

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Commissioners Date: November 4, 2013

Thru: Bridget C. Bohac, Chief Clerk
Zak Covar, Executive Director

From:  L'Oreal W. Stepney, P.E., Deputy Director
Office of Water

Subject: Docket No. 2013-0939-RUL
Project No. 2013-033-PET-NR
Changes since back-up for the Follow-up Report on the Petition for Rulemaking
on Land Application of Sewage Sludge

The attached documents contain revisions identified in highlight/strikeout which have been made since back-up was filed. Back-up material was submitted on November 1, 2013, for the November 20, 2013, Agenda.

The proposed changes include:

- Page 1 – Examining Issues in the Petition
 - As shown in the last sentence in first paragraph, the number of biosolids processing facilities visited by staff has been changed from 5 to 6.
- Page 4 - Recommendation Section
 - An additional paragraph (now shown as the third paragraph under the Recommendation Section) was added to describe the executive director's concept for rulemaking. This paragraph references a new Attachment B.
- Attachment B - Requirements for Classes A, AA, and B
 - An attachment was added to provide additional details on the concept for rulemaking. Specifically, this attachment identifies the proposed categories and requirements of each category.

Attachments

cc: Stephanie Bergeron Perdue
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Subject: Follow-up Report on the Petition for Rulemaking on Land Application of Sewage Sludge
Chapter 312 - Sludge Use, Disposal, and Transportation
Non-Rule Project No. 2013-033-PET-NR
Docket No: 2013-0939-RUL

Introduction and background:

On May 13, 2013, the Texas Commission on Environmental Quality received a petition from Mr. Cole Turner (petitioner), on behalf of the landowners and citizens of Ellis County. The petitioner requested that TCEQ amend 30 Texas Administrative Code (TAC) Chapter 312, Sludge Use, Disposal, and Transportation, in order to prohibit the land application of sewage sludge in, or within, three miles of a city limit in a county with a population of 140,000 or more that is located adjacent to a county with a population between 2,000,000 and 4,000,000. The petition is included as Attachment A.

On June 18, 2013, the commission instructed the executive director to examine the issues raised in the petition and to initiate the rulemaking process by obtaining stakeholder input on the issues raised in the petition and other odor related concerns at bulk sewage sludge land application sites. The commission also instructed the executive director to report findings and recommendations within five months.

Examining the issues in the petition:

The Water Quality Division and Regional office staff conducted site visits to various wastewater treatment plants (WWTPs), sewage sludge (biosolids) processing facilities and bulk sewage sludge land application sites throughout the state. The objective was to evaluate different types of bulk sewage sludge treatment processes and evaluate odors at several biosolids processing and land application sites. Staff visited a total of six land application sites and ~~five~~six biosolids processing facilities.

Staff concluded that the odors encountered at two different Parker County land application sites were offensive and not typical of the other application sites visited by staff. Also, significantly more flies were present at these land application sites than other land application sites visited. Both sites received biosolids that are generated at one of the WWTPs in the DFW area. Staff encountered more typical biosolid odors at the remaining land application sites visited. Staff 's experience indicate that biosolids that use more advanced treatment processes such heat drying or composting tend to have more typical odors than those that do not.

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Stakeholder Meetings:

The executive director held four stakeholder meetings in Springtown, Midlothian, Brookshire and Austin, Texas. The comments received at the stakeholder meetings and in writing were split between those that support the petition and those that do not. The comments are summarized below.

Comments in favor of the petition:

- Offensive odors affect quality of life and enjoyment of property
- Close proximity of land application sites to populated areas
- Safety of sludge land application to human health
- Decreased property values
- Notice of Class A land application sites should be provided to public
- Contamination of groundwater
- Vectors (flies)
- Fish kills from land application runoff
- Truck traffic
- Hazardous waste and pharmaceuticals in biosolids
- Tracking of biosolids on roadways
- Burdensome TCEQ odor complaint process
- Recommend incorporation of biosolids into soil

Comments against the petition:

- Arbitrary three-mile prohibition is excessive
- City limits vary along waterways
- Detriment to the biosolids program
- Removes the incentive to perform Class A treatment
- Economic value of biosolids over commercial fertilizer
- Slow release and nutrient benefits of biosolids over commercial fertilizer
- Odor complaints are limited to the Dallas/Fort Worth area

Follow-up Actions Taken:

Permitting

During the site evaluations, staff encountered odor issues which were specific to the land application sites receiving biosolids processed at a particular WWTP in the DFW area. Therefore, the executive director has initiated an amendment of the major wastewater discharge permit to require the development and implementation of additional requirements to its sludge operations and an odor control plan.

