as approved by the Department. However, a review of the VOC data in the GEMS database indicates inconsistencies in the parameters being reported.

The intent of providing this parameter list is to maintain consistency among landfills that are required to monitor for VOC parameters in landfill gas. A standard list of parameters will allow for more effective data review by Department staff. The Department expects this list of parameters can continue to be obtained using current monitoring procedures and either EPA Test Method TO-14A or TO-15. Individual plan of operation approvals or the landfill's air permit may still require additional parameters beyond this standard list depending on site specific circumstances.

GEMS Parameter Code	Parameter
99001	Benzene
99008	Ethylbenzene
99014	m & p-Xylene
99022	n-Propylbenzene
99023	o-Xylene
99026	Styrene
99028	Toluene
99031	1,2,4-Trimethylbenzene
99032	1,3,5-Trimethylbenzene
99093	Isopropylbenzene (Cumene)
99180	Naphthalene
99213	Propene
99237	n-Hexane
99244	Cyclohexane
99249	n-Heptane
99288	Ethanol
99289	Methyl tert butyl ether
99340	Bromodichloromethane
99342	Bromomethane

99343	Carbon tetrachloride
99344	Chlorobenzene
99345	Chloroethane
99346	Chloroform
99347	Chloromethane
99349	Dibromochloromethane
99350	Methylene chloride (Dichloromethane)
99351	Tetrachloroethylene (Perchloroethylene)
99353	Vinyl chloride
99354	1,1,1-Trichloroethane
99355	1,1,2-Trichloroethane
99356	1,1,2,2-Tetrachloroethane
99357	o-Dichlorobenzene (1,2-dichlorobenzene)
99358	1,2-Dichloroethane
99360	1,2-Dichloropropane
99361	m-Dichlorobenzene
99362	cis-1,3-Dichloropropene
99363	trans-1,3-Dichloropropene
99364	p-Dichlorobenzene (1,4-dichlorobenzene)
99365	Tribromomethane
99366	Benzyl chloride
99367	1,2,4-Trichlorobenzene
99368	Hexachlorobutadiene
99369	Freon 12 (Dichlorodifluoromethane)
99372	Freon 11 (Trichlorofluoroethane)
99373	1,1-Dichloroethene
99374	Carbon disulfide
99375	Acetone
99376	Trans-1,2-dichloroethylene
99377	1,1-Dichloroethane
99378	Vinyl acetate
99379	cis-1,2-Dichloroethylene
99380	Methyl ethyl ketone
99381	Trichloroethylene (Trichloroethene)
99382	Methyl isobutyl ketone
99383	2-Hexanone (methyl butyl ketone)
99384	1,2-Dibromoethane (Ethylene dibromide)
99480	Isopropanol
99501	Tetrahydrofuran
99771	Acrylonitrile
99775	Methyl methacrylate
99779	Acrolein
99970	Allyl chloride
99974	Ethyl acetate

Contact [DNRWasteMaterials@wisconsin.gov](mailto:DNRWasteMaterials@wisconsin.gov) for further information.

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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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Volatile Organic Compound Parameters for Landfill Gas Monitoring at Municipal Solid Waste Landfills

### PROGRAM/BUREAU

Waste and Materials Management

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Ch. 289, Wis. Stats.

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September 9, 2019

### DATE FINALIZED

October 4, 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'.

October 4, 2019

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Signature

Date