

Proposed Air Pollutant Watch List Revision Document

Delisting of APWL Area 1101: Hydrogen Sulfide in Bastrop, Bastrop County, Texas

Background

Griffin Industries, LLC (Griffin Industries), operates a rendering facility, located at 264 Farm-to-Market Road 2336 in Bastrop, Bastrop County, Texas. Griffin Industries receives inedible byproducts from the poultry industry and used cooking grease to manufacture protein meal for animal feed. The site contains several anaerobic lagoons. Bacterial breakdown of the organic matter contained in the lagoons results in the formation of hydrogen sulfide.

Hydrogen sulfide is a colorless gas with a characteristic odor of rotten eggs and people can smell it at low levels. Some individuals can detect hydrogen sulfide in concentrations as low as 0.005 parts per million by volume (ppm_v). The Texas Commission on Environmental Quality (TCEQ) established regulatory property line standards for hydrogen sulfide in Title 30 Texas Administrative Code (30 TAC) §112.31, Allowable Emissions – Residential, Business, or Commercial Property, and 30 TAC §112.32, Allowable Emissions – Other Property. The rules contain hydrogen sulfide net ground level property line standards of 0.08 ppm_v averaged over any 30-minute period for residential, business, or commercial property and 0.12 ppm_v averaged over any 30-minute period for property used for other than residential, recreational, business, or commercial purposes, such as industrial property and vacant tracts and range lands not normally occupied by people. The odor threshold of 0.005 ppm_v is a guideline; however, the regulatory property line standards must be met.

Executive Summary of Proposed TCEQ Action

The TCEQ previously conducted mobile monitoring trips in response to odor complaints from citizens regarding Griffin Industries. The mobile monitoring trips provided data confirming that odors from Griffin Industries violated the hydrogen sulfide state regulatory standards. The TCEQ listed Bastrop on the Air Pollutant Watch List (APWL) in 2007 to reduce emissions by focusing TCEQ resources and heightening awareness. Griffin Industries subsequently installed a control system to reduce hydrogen sulfide emissions and monitoring conducted in 2008 and 2010 confirmed compliance with the hydrogen sulfide state regulatory standards. The TCEQ's Toxicology Division, therefore,

determined that monitored hydrogen sulfide levels are below the state standards. The TCEQ is proposing to delist Bastrop from the APWL.

Explanation of APWL Delisting and APWL Area History

The TCEQ Region 11 Office received numerous complaints regarding odors from Griffin Industries. As a result, the TCEQ deployed a mobile monitoring trip in February 2006 to measure hydrogen sulfide levels downwind of Griffin Industries and determined that hydrogen sulfide concentrations exceeded the 30-minute state regulatory standards and odor threshold.

The TCEQ conducted an additional mobile monitoring trip on March 1 – 2, 2007. During the March 2007 mobile monitoring trip, TCEQ staff measured hydrogen sulfide levels downwind of Griffin Industries and, again, determined that levels exceeded the TCEQ state regulatory standards and odor threshold. Specifically, the highest 30-minute net average concentration was 1.066 ppm_v, and the highest reported 5-minute average was 6.7 ppm_v.

In response to a TCEQ enforcement action, Griffin Industries installed a lagoon cover and on-demand flare system to reduce hydrogen sulfide emissions from the primary anaerobic lagoon and agreed to develop a hydrogen sulfide perimeter monitoring plan. Griffin Industries completed installation of the lagoon cover on February 21, 2007, and completed installation of the piping from the lagoon cover to the flare on March 14, 2007 (which was, incidentally, completed after the TCEQ mobile monitoring trip on March 1 – 2 that resulted in documented exceedances of the hydrogen sulfide state regulatory standards). Additionally, Griffin Industries hired a third party contractor to conduct the hydrogen sulfide monitoring, which was conducted on December 10 – 11, 2008. All reported 30-minute average hydrogen sulfide concentrations downwind of Griffin Industries were below the state regulatory standard of 0.08 ppm_v. The highest 30-minute average concentration measured by the third party contractor was 0.053 ppm_v and the highest reported 5-minute concentration was 0.075 ppm_v. However, 130 of the 242 reported 5-minute hydrogen sulfide concentrations taken downwind of the anaerobic lagoons exceeded the odor threshold of 0.005 ppm_v (over half of the samples).