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Additional requirements for the land application activity:

- Buffer zones
- Post signage
- Best Management Practices for transportation
- Staging restrictions
- Adverse Weather and Alternative Plan

New Elements regarding the Development of an Odor Control Plan include:

- Investigation of atypical odor source
- Evaluation of the processing from beginning to end (WWTP, transport and land application)
- Implementation of corrective action measures for odor control
- Implementation of Best Management Practices
- Requirement of deadline to submit the plan (90 days)
- Certification by a Professional Engineer licensed in the State of Texas
- Implementation schedule
- Submission of progress reports
- Submission of final report upon successful implementation

Field/Enforcement Response

In response to the large volume of odor complaints received, the TCEQ Region 4 office has been implementing the following heightened level of response measures:

- Reprioritization of biosolid related odor complaints. Typically odor complaints that do not allege an imminent threat to human health or the environment are prioritized with a 30 calendar day investigation response. As the number of complaints and concerns with odors from the public increased, the DFW Region reprioritized these complaints to immediate ranging to five working day response time. The average response time was within approximately 2.6 days. During an odor investigation, frequency, intensity, duration and offensiveness of an odor is assessed to determine if nuisance conditions exist. Staff also made a determination whether biosolids being applied meet Class A.
- DFW Region Staff have requested to receive advanced notification of the sites scheduled to have Class A biosolid applications. Both WWTPs in the DFW area have agreed to provide the monthly projected schedule to the DFW Region. This advanced notification allows the DFW Region to plan odor surveys, reconnaissance investigations and/or sampling events in the areas of the biosolid applications prior to receipt of citizen complaints. It also allows TCEQ DFW Region staff the ability to answer questions about the applications from concerned citizens earlier in the application process.

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- DFW Region Staff meet with several WWTPs on a quarterly basis regarding biosolids programs and application of biosolids.
- DFW Region Staff are conducting quarterly biosolids sampling of several WWTP's produced biosolids. The sampling is conducted at both the processing sites and an application site receiving the biosolids. The biosolids are sampled for the following parameters: metals, pH, % moisture, % volatile solids, and fecal coliform.

Recommendation:

The executive director recommends initiating state-wide rulemaking rather than the three mile prohibition requested in the petition. The three mile prohibition could be considered a local rule due to the bracketing of the rule to certain counties based on population criteria. Future changes in population would lead to regulatory uncertainty as new counties become subject to the prohibition and existing authorizations within any newly subject counties would need to be revoked. Additionally, stakeholder input included comments from individuals that do not support rulemaking or a prohibition. Some stakeholders which receive sewage sludge for land application would be adversely impacted by a three mile prohibition and would no longer be allowed to accept sewage sludge due to the proximity of their land application area to city limits.

This recommendation to move forward with the rulemaking process is based upon stakeholder comments requesting relief from odors, vectors, unauthorized discharges from land application sites, tracking of material on roadways and staff observations during site visits.

The executive director's concept for rulemaking includes separating existing Class A into two categories, Class A and Class AA, and including additional odor control provisions. See Attachment B for additional information on this concept, including categories and requirements highlighting the differences which are specific to the types of pathogen treatment and method of land application. The management conditions for each category become more stringent as the treatment processes used for pathogen reduction used are less advanced. This approach provides additional incentives for permittees to select more advanced pathogen treatment processes to (such as composting, heat drying, pasteurization, and other equivalent processes) and promotes land application through incorporation into the soil, when feasible. Staff observations noted that sites using these advanced treatment process did not have atypical odors on those days that staff was present.

One of the primary concerns provided during the stakeholder meetings was TCEQ's inability to respond to odor complaints and prevent recurrences. Therefore, in addition to the changes to sludge classification, the rules would clarify the executive director's existing ability to include additional, more stringent requirements to any Class A, AA, or B site. The language would include the executive director's authority to require a permit authorization and require an Odor Control Plan with measurable goals. This would allow

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TCEQ investigators to determine compliance with specific permit conditions designed to address odor and other compliance issues at a specific site and aid in addressing recurrent issues.

In addition, staff evaluated existing requirements within Chapter 312 for Class B sites which could be applied to all sites. These conditions would address the stakeholder issues mentioned above in addition to odor.

Potential controversial concerns and legislative interest:

WWTPs that have advanced sewage sludge processing facilities that produce Class A sewage sludge for marketing and distribution that are currently not experiencing odor complaints or other issues may be opposed to more stringent requirements on their operations. Farmers and ranchers that currently utilize sewage sludge as fertilizer may be opposed to additional restrictions in the rules.

There is legislative interest related to this issue. Members of the legislature in the DFW and north Texas area have expressed interest in this issue as their offices have received multiple inquiries from citizens in this area seeking relief from nuisance odor conditions. Multiple local county and state legislative officials attended one or both of the stakeholder meetings held in the DFW area.

