

TCEQ Interoffice Memorandum

To: Regional Staff

Thru: ~~✓~~ Randy J. Ammons, Director, North Central and West Texas Area
~~✓~~ Susan M. Jablonski, P.E., Director, Central Texas Area
~~✓~~ Kelly Keel Linden, Director, Coastal and East Texas Area
~~✓~~ David A. Ramirez, Director, Border and Permian Basin

From: ~~✓~~ Ramiro Garcia, Jr., Deputy Director, Office of Compliance and Enforcement
~~✓~~ Steve Hagle, P.E., Deputy Director, Office of Air

Date: September 28, 2017

Subject: **Enforcement Discretion for Flares Associated with Gas Collection and Control Systems at Landfills**

Brief Description of Problem

Landfills at which a Gas Collection and Control System (GCCS) and associated flares are operated daily, but not staffed seven days a week, are potentially operating in violation of 30 Texas Administrative Code (TAC) Chapter 111, which requires that the flare operator record at least 98% of daily observations while operating. If a landfill is staffed Monday thru Saturday and records visible emissions observations for each day but does not observe the flare or record an observation on Sunday, then they would be in violation of 30 TAC §111.111(a)(4)(A)(ii).

Background

Methane (CH₄) and carbon dioxide (CO₂), the primary constituents of landfill gas, are produced by microorganisms within the landfill under anaerobic conditions. Information from the Environmental Protection Agency's AP-42, Section 2.4.4, indicates that when gas generation reaches steady state conditions, landfill gas consists of approximately 40 percent by volume CO₂, 55 percent CH₄, 5 percent nitrogen (N₂) and other gases, and trace amounts of non-methane organic compounds (NMOC). Therefore, flaring of landfill gas produces very little, if any, opacity concerns and should not smoke under almost any circumstance.

In consideration of the steady nature of air emissions generated from landfill flaring, the general gas composition of landfill gas, and history of the ability of landfill flares to consistently meet opacity requirements, enforcement discretion is recommended for the daily flare observation requirement found in 30 TAC § 111.111(a)(4)(A)(ii).

This characterization of landfill flaring was determined using Environmental Protection Agency's AP-42, Section 2.4, Municipal Solid Waste Landfills, which provides emission factors and supporting documentation that can be used to quantify landfill gas

TCEQ Interoffice Memorandum

emissions and combustion by-products. Section 2.4 also provides guidance for developing estimates of landfill gas emissions for national, regional, and state emission inventories.

Regarding the regulatory history and intent of 30 TAC §111.111(a)(4)(A)(ii), Air Quality Division staff cannot verify whether landfill flares were contemplated in the flare observation requirement. However, when the provision was adopted in 1993, the agency did express the intent regarding the provisions in 30 TAC §111.111(a)(4)(A)(iii) and (B) that exempt flares used less frequently than daily or those used solely for emergencies or upset condition:

“The testimony has brought out instances where daily observation is clearly impractical, such as emergency, upset, or infrequently used process flares. A daily visual check of these flares is no guarantee of their proper operation when needed. Additionally, many of these flares are located at sites that are not normally staffed and are used only in case of upsets. ***Staffing or visiting these sites for the sole purpose of a daily observation is an unreasonable requirement when it will not ensure proper flare operation.*** Flares used only in emergencies or upsets are exempt from a specified frequency of visual observation checks.

The issue of process flares that operate less than continuously remains. Reference Method 9 or 22 will be performed should a process change occur. The staff further recommend that flares that are operated daily, but less than continuously, be required to use a spot check system as is used for continuous flares.” 18 *TexReg* 4509, July 9, 1993.

While the staff recommended during the 1993 rulemaking that flares operated daily be subject to a spot check requirement, even those that do not operate continuously during the day, it was clearly stated that visiting an unstaffed site for the sole purpose of a daily observation was considered unreasonable for flares that were used infrequently or for emergencies or upsets. What does not appear to have been considered is the frequency of observation for flares that operate daily or continuously at sites that are not staffed seven day per week.

Enforcement Procedure

Enforcement discretion will be granted when daily visual flare observations are not conducted during periods when the landfill is unstaffed, in accordance with the operating hours documented in the site operating plan, provided the following requirements are met:

- Landfill owners/operators must observe the flare during all days for which the landfill is open and staff are present.

TCEQ Interoffice Memorandum

- If visible emissions are not observed on these days, a flare observation is not required on days the landfill is unstaffed.
- If visible emissions are observed on any day, the landfill operator must comply with the compliance determination requirements set forth in 30 TAC §111.111(a)(4)(A)(ii). Daily observations must continue on all days until visible emissions are no longer observed regardless of the days and hours of operation specified in the site operating plan.
- Records shall be maintained of all observations.
- Enforcement discretion does not extend to deviation reporting. Any indication of noncompliance must be reported in accordance with 30 TAC §122.145(2)(a), including failing to record at least 98% of the required observations.

When enforcement discretion is granted, investigation reports will include an “additional issue” similar to this: Observations were made on days the landfill was open and staffed. Visible emissions were not detected; therefore enforcement discretion is provided for days the landfill is unstaffed.

Enforcement discretion granted under this procedure applies only to the daily observation and operation log notation requirement in 30 TAC §111.111(a)(4)(A)(ii) for gas flares and does not apply to any other requirement applicable to a landfill site.

Enforcement discretion is granted from the effective date of this memo until it is rescinded or superseded. If conditions outlined above are met, violations will not be issued for any instance regardless of whether they occurred before or after the effective date of this memo.

Alternatively, landfills may use a camera to ensure compliance with 30 TAC Chapter 111.