

**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY  
CHAPTER 100. AIR POLLUTION CONTROL**

**RULE IMPACT STATEMENT**

**SUBCHAPTER 47. CONTROL OF EMISSIONS FROM EXISTING MUNICIPAL  
SOLID WASTE LANDFILLS**

**252:100-47-3. [AMENDED]**

**252:100-47-4. [REVOKED]**

**252:100-47-5. [AMENDED]**

**252:100-47-6. [AMENDED]**

**252:100-47-7. [AMENDED]**

**252:100-47-8. [AMENDED]**

**252:100-47-9. [AMENDED]**

**252:100-47-10. [AMENDED]**

**252:100-47-11. [AMENDED]**

**252:100-47-12. [AMENDED]**

**252:100-47-13. [AMENDED]**

**252:100-47-14. [AMENDED]**

**APPENDIX R. EMISSIONS CALCULATIONS FOR MUNICIPAL SOLID WASTE  
LANDFILLS [NEW]**

Before the Air Quality Advisory Council, January 18, 2017

Before the Environmental Quality Board, February 17, 2017

1. **DESCRIPTION:** The Department proposes to amend OAC 252:100, Subchapter 47, Control of Emissions from Existing Municipal Solid Waste Landfills. The gist of the proposed rule is to incorporate new federal guidelines for municipal solid waste landfills into the state rules. The proposed rules would implement the provisions of 40 CFR Part 60, Subpart Cf, the federal emission guidelines published by EPA in the Federal Register on August 29, 2016 (81 FR 59313). Upon promulgation, the revised Subchapter 47 will be incorporated into Oklahoma's revised State 111(d) Plan. The proposed rules affect municipal solid waste (MSW) landfills that commenced construction, modification, or reconstruction before July 17, 2014, that accept or can accept municipal solid waste, or that are closed landfills. Landfill gas collection and control systems (GCCS) will be required for landfills with design capacities of at least 2.5 million megagrams (Mg) or 2.5 million cubic meters and have estimated emissions of at least 34 Mg per year of non-methane organic compounds (NMOCs). The previous NMOC threshold to install a control system was 50 Mg per year. The proposal would also add a new Appendix R, Emissions Calculations for Municipal Solid Waste Landfills, to incorporate equations pertinent to the proposed rule.
  
2. **CLASSES OF PERSONS AFFECTED:** The owners and operators of Oklahoma MSW landfills that commenced construction, modification, or reconstruction on or before July 17, 2014, will be affected.

3. **CLASSES OF PERSONS WHO WILL BEAR COSTS:** The costs will be borne by the owners and operators of existing Oklahoma MSW landfills that commenced construction, modification, or reconstruction on or before July 17, 2014.
4. **INFORMATION ON COST IMPACTS FROM PRIVATE/PUBLIC ENTITIES:** The Department has received no information on cost impacts from private or public entities related to this rulemaking as of this date.
5. **CLASSES OF PERSONS BENEFITTED:** The citizens of Oklahoma will benefit from the reduction in emissions whether this rule is implemented by the state or by EPA.
6. **PROBABLE ECONOMIC IMPACT ON AFFECTED CLASSES OF PERSONS:** The owners and operators of landfills subject to this rulemaking are expected to experience additional costs associated with compliance. Although these additional requirements will be made enforceable by the DEQ with this rulemaking, the additional regulatory requirements were actually put in place by the EPA rule, not the proposed DEQ rule.
7. **PROBABLE ECONOMIC IMPACT ON POLITICAL SUBDIVISIONS:** Landfills may be operated by private or public entities. In Oklahoma, out of the 29 landfills that have current design capacities in excess of 2.5 million cubic meters, ten landfills are operated by public entities: nine by cities and one by a public trust. Two of the publicly-owned facilities are already equipped with active landfill gas collection systems. An additional five landfills with design capacities below 2.5 million cubic meters are currently operated by cities or counties. This rulemaking will likely require additional Oklahoma MSW landfills to install GCCS.
8. **POTENTIAL ADVERSE EFFECT ON SMALL BUSINESS:** The landfills affected by this proposed rule are not expected to be operated by small businesses as defined by Oklahoma Statutes and therefore there are no potential direct adverse effects on small businesses. The indirect cost impacts to small businesses are expected to be an incremental increase in landfill disposal costs to all entities, including small businesses, due to compliance with the federal requirements. However, in the federal rulemaking associated with EPA's emission guidelines publication, EPA concluded that increases in tipping fees are likely to be minimal.
9. **LISTING OF ALL FEE CHANGES, INCLUDING A SEPARATE JUSTIFICATION FOR EACH FEE CHANGE:** None.
10. **PROBABLE COSTS AND BENEFITS TO DEQ TO IMPLEMENT AND ENFORCE:** Additional costs to DEQ to enforce or implement the proposed rules are anticipated to be minimal. The costs associated with implementing and enforcing this program represent a small, incremental increase over core program functions.
11. **PROBABLE COSTS AND BENEFITS TO OTHER AGENCIES TO IMPLEMENT AND ENFORCE:** None.