Effect on the:

- A) Regulated community:** Existing municipal wastewater treatment plants that generate sewage sludge that is land applied for a beneficial purpose would be subject to new provisions proposed via rulemaking.
- B) Public:** Stakeholders that reside near beneficial sewage sludge land application sites would benefit from new requirements proposed to address nuisance odors.
- C) Agency programs:** A rule team would be established and include various programs within the agency. Following rule adoption, individual permits that authorize land application of sewage sludge would be revised as they come up for renewal. However, the executive director staff could open permits to add requirements at the time the rules have been adopted. New conditions proposed in the revised rules may assist regional offices in addressing nuisance odor complaints.

Proposed schedule and constraints:

Proposal date: Early 2014
Adoption date: Summer 2014

Planned stakeholder involvement:

The executive director proposes to make rule concepts and draft rule language available for initial stakeholder review and comment. Staff will review the comments received and return to the Commissioners' Agenda early 2014 to formally proceed with proposed rules.

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If approved for proposal, rules will be published in the Texas Register and a rule proposal hearing will be scheduled to solicit public comment.

Statutory authority:

- Texas Government Code, §2001.021, which establishes the procedures by which an interested person may petition a state agency for the adoption of a rule;
- Texas Health and Safety Code (THSC), §361.022, which establishes the State's Public Policy Concerning Municipal Solid Waste and Sludge;
- THSC, §361.121, which authorizes the commission to issue authorizations for the land application of sludge;
- Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state;
- TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction;
- TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013;
- TWC, §5.120, which authorizes the commission to promote maximum conservation and protection of the quality of the environment and natural resources of the state;
- TWC, §26.0135, which authorizes the commission to monitor and assess the water quality of each watershed and river basin in the state;
- TWC, §26.027, which authorizes the commission to issue permits; and
- TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges into or adjacent to water in the state.

Attachments:

Attachment A - Petition for Rulemaking

Attachment B - Requirements for Classes A, AA, and B

Electronic cc:

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Attachment A
Petition for Rulemaking

40008
DLS

Mr. Zak Covar
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087



RE: Petition for Adoption of Rules (Title 30 TAC 20.15)

Dear Mr. Covar:

This Petition for Adoption of Rules is submitted by landowners and citizens subjected to the adverse effects of land application of sewage sludge in Ellis County, Texas. The changes affect the current Title 30 TAC 312 rules.

The purpose of the rule petition is to prohibit the application of sewage sludge in, or within, three miles of a city limit in Ellis County.

Background

Since February of 1998, land application of sludge has increased south of Midlothian. Specifically, the areas affected are in the vicinity of FM 875 and Singleton Road. The population since 1998 has increased dramatically to almost 1,200 families. The increased sludge application in the area has resulted in adverse effects leading to diminishing quality of life and enjoyment of property.

The primary adverse effect has been objectionable odors caused by the application of sewage sludge in the area, however, other physical effects include documented fish kills.

Currently, the land application of sludge is at its highest levels and public awareness of the problem is increasing with attention of news media outlets and local legislators.

Proposed Rule

The proposed changes are as follows:

Title 30 TAC 312.3 Exclusions

Add 312.3(n) – This chapter does not allow the application of bulk sewage sludge to land in, or within, three miles of a city limit in a county with a population of 140,000 or more that is located adjacent to a county with a population between 2,000,000 and 4,000,000.

Add 312.4(b)(5) – This subchapter does not authorize the application of bulk sewage sludge to land in, or within, three miles of a city limit in a county with a population of 140,000 or more that is located adjacent to a county with a population between 2,000,000 and 4,000,000.

Attachment A Petition for Rulemaking

Add 312.41(c)(3) – No person shall cause suffer or allow the land application of bulk material derived from sewage sludge in, or within, three miles of a city limit in a county with a population of 140,000 or more that is located adjacent to a county with a population between 2,000,000 and 4,000,000.

Add 312.42(j) – Land application of bulk sewage sludge is prohibited in, or within, three miles of a city limit in a county with a population of 140,000 or more that is located adjacent to a county with a population between 2,000,000 and 4,000,000.

Changes (*Italicized and underlined*) §312.41(b)(1) – Section 312.42 of this title (relating to General Requirements) and §312.44 of this title (relating to Management Practices), *with the exception of the requirements in §312.42(j)*, do not apply when bulk sewage sludge is applied to the land if the bulk sewage sludge meets the metal concentration in §312.43(b)(3) of this title (relating to Metal Limits), the Class A Pathogen requirement in §312.82(a) of this title (relating to Pathogen Reduction), and one of the vector attraction reduction requirements in §312.83(b)(1)-(8) of this title (relating to Vector Attraction Reduction).

