

Updated Clean Air Act Municipal Solid Waste Landfill Regulations

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The Actions



- As part of the Obama Administration's *Climate Action Plan – Strategy to Reduce Methane Emissions*, EPA proposed updates to Clean Air Act (CAA) municipal solid waste (MSW) landfill regulations in July 2014 (for new sources) and July 2015 (for existing sources)
- On July 15, 2016 EPA finalized updated MSW landfill regulations.
- The rulemakings include:
 - Finalization of a new New Source Performance Standard (NSPS) for MSW landfills (40 CFR Part 60 Subpart XXX), which serves as an update to an existing NSPS for MSW landfills (40 CFR Part 60 Subpart WWW)
 - Finalization of amendments to the emission guidelines for existing MSW landfills (40 CFR Part 60 Subpart Cc).

The Actions



- The rules apply to large MSW landfills with design capacities of 2.5 million metric tons and 2.5 million cubic meters of waste or more.
- Landfills with emissions of 34 Mg/yr of non-methane organic compounds (NMOC) or greater require the installation of gas collection and control system (GCCS).
- The rules will reduce an estimated 8.5 million metric tons of carbon dioxide equivalent emission by 2025 when compared to a business as usual scenario.
- Combined climate-related benefits of the rules are valued at \$512 million in 2025 (2012\$); combined costs are \$60 million.
 - An 8:1 benefit to cost ratio.



Comparative Look at MSW Landfill Regulations

Old Version vs Updated Versions

Requirements	Old Versions	Updated Versions
<i>Design Capacity</i>	2.5 million tons & 2.5 million m ³	2.5 million tons & 2.5 million m ³
<i>Emission Threshold</i>	50 Mg/yr NMOC	34 Mg/yr NMOC
<i>Emissions Tests</i>	Tier 1 Tier 2 Tier 3	Tier 1 Tier 2 Tier 3 Tier 4 (measuring CH ₄ with 500 ppm threshold)
<i>Parameters Requiring Monitoring</i>	Pressure Temperature Oxygen/Nitrogen	Pressure Temperature Oxygen/Nitrogen Surface methane (in landfills with GCCS)
<i>Parameters Requiring Corrective Action</i>	Pressure Temperature Oxygen/Nitrogen	Pressure Temperature Surface methane (in landfills with GCCS)
<i>NMOC Destruction Rate</i>	98%	98%

Impact in New England



- There are 20 landfills in New England subject to the original federal MSW landfill regulations.
 - At least one federally-regulated landfill exists in each New England state.
- Over the past 30 years, small landfills have closed, and the remaining landfills have grown larger.
- Many New England landfills have GCCS installed, even if they are not regulated by federal standards.
 - Required via permitting transactions, state air toxics programs, or installed as a good business practice.
 - According to EPA HQ's Landfill Methane Outreach program:
 - 60 landfills have GCCS system (29 of which are closed landfills)
 - 31 landfills have operational landfill gas-to-energy projects
 - ISO-NE reports landfill gas-to-energy plants provide ~60 MW of electric generation capacity to the New England power grid.

Impact in Connecticut



- Currently, Connecticut has two sources subject to federal CAA MSW landfill standards:
 - Manchester (owned by Town of Manchester)
 - Hartford (owned by CT Resource Recovery Authority)
- Only Manchester Landfill is still accepting waste.
- More landfills may become subject to the updated CAA landfill standards due to the more stringent emissions threshold
 - Testing, monitoring, recordkeeping and reporting standards would apply to any landfill which becomes subject to the updated regulations.
 - Landfills currently complying with CAA landfill regulations may need to operate controls for a longer period of time (until gas generation rates fall beneath the annual emissions threshold.)

Implementation of Updated Landfill Standards



- The new NSPS (Subpart XXX) applies to MSW landfills that begin construction, modification or reconstruction on or after July 17, 2014.
- Sources currently subject to the old NSPS (Subpart WWW) are now considered “existing sources.” They will continue to comply with Subpart WWW until an enforceable existing source regulation is in place, i.e., a state plan or updated federal plan.
- Sources currently subject to the existing source federal plan (40 CFR Part 62 Subpart GGG) will continue to be subject to the federal plan until either the federal plan is updated or a state develops a state-specific plan consistent with the updated emission guidelines.
 - States with affected sources have 9 months from the effective date of the regulation to submit a state plan.
 - New England states have not decided whether they intend to develop state-specific plans.
 - EPA will begin development of federal plan amendments once the need has been determined.



For More information on CAA Landfill Regulations

<https://www.epa.gov/stationary-sources-air-pollution/municipal-solid-waste-landfills-new-source-performance-standards>

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