12. **SOURCE OF REVENUE TO BE USED TO IMPLEMENT AND ENFORCE RULE:** Implementation and enforcement of this rule would be funded by fees and federal grants.
13. **PROJECTED NET LOSS OR GAIN IN REVENUES FOR DEQ AND/OR OTHER AGENCIES, IF IT CAN BE PROJECTED:** The Department does not anticipate any net losses or gains associated with the proposed rule. There may be a slight decrease in inventory fees due to additional landfills installing landfill GCCS with commensurate reductions in emissions. However, those reductions, and the impact on inventory fees are not expected to represent a significant decrease when compared with current operations.
14. **COOPERATION OF POLITICAL SUBDIVISIONS REQUIRED TO IMPLEMENT OR ENFORCE RULE:** None. Affected municipalities, counties, and public trusts will be required to comply with this rulemaking. DEQ will implement, enforce, and administer these proposed rules.
15. **EXPLANATION OF THE MEASURES THE DEQ TOOK TO MINIMIZE COMPLIANCE COSTS:** The proposed rules are in conformity with the emission guidelines mandated by EPA, which represent the minimum requirements necessary to protect the environment and the public's health and safety, according to the current federal policy. Therefore, all compliance costs associated with the proposed rules also represent the minimum costs necessary to protect the environment and the public's health and safety.
16. **DETERMINATION OF WHETHER THERE ARE LESS COSTLY OR NONREGULATORY OR LESS INTRUSIVE METHODS OF ACHIEVING THE PURPOSE OF THE PROPOSED RULE:** None. EPA, acting under the authority of Section 111(d) of the federal Clean Air Act, promulgated the emission guidelines for MSW landfills for states to adopt into and implement through their State Plans. Therefore, adoption of these proposed rules into Oklahoma's State Plan is necessary in order to give Oklahoma the authority to enforce these federally mandated requirements. If Oklahoma does not revise its State Plan to include the proposed rules containing these federally mandated requirements and does not proceed to implement them, EPA will adopt and implement a Federal Plan.
17. **DETERMINATION OF THE EFFECT ON PUBLIC HEALTH, SAFETY AND ENVIRONMENT:** The proposed rules will have a positive effect on public health, safety, and the environment, because a lower NMOC emissions threshold triggers installation of a landfill GCCS, which will reduce NMOC emissions, which contain HAPs and VOCs, and will also reduce methane emissions.
18. **IF THE PROPOSED RULE IS DESIGNED TO REDUCE SIGNIFICANT RISKS TO THE PUBLIC HEALTH, SAFETY, AND ENVIRONMENT, EXPLANATION OF THE NATURE OF THE RISK AND TO WHAT EXTENT THE PROPOSED RULE WILL REDUCE THE RISK:** Landfill gas is a collection of air pollutants, including methane, a greenhouse gas, and NMOCs. Methane is harmful to the environment because its greenhouse gas potential is 28-36 times greater than that of

carbon dioxide (CO<sub>2</sub>) and it can remain in the atmosphere for up to 12 years. The NMOC portion of landfill gas can contain HAPs and VOCs. HAPs include a number of compounds that can cause cancer. VOC emissions are precursors to both fine particulate matter (PM-2.5) and ozone, pollutants which have significant health effects and are regulated by National Ambient Air Quality Standards. EPA estimated that nationally, 93 additional landfills will be required to install landfill GCCS resulting in reductions of 1,810 Mg of NMOC and 0.29 million Mg of methane by 2025. Oklahoma should expect proportionally reduced, yet similar, reductions in the state.

19. **DETERMINATION OF ANY DETRIMENTAL EFFECT ON THE PUBLIC HEALTH, SAFETY, AND ENVIRONMENT IF THE PROPOSED RULE IS NOT IMPLEMENTED:** See paragraphs 17 and 18. Additionally, adoption of these proposed rules into Oklahoma's State 111(d) Plan is necessary to give Oklahoma the legal authority to enforce these federally mandated requirements. If the rule is not revised, EPA will adopt and implement a Federal Plan for Oklahoma.
  
20. **PROBABLE QUANTITATIVE AND QUALITATIVE IMPACT ON BUSINESS ENTITIES (INCLUDE QUANTIFIABLE DATA WHERE POSSIBLE):** There are 41 existing MSW landfills in Oklahoma. Initial DEQ analysis has identified 29 of these existing landfills with design capacities that exceed 2.5 million Mg or 2.5 million cubic meters. Twelve of these landfills are already equipped with a GCCS. 7 of the 29 landfills report annual NMOC emissions below the 34 Mg/yr threshold. NMOC emissions for the remaining ten landfills are unclear. It is possible some of these landfills will have NMOC emissions in the range of 34-50 Mg/yr, which would trigger the requirement for these landfills to install a GCCS under the proposed rule. One landfill has identified NMOC emissions within the 34-50 Mg/yr range, but it already has a GCCS. Another landfill has NMOC emissions just under 34 Mg/yr and may be impacted by the proposed rule in the future. These 29 landfills, whether active or closed, are already required to obtain Part 70 permits under the previous version of Subchapter 47. It is possible up to 11 additional facilities will be required to comply with this proposed rule due to the new federal NMOC emission threshold. Regulatory compliance costs may include: capital costs; operation and maintenance costs; and costs for sampling, monitoring, inspection, recordkeeping, and reporting. EPA estimated the costs to affected landfills in the federal rulemaking. Since this proposed rule only implements the federal requirements, no additional state compliance costs are expected. Landfills, which install a collection and control system, may be required to increase or modify their financial assurance as provided in OAC 252:515-27. Construction permit fees will be required for those facilities that require a GCCS.

**THIS RULE IMPACT STATEMENT WAS PREPARED ON:** December 13, 2016