Changes (*Italicized and underlined*) 312.41(d) – Special Requirements for Certain Bulk Derived Materials. The requirements in this subchapter when a bulk material derived from sewage sludge is applied to the land; if the sewage sludge from which the bulk material is derived *meets the distance requirement in §312.41(c)(3) and* meets the metal concentration in §312.43(b)(3) of this title the class A pathogen requirements in §312.82(a) of this title, and one of the vector attraction reduction requirements in §312.83(b)(1)-(8) of this title and the distance requirements in §312.32(j). The executive director may apply any or all of §312.42 and §312.44 of this title to the bulk derived material on a case-by-case basis after determining that the general requirements or management practices are needed to protect public health and the environment from any reasonably anticipated adverse effect that may occur from any metal in the sewage sludge.

Statement of Authority

Texas Health and Safety Code Chapter 361. Solid Waste Disposal Act and Title 30 Texas Administrative Code Chapter 312

Allegation of injury or inequity

It is my plea to help bring relief to over 1000 families who live in close proximity to an odor that is so offensive that it will run citizens back into their homes. For the past three years, since purchasing our home, we have been limited to the time we can spend outdoors due to the intense odor created by the sludge dumped on the acreage directly across the road from our home. Wind, humidity, rain and heat all cause the odor to intensify. We are confined to being indoors during the prettiest times of the year because the smell is unbearable and lingers well after it has been dumped. We are unable to open our windows in our house and the sludge odor prevents us from enjoying our property, our animals and outside activities. The smell also permeates our vehicles and the smell travels with us even when we are not at home.

Attachment A Petition for Rulemaking

Since 1998, housing and developing has increased the area population from hundreds to thousands as Midlothian, and the surrounding communities, continue to grow. New subdivisions are being created monthly and buyers are unaware of any odor, depending on the wind, until it is too late. A majority of citizens have no idea where the smell is coming from, nor do they know how to combat the intrusion when they do realize the origin. The average citizen is not prepared to spend hours and hours trying to fight for the rights they should already have.

My plea is for relief with a three mile no dump zone. Please help us get back the same clean air everyone else enjoys.

Sincerely,



Cole Turner
1050 Marion Road
Venus, Texas 76084

Attachment B
Requirements for Classes A, AA, and B

Core Requirements applicable to Class A, AA and B:

1. Clarify ED authority to add more stringent requirements such as requiring an Odor Investigation and Control Plan, require a permit, require a co-permittee on existing permit, or require covering storage areas at processing location.
2. Prohibit land application during rain or on saturated soils
3. Require cover on trucks
4. Nuisance condition prohibition
5. Submittal of an Adverse Weather and Alternative Plan

	Treatment Process	Bacteria Levels	Requirements
Class A	Pathogen Alternatives 5 or 6 PFRP*	Fecal < 1000	Core Requirements
Class AA (incorporated)	Pathogen Alternatives 1 thru 4	Fecal < 1000	Core Requirements only if incorporated into soil
Class AA	Pathogen Alternatives 1 thru 4	Fecal < 1000	Core Requirements plus the following: <ol style="list-style-type: none"> 1. Post signage at application sites 2. Buffer zones (<i>see reference table below</i>) 3. Staging of biosolids away from odor receptors 4. BMPs to address tracking biosolids off-site
Class B	PSRP**	Fecal < 2 million	Core Requirements plus the following: <ol style="list-style-type: none"> 1. Staging of biosolids away from odor receptors 2. BMPs to address tracking biosolids off-site

*PFRP – Process to Further Reduce Pathogens

**PSRP – Process to Significantly Reduce Pathogens

Attachment B
Requirements for Classes A, AA, and B

Class B Pathogen Alternatives - Process to Significantly Reduce Pathogens (PSRP)

- Aerobic Digestion
- Anaerobic Digestion
- Air Drying
- Composting
- Lime Stabilization

Class AA Pathogen Alternatives

- Alternative 1: Time and temperature
- Alternative 2: High pH, high temperature and time
- Alternative 3: Concentrations of enteric viruses and helminth ova – known process
- Alternative 4: Concentrations of enteric viruses and helminth ova-unknown process

Class A Pathogen Alternatives

- Alternative 5: Process to Further Reduce Pathogens (PFRP)
 - Composting
 - Heat Drying
 - Heat Treatment
 - Thermophilic aerobic digestion
 - Pasteurization
- Alternative 6: Equivalent to PRFP (EPA approval)

Buffer Zone Reference Table

School, institution, business or residence	750 ft
Public right of way	50 ft
Property boundary	50 ft