Because Griffin Industries took corrective action that resulted in reduced hydrogen sulfide concentrations that were below the state regulatory standards, the TCEQ proposed removal of Bastrop from the APWL in September 2009. The TCEQ did not adopt the removal because the TCEQ Region 11 Office received odor complaints during the 30-day public comment period of Bastrop's removal from the APWL, and Region 11 staff confirmed strong odors during a follow-up investigation near Griffin Industries on September 24, 2009. The TCEQ noted in its response to public comments on Bastrop's APWL delisting that the TCEQ would not remove the area from the APWL at that time, as further investigations were warranted.

The TCEQ followed up with a site assessment and survey on August 25 – 26, 2010. Staff collected 50 instantaneous hydrogen sulfide readings using a Jerome 631X analyzer. The instantaneous hydrogen sulfide concentrations ranged from 0.002 ppm_v to 0.039 ppm_v, and all of these readings were below the 30-minute state standard of 0.08 ppm_v. The state standard is a 30-minute time-weighted average, and the measurements collected during the August 2010 mobile monitoring trip are instantaneous

measurements; however, a highest instantaneous concentration is usually higher than the highest 30-minute time-weighted average concentration. As such, comparing the highest instantaneous reading to the 30-minute state standard is considered a worst-case scenario. Most of the reported samples (43 of 50 samples) exceeded the 0.005 ppm_v odor threshold.

The TCEQ conducted its most recent survey of Griffin Industries on October 19, 2011. The TCEQ noted no hydrogen sulfide odors and used a Jerome 631X analyzer to sample the ambient hydrogen sulfide concentration at the facility boundary, downwind of the anaerobic lagoons. The instantaneous hydrogen sulfide concentration was 0.008 ppm_v, which is below the 30-minute state standard of 0.08 ppm_v.

Griffin Industries has taken corrective action in installing the lagoon cover and flare system, and monitored concentrations show a significant improvement. The TCEQ does not expect hydrogen sulfide concentrations to exceed the 30-minute state regulatory standards with the continued use of the control system and is proposing to delist Bastrop from the APWL. The TCEQ acknowledges that there is a potential for nuisance odor from the site. The delisting of Bastrop from the APWL would not affect an individual's ability to report any possible odor or other complaints regarding Griffin Industries to the TCEQ Region 11 Office, which will continue to respond to all citizen complaints.

Public Comment Period

The TCEQ will accept comments on the proposed delisting of the Bastrop APWL area. Interested persons may send comments to APWL@tceq.texas.gov or may send comments to the APWL coordinator at the following mailing address:

Ms. Tara Capobianco, P.E.
Air Pollutant Watch List Coordinator
Texas Commission on Environmental Quality
Chief Engineer's Office
MC-168
P.O. Box 13087
Austin, Texas 78711-3087

The comment period began on December 12, 2011, and the TCEQ will accept comments through January 20, 2012. Any questions regarding the proposed delisting or the APWL process may be forwarded to Ms. Capobianco at (512) 239-1117.

Public Meeting

The TCEQ will conduct a public meeting to receive comments on the proposed delisting of Bastrop from the APWL. The public meeting will be held on January 11, 2012, at 6:00 p.m. at the Bastrop Public Library, located at 1100 Church Street, Bastrop, Texas. The TCEQ will give a short presentation at 6:00 p.m. After a short question and answer session, the TCEQ will officially open the public meeting. The public meeting will be structured for the receipt of oral or written comments by interested persons.

Individuals may present statements when called upon in order of registration. Open discussion within the audience will not occur during the public meeting; however, the TCEQ staff will be available to discuss the proposed delisting and answer any additional questions after the meeting.

Persons who have special communication or other accommodation needs who are planning to attend the meeting should contact Ms. Capobianco as far in advance as possible.